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THE ORDER OF SCIENTIFIC MERIT

IN selecting groups of one thousand American men of science for statistical study in 1903 and 1909, the workers in each of twelve sciences were arranged in the order of merit for their work by ten of their leading colleagues.¹ The average positions gave the order, and, as there were ten observations of the position of each individual, its probable error could be calculated.

As the writer of this paper is a psychologist and the ultimate object of the work is the study of behavior with a view to advancing scientific research, the psychologists may be used for illustrations of method. William James was placed first in 1903 by the independent judgment of each of the ten observers. The psychologist who stood second had an average position of 3.7 with a probable error of 0.5; the chances are even that his position was between 3.2 and 4.2. The psychologists who stood third, fourth and fifth were assigned, respectively, positions of 4.0, 4.4 and 7.5, with probable errors of 0.5, 0.6 and 1.0. It follows that the relative order of Nos. II, III and IV is not determined definitely, whereas the chances are some 10,000 to 1 that each of these stood below No. I and above No. V. The probable errors increase in size as the work of the men becomes less significant; it is on the average 0.65 places for the first ten of the fifty psychologists and 10.7 places for the last ten. Consequently No. XL on the list would have about one chance in four of falling out of the group of fifty, if the number participating in the arrangement had been very large.

The figures determine not only the validity of the positions, but also the differences in scientific merit among the psychologists, these varying inversely as the probable errors. As men who are about 6 ft. 2 in. tall are likely to differ from each other about ten times as much

as men who are about 5 ft. 8 in. tall, so the more distinguished scientific men at the top of the list differ from each other about ten times as much as those toward the bottom, and a unit can be adopted for measuring the differences. This method for converting relative positions into degrees of quantitative differences, which was first used by the writer² to measure subjective differences in the intensity of lights has proved to be of wide application.

For a third selection of our thousand leading men of science it seemed desirable, in order to avoid the inbreeding that might occur through selection by a limited group, to obtain a general vote from those competent, and, as before, the new methodological problems have proved to be of interest. The validity of votes appears not to have been considered, yet the problem is wide-reaching and is closely related to the drawing of balls from an urn, which has largely occupied students of the theory of probabilities.

If, for example, the council of the American Psychological Association, which consists of eight members, decides without consultation in favor of a given measure by a vote of 6 to 2, how likely is this to represent the majority opinion of the 432 members? We do not know the distribution of this "population," but if from an urn containing 216 white and 216 black balls, 8 are drawn, the chances are about one in nine that 6 will be white and about one in seven that 6 or more will be white. These may be regarded as approximately the chances that when the membership is about evenly divided a vote of that character will be obtained from the council; and on this basis the desirability of a plebiscite vote may be decided.

² *Philosophische Studien*, 1902. See also "Studies by the Method of Relative Position," H. L. Hollingworth, in "The Psychological Researches of James McKeen Cattell," a review by some of his pupils, on the occasion of the twenty-fifth anniversary of his professorship. New York, 1914.

¹ SCIENCE, November 23, November 30 and December 6, 1906, "American Men of Science," The Science Press, 1910.

In 1916 Mr. Wilson was elected president by the vote in California, which was in his favor by 466,300 to 462,394, giving him a majority of 3,906. It might be supposed that this small majority would readily have been reversed by an indefinitely large electorate, but if the population were equally divided this would probably occur only once if an election were held every day for a hundred years.

If the members of a jury reached their decision without consultation and stood eleven to one for conviction, many would conclude that the chances are eleven to one that the defendant is guilty. As a matter of fact if the total population is divided in the same ratio and the legal fiction is followed that a man is proved guilty or innocent only by unanimous vote of twelve peers, the chance of obtaining a jury which without consultation will be unanimous for conviction are about one in three, of obtaining a jury unanimous for acquittal, only one in many billions. The practise of the courts must ultimately adjust itself to such conditions, and learn whether the unanimous vote of three or five jurymen without consultation is more or less valid than the unanimous vote of twelve after consultation. It must be decided on what probabilities a man shall be convicted and to what extent the chances of innocence shall be considered in imposing sentence.

When our rulers are selected and their legislation is determined by votes, it seems strange that knowledge concerning the variable and constant errors is so completely lacking. A decision of the supreme court, which may involve the welfare of hundreds of thousands of children or taxation amounting to billions of dollars, is equally binding whether the vote is unanimous or by a majority of one. It would apparently be as reasonable to require a three fourths vote of the supreme court to invalidate a law passed by both houses of the congress and signed by the president, as to require a unanimous vote of a jury to award petty damages.

The method of voting used to select scientific men might have useful applications in industry. For example, if a bank employs 100

clerks, some of whom will be promoted from time to time, all of them might be asked to check the fifty per cent. and the five per cent. most deserving of promotion. From the records an order of merit for promotion would be obtained, together with the relative value of the men to the bank and the salaries deserved. The data would also throw light on those voting, for the value of the judgment of each is measured by its departure from the average; if any were prejudiced or unfair in their treatment of friends or rivals this would be discovered. The combined judgment of associates is probably a more valid method of selection than the choice of a superior and would presumably lead to better service.

In like manner a group of factory workers or of laboring men might select a boss or leader by vote. If the employer would agree to take one of the five men receiving the most votes, the employees would understand and probably approve the method. Not only would a good selection free from favoritism be made, but the men would share in the control of their work and would be more loyal and more efficient.

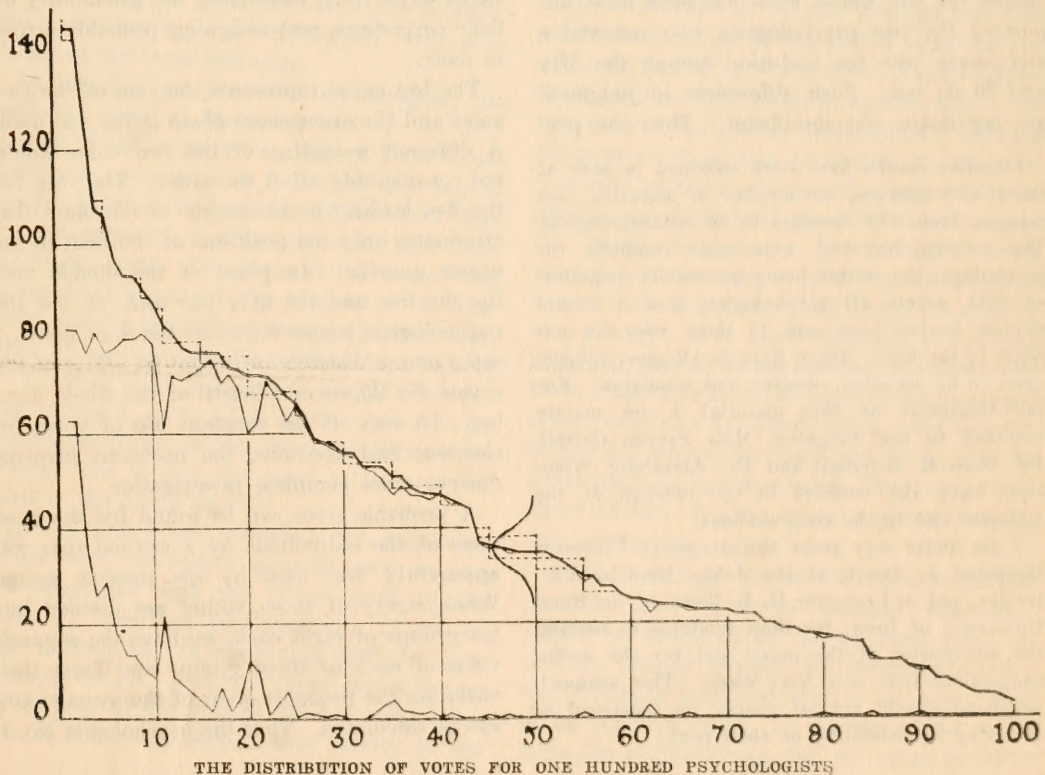
The writer has proposed a compromise between the competitive and the semi-communistic systems for payment of the salaries of university professors, according to which, say, five super-professorships with relatively large salaries and large freedom should be established. The difficulty under our present method is that the appointments would be by favor of the administration. If, however, a vote of the teachers in the university, and perhaps of the students, were taken on the basis of desert for research, teaching and service, a method of selection would be used probably more accurate than the choice of the president and at the same time more conducive to co-operation and goodwill.

In the selection by votes of one thousand scientific men the same number for each of the twelve sciences was retained as in the two previous studies, this being nearly proportional to the total number of workers in each science. In the first edition of "American Men of

Science" there were listed about 4,000 scientific men, in the second edition about 5,500, and in the present edition, published some fifteen years after the first, the number is about 9,600. The present writer was in 1888 the only professor of psychology in the world. The number of members of the American Psychological Association, which has a professional qualification, increased from 127 in 1903, when the first selection was made, to 432 in 1920. The average number of doctorates conferred in psychology during the five years prior to 1903 was 12.6; it was 40 in 1920. Competition for inclusion among our fifty leading psychologists or among our thousand leading men of science is thus much more severe at present than was the case when the selections were first made. There are now about 500 working psychologists and about 10,000 scientific men in the United States; the present selection consists approximately of those who form in each science the upper tenth in merit of their work.

In the case of the psychologists, here used

as an example, those in the two earlier groups of fifty (except five no longer occupied with psychology or no longer residents of the United States), numbering 48, were asked to send the names of 10 or a smaller number of others whose work warranted their inclusion in such a group. Then those who received two or more nominations were in like manner asked to propose 10 or fewer names. The 52 who received the most votes were added to the original 48 to form a group of 100. These names were placed in alphabetical order on a list, which was sent to them all, with the request to "check (\checkmark) about 50 (namely, about one half) of the names to indicate those who have done the best work in psychology, placing a double check ($\checkmark\checkmark$) before about five of those whose work has been the most important." Eighty-three (besides one who replied too late) of the 100 returned the blank and, as each was asked not to consider himself, there were 82 votes. When more than five double checks were assigned they were weighted in-



versely as the number. The result of the votes can be conveniently shown by curves such as are here reproduced. The middle curve gives the distribution of the 82 votes for the 100 psychologists, the vertical ordinates representing the number of votes, while the individuals are ranged serially along the horizontal axis. The bottom curve shows the number of double checks for each individual, namely, the opinion that he is one of the five psychologists whose work is the most important. The top curve represents the sum of two votes, and the individuals are arranged in order in accordance with this vote.³

As indicated on the curve and shown on the tables (which it seems unnecessary in this place to print) two and only two psychologists were included among the fifty leading psychologists by unanimous vote of their eighty-two colleagues. The psychologist at the bottom of the fifty received 35 votes; three were given for the psychologist who stands last in the hundred. Sixty-two of the 82 voting include among the five whose work has been most important the two psychologists who received a unanimous vote for inclusion among the fifty and 20 do not. Such differences in judgment are legitimate and significant. Thus the psy-

³ Similar results have been obtained in each of the twelve sciences, the number of scientific men ranging from 175 chemists to 20 anthropologists. The returns, however, were most complete for psychology, the writer being personally acquainted with nearly all psychologists and a second request having been sent to those who did not reply to the first. There were in all some 130,000 votes to be collected, counted and tabulated. For the treatment of this material I am mainly indebted to my daughter, Miss Psyche Cattell. Dr. Dean R. Brimhall and Dr. Alexander Weinstein have also assisted in the revision of the material and in the computations.

I am under very great obligations to Professor Raymond L. Pearl, of the Johns Hopkins University, and to Professor H. L. Rietz, of the State University of Iowa, for their kindness in reading the manuscript of the paper and for the useful suggestions that they have made. This acknowledgement should not, of course, be construed as involving responsibility on their part.

chologist placed eleventh is held by 22 of his colleagues to belong to the first five and by 21 not to belong to the group of 50, and similar conditions obtained for the one placed twentieth. The names could be guessed by one familiar with the situation. They are men of distinction whose more important work is by some judged not to fall within the field of psychology.

The attitude of those voting is of scientific significance, for it measures the validity of judgments. If we assume the average judgment of the 82 psychologists to be nearly correct, the departure from this average measures the competence of the individuals to form such judgments. There do not appear to be group differences dependent on distinction or age, but individuals, as shown in the previous study, differ in the ratio of about two to one. There will be an extraordinary change in our attitude toward political, social and business problems when we learn to look upon our observations, recollections, beliefs and judgments objectively, measuring the probability of their correctness and assigning probable errors to them.

The top curve represents the sum of the two votes and the order there given is the one used. A different weighting of the two votes would not considerably affect the order. The vote for the five leading psychologists in the main discriminates only the positions of the men in the upper quartile. In place of the double vote for the five and the fifty per cent. of the 100 psychologists whose work has the most merit, a satisfactory distribution might be obtained by a vote for 25, or one fourth of the whole number. In view of the constant use of votes for elections and decisions, the problems involved deserve more complete investigation.

A probable error can be found for the positions of the individuals by a method that was apparently first used by the present writer. When eighty of those voting are divided into ten groups of eight each, we have the separate votes of each of these groups and from their variation the probable error of the average vote can be calculated. Thus the psychologist No. L,

in the ten groups of eight votes each received, respectively, 4, 4, 2, 1, 4, 7, 4, 3, 2, and 2 votes. The probable error is 0.363, and for the group of eighty votes it is 3.63. The position on the curve assigned by each of the small groups can also be found and a probable error calculated from these ten positions.

The probable errors based on 80 votes (as a rule for each fifth individual) are indicated by the broken vertical line on the curve and when referred to the order of merit by the broken horizontal lines. The probable errors of the votes of the five psychologists last in the fifty are, respectively, 3.4, 2.8, 2.8, 3.1 and 3.6, an average of 3.14. The curve from No. X to No. C is nearly a straight line, the vote decreasing from 79 for No. X to 3 for No. C. Consequently the probable error of the vote when referred to the order is increased by about one sixth. The probable error of position at the bottom of the group of fifty is 3.6; there are thus only three or four for whom there would be as much as one chance in four of being dropped from the list if the arrangement were made by an indefinitely large electorate of the same character.

In the first study of the psychologists, the probable error at the lower end of the fifty was 10.7, that is, there were 10 or 11 for whom there was one chance in four that they should not be included on the list. There were then ten arrangements in order of merit; now there are eighty votes. The probable error decreases as the square root of the number of observations, and the probable errors in the two cases, other things being equal, should be about as 3:1, which is in fact almost exactly the case. The probable error of a single vote for the psychologists low in the group of fifty at the present time is thus the same as by order of merit in the group of 1903.

In the first study, however, we were concerned with the upper quartile, and we are now concerned with the upper decile of the group of American psychologists. If we assume distributions in accordance with the curve of error, the men who now stand at the bottom of the fifty in the present selection will be as able as those who stood about twenty in the

first arrangement. An examination of the relative positions of the individuals who are in each of the two arrangements indicates that this tends to be the case. The probable error at the bottom of the fifty selected by votes should be in the neighborhood of those who stood about twenty in the first arrangements. This would make a single vote one half as valid (the ratio of the probable errors in the first arrangement for those near the bottom of the fourth hundred and in the tenth hundred of the thousand being 64:125) as a single judgment of order of merit. The figures given should, however, be regarded as indications of method rather than as exact determinations, for they are subject to various errors.

The average position of the survivors of the first group of psychologists in the arrangement of 1903 was (after deaths have been eliminated) 4; it is now for the same individuals 14.8. Those in the four following groups of ten have dropped, respectively, from 11.5 to 18.1; 20 to 27.4; 29.5 to 59.2, and 39.5 to 64.9. This drop in position is on the average less than would be expected if the 10,000 scientific men of to-day are as able and have as good opportunity as the 4,000 scientific men of 1903. The inference is that as the total number increases the proportion of men of distinction decreases. This may be due to the fact that men of special ability find their level apart from the size of the group or because the scientific career attracts less able men or gives them less opportunity than formerly. Both factors are probably present; it is apparent that the situation deserves further investigation. In the previous study it was shown that in the increased competition of a five-year period, those between 40 and 44 years of age remained on the average about stationary; those below 40 gained; those above 44 lost, the loss being in direct proportion to the age.

As the work of the men becomes more important, the differences between the individuals as measured by the probable error of position become greater, the distribution corresponding in a general way to the upper end of the curve of error. In the case of the votes there are complications, for the votes for dif-

ferent men do not have the same weight. The ten who receive the most votes receive nearly all the votes, and in the cases of the few who do not vote for them poor judgment or an error in checking is indicated. Some votes mean that a psychologist stands first or near the top of the list, whereas others mean that he is barely included. Consequently the order and the probable errors in the case of such a vote for one half of the group do not have great validity for the upper part of the distribution. The order is obtained in a satisfactory manner by the double vote, but this introduces further complications in the probable error. In all cases of votes, we have asymmetrical distributions and skew curves. The quantitative relations should be worked out in the first instance for less complicated material than that with which we are here concerned.

In nearly all cases in which probable errors have been applied to psychological data, the determinations are more exact than common sense would presuppose. Thus the writer found⁴ that in grading traits of character by ten individuals on a scale of 100, a position was assigned with probable errors varying from 4.6 for physical health and cheerfulness to 3 for originality and efficiency. All other traits, such as energy, courage, judgment and integrity, were assigned positions with intermediate probable errors, the average being 4, which is nearly the same as the probable error of position as determined by 80 votes of the psychologists near the middle of the 100 in order of merit.

The comparatively small probable errors appear to be due to the fact that there are constant errors which affect the whole group. The psychologists who vote are subject to the same kind of influences, not making in fact independent judgments, but being influenced as a group by the knowledge of what others think and by all sorts of conditions, conventions and restrictions. If a similar vote were taken ten years hence the work of the same psychologists would be viewed from new standpoints and the positions would change to a much greater degree than the probable errors warrant. "Con-

stant" errors are in fact more inconstant and variable than "variable" errors.

In the case of a vote (as in any series of measurements) there are two factors entering into the probable error, one dependent on the quantitative conditions prescribed in advance, the other on the behavior of the individuals. The former may be called the deductive probable error and when the latter is determined by experiment and added to it the whole is the inductive or actual probable error. Thus, if from an indefinitely large number of balls equally distributed between black and white, some are drawn, the most frequent distribution will be an equal number of black and white, but the average departure from equality will increase as the square root of the number drawn and the ratio of departure from equality will decrease as the square root of the number.

If large numbers of white and black balls are distributed in the ratio of 33 white to 47 black, and we draw 80 balls, the most probable number of white balls will be 33. The standard deviation from 33 in a large number of draws will be 4.40, and the quartile deviation or probable error will be 2.97; that is, in one case out of four there will be more than three white balls. The psychologist at the bottom of the fifty received 33 votes out of a possible 80. If an indefinitely large number of psychologists were distributed in this ratio the deductive probable error or error of sampling would be 2.97. The actual probable error, namely, 3.63, is composed of (the square root of the sum of the squares of the two) this deductive probable error and an error or deviation due to the groupings of the psychologists into different "species" with different points of view. The psychologist who stood XIL had a probable error of 3.1. The deductive probable errors are approximately the same for the two individuals, but it is more difficult to form a judgment regarding No. L than regarding No. XIL.⁵

⁵ In these cases the actual and the deductive probable errors have probable errors of the order of magnitude of the differences between them, and these differences have only moderate validity. The writer has purposely "not minded his p's and his q's," for it seems that equations are not becoming to one who is not a mathematician.

⁴ Address of the president of the American Society of Naturalists, *SCIENCE*, April 10, 1903.

The situation may be illustrated by an instance of general importance. Death rates, birth rates and marriage rates are continually used, but always without probable errors. Thus, for example, the Bureau of the Census issues weekly a bulletin that contains the death rates of the leading cities of the United States, but the figures have no meaning because one does not know whether the different rates are due to chance fluctuations with a limited population or to causes such as a large proportion of infants or an epidemic of influenza.⁶ If the average death rate is 12 per thousand, in a city of 100,000 population there will be about 23 deaths in a week. If black and white balls in indefinitely large numbers are distributed in the ratio of 23 black to 99,977 white and 100,000 are drawn, the most probable number of black balls is 23, but one time in four there will be more than 27. Thus the recorded death rate for a week for a city of 100,000 will normally fluctuate. If it is on the average 12, it will in half the weeks be approximately either as large as 15 or as small as 9.

If the death rate exceeds 15 in two consecutive weeks then the chances are fifteen out of sixteen that it is due to some cause such as an epidemic. The conditions are obviously of practical importance for physicians and health officers. The situation for death rates is nicely illustrated by the illustration that has been used of the distribution of black and white balls in an urn. If the population of the

⁶In the last report received (for the week ending September 2, 1922) the death rate of New Haven is given as 5.8 and of Houston as 13.9. In the same week a year ago the death rate of New Haven was 10 and of Houston 7.6. Without probable errors these figures give no useful information in regard to the conditions in the two cities.

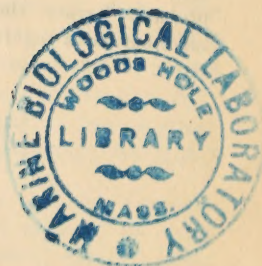
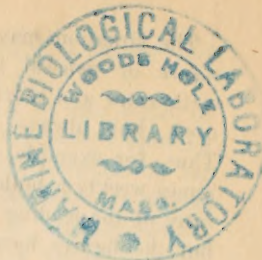
country were 100,000,000 and the death rate were 12 (as it should be, but is not), then 1,200,000 people would die during a year. Among 100,000,000 black and white balls there are 1,200,000 black. But if we draw 100,000 (*i. e.*, take a town of that population) there will be a chance fluctuation as described above. It is also the case that the balls are not completely mixed, there being more black balls in some part of the urn than others. In some places we shall draw a larger proportion of black balls. When there is a negro population or a tenement house population or a large population of very young or very old people, there are relatively more black balls. There are temporarily more black balls in one place when there is an epidemic or the like. In that case we have the analogy of the black balls attracting one another.

This paper has been written to explain the methods used to select the thousand leading American men of science by votes. The psychologists have been taken as an example; if space and time permitted tables and curves might be given for the other sciences and a study of the data might yield results of interest. Such treatment must, however, be postponed or left to others. The object of the present paper will be accomplished if it makes clear that the scientific men have been selected and placed in the order of merit for their work by valid objective methods and that the methods used have wide application. In a subsequent paper the distribution of the scientific men will be considered with special reference to the changes that have occurred in the course of ten years.

J. McKEEN CATTELL

THE PSYCHOLOGICAL CORPORATION,
AUGUST 1, 1922







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EDITED BY J. KEEN CATTELL

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AMERICAN MEN OF SCIENCE

A BIOGRAPHICAL DIRECTORY

EDITED BY

J. McKEEN CATTELL

AND

DEAN R. BRIMHALL

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PREFACE TO THE FIRST EDITION

THIS BIOGRAPHICAL DIRECTORY OF AMERICAN MEN OF SCIENCE was begun as a manuscript reference list for the Carnegie Institution of Washington, which made an appropriation of \$1,000 toward the clerical and office expenses. It is hoped that the publication will be a contribution to the organization of science in America. There is here given for the first time a fairly complete survey of the scientific activity of a country at a given period. As a reference book for the field it covers, it may be even more useful in academic circles than *Minerva* or *Who's Who in America*. But the chief service it should render is to make men of science acquainted with one another and with one another's work. There scarcely exists among scientific men the recognition of common interests and the spirit of cooperation which would help to give science the place it should have in the community. It is fully as important for the nation as for men of science that scientific work should be adequately recognized and supported. We are consequently in the fortunate position of knowing that whatever we do to promote our own interests is at the same time a service to the community and to the world.

There are included in the directory the records of more than four thousand men of science, and it is believed that the entries are tolerably complete for those in North America who have carried on research work in the natural and exact sciences. Some are admitted who are supposed to have advanced science by teaching, by administrative work, or by the preparation of text-books and compilations. There are also some whose work has been chiefly in engineering, medicine or other applied sciences, and a few whose work is in education, economics or other subjects not commonly included under the exact and natural sciences. But the book does not profess to cover these fields. The names are included because they are supposed to represent work that has contributed to the advancement of pure science—the term being used in the narrower sense—or because they are found in the membership lists of certain national societies. * * * *

It was intended that each entry should contain information as follows:

- (1) The full name with title and mail address, the part of the name ordinarily omitted in correspondence being in parentheses.
- (2) The department of investigation given in italics.
- (3) The place and date of birth.
- (4) Education and degrees.
- (5) Positions with dates, the present position being given in italics.
- (6) Temporary and minor positions.
- (7) Honorary degrees and other scientific honors.
- (8) Membership in scientific and learned societies.
- (9) Chief subjects of research, those accomplished being separated by a dash from those in progress.

A star is prefixed to the subject of research in the case of about a thousand of the biographical notes. These are the thousand students of the natural and exact sciences in the United States whose work is supposed to be the most important. In each of the twelve principal sciences the names were arranged in the order of merit by ten leading students of the science. The average positions and the probable errors were then calcu-

There is no change in the general plan of the book. Arrangements were made to include biographical sketches of the thousand leaders of science of foreign nations and to prepare a statistical study of their distribution, performance, etc. Material for this purpose was partly collected, but the war made difficult both the obtaining of the material and objective judgments. The thousand leading American men of science who died prior to the publication of the first edition of the book have been selected by objective methods with a view to a scientific study. A new edition of this work published five years hence may include biographical sketches of the thousand leading foreign men of science and of the thousand Americans who made most important contributions to science prior to the twentieth century.

The first edition, compiled in 1904 and published at the beginning of 1906, contained about 4,000 biographies; the second edition published at the end of the year 1910, about 5,500. In the present edition, published fifteen years after the first, the number is about 9,500. This increase may to some extent be due to a more complete collection of the material, but in the main measures the increase in the number of scientific men.

After an interval of ten years, the thousand men whose work for science has been most valuable have been reselected. Stars are prefixed to the subjects of research for these, as well as for those who received this position in the previous edition. The selections were made by a vote of the men competent in each science—some two thousand in all being asked to take part, of whom about one thousand complied. An account of the methods of selection and a further study of the scientific situation are in course of preparation. In the present volume an appendix contains statistics and observations concerning origins and families of American men of science.

J. McKEEN CATTELL

GARRISON, N. Y.
May, 1921

AMERICAN MEN OF SCIENCE

Aase, Prof. Hannah (Caroline), State College of Washington, Pullman, Wash. *Botany*. Elkpoint, S. Dak, July 12, 83. A.B, South Dakota, 96; Ph.D, Chicago, 14. Instr. bot, Wash. State, 14-19, asst. prof, 19- A.A; Bot. Soc. Plant morphology.

Abbe, Cleveland, Jr, Engineering and Mining Journal, Tenth Ave. and 36th St, New York, N. Y. *Geology, Climatology*. Washington, D. C, March 25, 72. A.B, Harvard, 94, A.M, 96; Ph.D, Hopkins, 98; Vienna and Paris, 01-03. Prof. nat. sciences, Winthrop Nor. and Indust. Col, 99-01; aid, U. S. Geol. Surv, 03-06; with U. S. Weather Bur, 06-19; '*Eng. and Mining Jour.*' 19- Asst, Md. Geol. Surv, 97-01; asst. ed, 'Monthly Weather Rev,' 08-09, 14-16, ed, 16-18; 'Sci. Am. Supplement,' 19. A.A; Geol. Soc; Wash. Philos. Soc; Berlin Gesell. für Erdkunde. Topographic development; climate of Guam, Alaska; fall line of east North America; Washington winters.

Abbe, Dr. Robert, 11 W. 50th St, New York, N. Y. *Surgery*. New York, April 13, 51. A.B, Col. City of N. Y, 70; M.D, Columbia, 74. Prof. surg, Woman's Med. Col, N. Y, 86-88; Post-Grad. Med. Sch, N. Y, 88-96; clin. instr. surg, Columbia, 94-99, assoc, 99- Senior attending surgeon, St. Luke's Hosp, 84- A.A; Surg. Ass.

Abbe, Dr. Truman, Stoneleigh Court, Washington, D. C. *Medicine*. Washington, Nov. 1, 73. A.B, Harvard, 95; M.D, Columbia, 99; Berlin. Instr. physics, physiol. and surg, Georgetown, 02-05; physiol, George Washington, 06-10, surg, 10- Am. Med. Ass. Radiotherapy; surgery.

Abbot, C(harles) G(reeley), Smithsonian Institution, Washington, D. C. *Astrophysics*. Wilton, N. H, May 31, 72. B.S, Mass. Inst. Tech, 94, M.S, 95; D.Sc, Melbourne, 14, Asst, Smithsonian *Astrophys. Observatory*, 95-96, aid, acting in charge, 96-07, director, 07-, asst. sec'y, Smithsonian Inst, 18- Draper medal, Nat. Acad, 10. Nat. Acad. (home sec'y, 19-); A.A; Astron. Soc; Philos. Soc; Wash. Philos. Soc. (v. pres, 08-10); Wash. Acad; Soc. Astron. de Mex; Royal Astron. Soc; cor. mem. Meteor. Gesell; Soc. Astron. de France; Modena Acad. Solar physics; infra-red solar spectrum; solar constant of radiation; sensitive galvanometer; osmotic pressure; absolute recording pyr-heliometer; variability of sun and of terrestrial temperatures; utilization of solar heat.

Abbot, Dr. E(dward) Stanley, 1301 Spruce St, Philadelphia, Pa. *Psychiatry*. Beverly, Mass, Dec. 13, 63. A.B, Harvard, 87, M.D, 93. Asst. histol, Harvard Med. Sch, 90-92; house officer, Boston City Hosp, 92-94; asst. physi-

cian, McLean Hosp, 94-98; asst. supt, Boston City Hosp, 00-04; first asst. physician, McLean Hosp, 04-09; clin. pathologist, 09-17, med. director, mental hygiene com, Public Charities Ass, Pa, 19- Major, M.C, 17, chief, neuro-psychiat. clinic, 17-18. A.A; Am. Med. Ass; Psychol. Ass; Medico-Psychol. Ass; New Eng. Soc. Psychiat. Insanity; medical psychology.

Abbot, Gen. Henry Larcom, U. S. A. (retired), 23 Berkeley St, Cambridge, Mass. *Engineering, Physics*. Beverly, Mass, Aug. 13, 31. Grad, U. S. Mil. Acad, 54; LL.D, Harvard, 86. All grades from second lieut. to col, E.C, 54-95 (retired by law), brig. gen. retired, 04. Col, brevet brig. and maj. gen, U. S. Vols; chairman, group XVI, Centennial Expos, 76; higher jury of awards, Atlanta Expos, 95; pres, board of consulting engineers, Pittsburgh and Lake Erie Canal, 95-96; mem. Int. Commission Engineers, New Panama Canal Co, 97-00, consulting engineer, 00-04; prof. hydraul. eng, George Washington, 06-; mem. many govt. boards. Nat. Acad; Philos. Soc; Am. Acad; New Orleans Acad; cor. mem. Austrian Imperial Royal Geol. Soc. River and harbor improvements; coast defence; submarine mining; explosives; electricity; vertical fire; astronomy; canals; river hydraulics; climatology of the Isthmus of Panama; the Chagres River; the Panama Canal.

Abbott, Dr. A(lexander) C(rever), 4229 Baltimore Ave, Philadelphia, Pa. **Hygiene, Bacteriology*. Baltimore, Md, Feb. 26, 60. Baltimore City Col, 77; M.D, Maryland, 84, hon. Sc.D, 07; Hopkins, 84-87; Munich, 87-88; Berlin, 88-89. Asst. hygiene and bacter, Hopkins, 89-91; asst. in charge, lab. of hygiene, Pennsylvania, 91-96, prof. hygiene and bacter. and director, lab. of hygiene, 97-, director, sch. hygiene and pub. health, 19- Director, div. path, bacter. and disinfection, Bur. of Health, Phila, 97; chief, Bur. of Health, and pres, Board of Health, 03-09. A.A; Soc. Bact; Am. Physicians; Physiol. Soc; Soc. Exp. Biol; Am. Med. Ass; Pub. Health Ass; Philos. Soc. Bacteriology and preventive medicine; infection, intoxication and immunity.

Abbott, Dr. C(harles) H(arlan), Massachusetts Agricultural College, Amherst, Mass. *Zoology*. Antrim, N. H, March 1, 89. A.B, Brown, 13, A.M, 14, Ph.D, 18. Instr. zool, Wash. State, 14-15; biol, Haverford, 16-17; asst, Yale, 19; instr. zool, Mass. Col, 19- Second lieut, Sanit. C, 18. A.A; Ecol. Soc. Ecology; light reactions of land isopods.

Abbott, Prof. George Alonzo, University, N. Dak. *Chemistry*. Alma, Ill, July 7, 74. B.S, Depauw, 95, A.M, 96; fellow, Chicago, 04-05; Austin fellow and research asst, Mass. Inst.

- Tech, 04-06, Ph.D, 08. Teacher *chem*, high sch, Evansville, Ind, 96-99; Cent. High Sch, Duluth, Minn, 99-00; Manual Training High Sch, Indianapolis, 00-04, 06-08; asst. prof, N. Dak. Col, 08-10; *prof*, North Dakota, 10- Chem. Soc; fel. Ind. Acad. (press sec'y); N. Dak. Acad; Cent. Ass. Sci. Teachers (pres, 10). Pyrophosphoric acids; durability of paints.
- Abbott, Prof. J(ames) F(rancis)**, American Embassy, Tokyo, Japan. *Zoology*. Greeley, Colo, Sept. 27, 76. A.B, Stanford, 99; A.M, 03; fellow, Chicago, 03-04, Ph.D, 06. Instr. English, Shigaken Shogyo Gakko, Japan, 00-01; *prof*. English lang, Imp. Naval Col, Etajima, Japan, 01-03; *prof*. zool, Washington (St. Louis), 04-18; capt. mil. intel. div, gen. staff, 18-19; *commercial attaché*, Am. Embassy, Tokyo, 19-A.A; Soc. Nat; Soc. Zool; Royal Asiatic Soc, Japan (councilor). Faunal ichthyology; etenophore morphology; hybridization.
- Abbott, Dr. Maude E(lizabeth Seymour)**, 229 Prince Arthur St, Montreal, Can. *Anatomy*. St. Andrews East, Que, March 18, 69. A.B, McGill, 90, hon. M.D, C.M, 10; M.D, C.M, Bishop's Col, 94; L.R.C.P. and S, Edinburgh, 97. Asst. curator, *path. museum*, McGill, 99-01, *curator*, 02-, Governor's fellow, *path*, 04-10; lecturer *path*, 11- Ass. Path. and Bact; Montreal Medico-Chirurg. Soc; Int. Ass. Med. Mus. (sec'y-treas. and ed, 'Bul'); Can. Med. Ass. Pathological anatomy; congenital cardiac disease; organization of the medical museum and classification of specimens; respiratory metabolism; history of medicine.
- Abbott, Dr. Raymond B**, 1803 Cedar St, Berkeley, Calif. *Physics*. Kans, 73. B.S, California, 08, M.S, 12, Ph.D, 19. Elec. engineer, Edison Elec. Co, 00-08; *instr. physics*, California, 10- Assoc. Physical Soc. Electricity; conduction through radio vacuum tubes; velocity of sound from a moving source.
- Abel, Prof. John J(acob)**, Johns Hopkins Medical School, Baltimore, Md. **Pharmacology, Physiological chemistry*. Cleveland, Ohio, May 19, 57. Ph.B, Michigan, 83, hon. A.M, 03; Hopkins, 83-84; European universities, 84-90; M.D, Strasbourg, 88; hon. Sc.D, Michigan, 12; Pittsburgh, 15; LL.D, Cambridge, 20. Principal, high sch, La Porte, Ind, 79-80, supt. pub. schools, 80-82; lecturer *mat. med. and therapeut*, Michigan, 90-91, *prof*, 91-93; *pharmacol*, Hopkins, 93- Ed, 'Jour. Pharmacol. and Exp. Therapeut.' Nat. Acad; A.A; Physiol. Soc; Am. Physicians; Soc. Pharmacol. (pres, 09, 10); Soc. Exp. Biol; Soc. Biol. Chem. (v. pres, 07, pres, 08); Fed. Societies Exp. Biol. (councilor, 14); Chem. Soc; Philos. Soc; Phila. Col. Pharm; assoc. mem. Soc. Royale des Sci. Med. et Nat. Bruxelles; cor. mem. Vienna Imp. Med. Soc. Composition of animal tissues and fluids; function and isolation of special chemical principles of the animal organism; ethyl sulphid; carbamic acid; pigment of negro's skin; isolation of the blood-pressure-raising constituent of the suprarenal capsules in form of a benzoyl derivative; pharmacological action of alcohol; action of phthaleins and derivatives; the poisons of Amantia phalloides; action of antimonials in experimental trypanosomiasis; convulsant dyes; lymph hearts of the frog; vividiffusion and plasmapheresis; crystalline poisons of Bufo aqua; albumoses in the tissues; active principles of the pituitary gland; histamin and like substances in animal tissues and hydrolytic products of proteids.
- Abraham, Herbert**, 19 W. 74th St, New York, N. Y. *Chemistry*. New York, July 9, 83. B.S, Columbia, 03. *Vice pres*, Standard Paint Co, 03- Soc. Chem. Indust; Chem. Soc; Soc. Test. Mat; Int. Ass. Chem. Mat. Bitumens; oils.
- Abrams, Prof. D(uff A)ndrew**, Lewis Institute, Chicago, Ill. *Civil engineering*. Grand Tower, Ill, April 25, 80. B.S, Illinois, 05, C.E, 09. Asst, eng. exp. sta, Illinois, 05-07, assoc, 07-14; *prof. in charge*, structural materials research lab, Lewis Inst, 14- Wason medal, Concrete Inst, 18. A.A; Soc. Test. Mat; Math. Ass; Concrete Inst; Ill. Soc. Eng; Chicago Eng. Club; Can. Inst. Eng. Brick and terra cotta block columns; drain tile; composition and manufacture of concrete.
- Abrams, Prof. LeRoy**, Stanford University, Calif. *Botany*. Sheffield, Iowa, Oct. 1, 74. A.B, Stanford, 99, A.M, 02; fellow, Columbia, 04-05, Ph.D, 10. Acting *prof. bot*, Idaho, 99-00; asst. syst. bot, Stanford, 00-02, instr, 02-04; asst. curator, div. plants, U. S. Nat. Museum, 05-06; asst. *prof. syst. bot*, Stanford, 06-11, *assoc. prof. bot*, 11- Lecturer bot, California, 15; field asst. U. S. Dept. Agr, 18. A.A; Bot. Soc; West. Soc. Nat. Flora of the Pacific states.
- Abt, Prof. Isaac Arthur**, 104 S. Michigan Ave, Chicago, Ill. *Medicine*. Wilmington, Ill, Dec. 18, 67. Hopkins, 89. M.D, Northwestern, 91: Vienna and Berlin, 92-94. Intern, Michael Reese Hosp, 91-92; instr. *physiol. and histol*, Northwestern, 94-97, *prof. diseases of children*, Woman's Med. Sch, 97-01; *assoc. prof*, Rush Med. Col, 02-09; *prof. Northwestern*, 09- *Pediat. Soc*; Am. Med. Ass. *Pediatrics*.
- Acheson, Dr. Edward G(oodrich)**, 35 W. 42nd St, New York, N. Y. **Electrometallurgy, Chemistry*. Washington, Pa, March 9, 56. Bellefonte Acad, Bellefonte, Pa; hon. Sc.D, Pittsburgh, 09. Civil engineer, 76-80; Edison's lab, 80-82; supt, Cons. Lamp Co, Brooklyn, N. Y, 84; electrician, Standard Underground Co, Pittsburgh, 86-89; *pres*, Carborundum Co, 91-01; *Int. Acheson Graphite Co*, 00-; *Acheson Oildag Co*; *Acheson Corp*; *Acheson Ink Co*; *director*, Carborundum Co. John Scott medals, Franklin Inst, 94, 01; Rumford medal. Perkin medal; Grand Prix, Paris, 00; La. Purchase Expos, 04; Rumford premium, Am. Acad, 07. A.A; Elec. Eng; Electrochem. Soc. (pres, 08); Chem. Eng. (v. pres, 08); Franklin Inst; London Soc Arts. Electric furnaces and products; methods of clay-working; lubricants; deflocculation of solid matter; lubrication.
- Achilles, Mrs. Paul Strong (Dr. Elith Mulhall)**, Barnard College, New York, N. Y. *Psychology*. Boston, Mass, Aug. 6, 92. B.S, Columbia, 14, A.M, 15, Ph.D, 18. Asst. psychol, Barnard, Columbia, 13-15; Vassar, 16-17; *instr. exten. dept*, Columbia, 18- Clin. psychologist, N. Y. City; sch. psychol. examiner, Ossining, N. Y, 18; Briarcliff, 19. Psychol. Ass. Memory; judgment; feeble-mindedness.

Ackert, Prof. J(ames) E(dward), Kansas State Agricultural College, Manhattan, Kans. *Zoology*. Woosung, Ill., Aug. 31, 79. A.B., Illinois, 09, A.M., 11, fellow, 11-13, Ph.D., 13. Asst. *zool.*, Illinois, 09-11; asst. prof., *Kansas State*, 13-16, assoc. prof., 16-18, *prof.*, 18-, *parasitologist*, *Exp. Sta.*, 13- A.A.; Soc. Zool.; Micros. Soc. Innervation of integumentary sense organs; life histories of cestodes.

Acree, Prof. S(olomon) F(arley), Hahnemann Hospital, Rochester, N. Y. **Chemistry*. McGregor, Tex., Dec. 18, 75. B.S., Texas, 96, M.S., 07; fellow, Chicago, 98-01, Ph.D., 02; Berlin, 03-04. Asst. chem., Texas, 96-97; instr., high sch., San Antonio, Tex., 97-98; asst., Chicago, 00-01; assoc. prof. chem., Utah, 01-04; Johnston scholar, Hopkins, 05-06, assoc., 06-07, assoc. prof., 07-14; chief chemist, Forest Prod. Lab., 14-17; prof. forest chem., Wisconsin, 14-17; Syracuse, 17-19; *with Nat. Wood Chem. Ass.*, *Syracuse*, 17- A.A.; Chem. Soc. (chairman, sect. org. chem., 09); Tex. Acad.; Chem. Gesell. Reactions induced by enzymes; tautomerism; catalysis; theory of colors in indicators and dye stuffs; theory of mechanism of the reactions of alkyl halides; theory of pinacone and pinacone rearrangements; mechanism of certain organic reactions.

Adami, Prof. John George, University of Liverpool, Liverpool, England. *Pathology*. Manchester, England, Jan. 12, 62. Owens Col., Manchester, 77-80, 85-87; B.A., Cambridge, 84, M.B., 86, M.A., 87; M.D., 90; Breslau, 84-85; M.R.C.S., 87, F.R.C.S., 19; F.R.C.P., 14; hon. M.A., M.D., McGill, 99; LL.D., Toronto, New Brunswick; Sc.D., Dublin, 12. House physician, Manchester Royal Infirmary, 86; demonstrator path., Cambridge, 87-90, John Lucas Walker student in path., 89, lecturer, 90, fellow and director nat. science, Jesus Col., 90-92; prof. path., McGill, 92-19; *v. chancellor*, *Liverpool*, 19- Pathologist, Can. Dept. Agr., 97-02; Fothergill gold medal, London Med. Soc., 14; Croonian lecturer, Royal Soc., 19; hon. fel. Jesus and Christ's Colleges, Cambridge, 20. Soc. Nat.; Ass. Path. and Bact.; Soc. Bact.; Physiol. Soc.; Am. Physicians (v. pres, 10, pres, 11); Soc. Exp. Biol.; Soc. Biol. Chem.; hon. mem. Vet. Med. Ass.; Royal Soc. Can.; Montreal Medico-Chirurg. Soc. (pres, 98-00); Royal Col. Surg.; Royal Col. Physicians; British Med. Ass. (pres, sect. path., 06); London Path. Soc.; London Physiol. Soc.; fel. Royal Soc.; fel. Royal Soc. Edinburgh; cor. mem. Soc. Méd. de Lyon. Cardiac, renal and hepatic pathology; heredity of disease; causation of cancer and goitre; variability of bacteria; colon bacillus; tuberculosis; degenerative processes.

Adams, Prof. Cha(rles) C(hristopher), New York State College of Forestry, Syracuse, N. Y. **Zoology*. Clinton, Ill., July 23, 73. B.S., Ill. Wesleyan, 95, hon. Sc.D., 20; M.S., Harvard, 99; fellow, Chicago, 00-03, Ph.D., 08. Asst. biol., Ill. Wesleyan, 95-96; asst. entomologist, state lab. nat. hist., Illinois, 96-98; asst. *zool.*, Chicago, summer, 02; curator, univ. museum, Michigan, 03-06; director, Cincinnati Soc. Nat. Hist., 06-07; assoc. animal ecol., Illinois, 08-14; asst. prof. *forest zool.*, N. Y. State Col. Forestry, *Syracuse*, 14-16, *prof.*, 16-, *director*, *Roosevelt Wild Life Forest*

Exp. Sta., 19- Curator, museum, Cincinnati, 06-07. A.A.; Soc. Nat.; Ecol. Soc.; Soc. Mammal.; Soc. Foresters; Fisheries Soc.; Ass. Geog. Habitats, faunas and associations dynamically and genetically considered; general animal ecology; ecology of inland environments, prairies, lakes and forests; migration and evolution; geographical distribution; forestry and the food supply; relation of animal ecology to forestry, economics and sociology.

Adams, Prof. C(omfort) A(very), 33 W. 39th St., New York, N. Y. *Electrical engineering*. Cleveland, Ohio, Nov. 1, 68. B.S., Case, 90, E.E., 05. Elec. engineer, Brush Elec. Co., 90-91; instr. *elec. eng.*, *Harvard*, 91-96, asst. prof., 96-06, *prof.*, 06-, *dean*, *eng. sch.*, 19-; *chairman*, *div. eng.*, *Nat. Research Council*, 19- Consulting engineer, Stone and Webster, 01-04; Am. Tool and Machine Co., 04-; Warner Sugar Ref. Co., 10-; Okonite Co., 16-; Nat. Cond. and Cable Co., 20- Mem. jury awards, St. Louis, 04; board of award, Edison medal; Fritz medal. Chairman, gen. eng. committee, Council Nat. Defence; welding committee, Emergency Fleet Corp. A.A.; Elec. Eng. (pres, 18); Mech. Eng.; Automotive Eng.; Welding Soc. (pres, 19); Nat. Elec. Light Ass.; Am. Acad.; British Inst. Elec. Eng. Induction motors; alternator regulation; synchronous motors; dynamo design schedules; commutation.

Adams, Cyrus C(ornelius), Jewett, N. Y. *Geography*. Naperville, Ill., Jan. 7, 49. A.B., Chicago, 76. On ed. staff, 'N. Y. Sun,' 82-08. Pres, dept. geog., Brooklyn Inst., 89-93; chairman, Committee on Collection of Geog. Material for Schools, 89-93. Delegate from Nat. Geog. Soc. to Sixth Int. Geog. Cong., 95. A.A.; Ass. Geog. (pres, 06); Am. Geog. Soc. (assoc. ed., 'Bul.' 02-08, ed., 08-15). Exploration; development of newly explored lands; the interaction of man with his geographic environment; cartographic presentation of the facts of commercial and economic geography.

Adams, Prof. Edwin P(limpton), Princeton University, Princeton, N. J. **Physics*. Prague, Bohemia, Jan. 23, 78. B.S., Beloit, 99; M.S., Harvard, 01, Ph.D., 04. Instr. *physics*, *Princeton*, 03-06, asst. prof., 06-09, *prof.*, 09- A.A.; Physical Soc.; Philos. Soc.; Math. Soc.; Chem. Soc. Metallic conduction; Corbino effect in iron; theory of magnetism.

Adams, Prof. Frank, Berkeley, Calif. *Irrigation*. Chicago, Ill., Sept. 19, 75. A.B., Stanford, 01; A.M., Nebraska, 06. *Irrig. investigator*, U. S. Dept. Agr., 00-06, 10-; *prof. irrig. investigations*, *California*, 16- Irrigation with special reference to economics and agriculture.

Adams, Prof. Frank D(awson), McGill University, Montreal, Can. *Geology*. Montreal, Sept. 17, 59. B.S., McGill, 78, M.S., 84, hon. Sc.D., 02; Sc.D., Tufts, 14; Ph.D., Heidelberg, 92; LL.D., Toronto, 16; Queen's (Can.), 19. Asst. chemist and petrographer, Can. Geol. Surv., 80-89, lecturer *geol.*, *McGill*, 89-94, *Logan prof.*, 94-, *dean*, *faculty of applied science*, 08-, acting principal, 19-20. Ed., 'Can. Record of Science,' 93-98; mem. Advisory Council for Scientific and Industrial Research; Can. Conservation Commission. Lyell medal, London Geol. Soc., 06. Pres, Int.

- Geol. Cong, 13. For. assoc. Nat. Acad; A.A; Geol. Soc. (v. pres, 09, pres, 16); Philos. Soc; hon. mem. Min. Eng; Min. and Metal; hon. mem. Am. Acad; cor. mem. N. Y. Acad; Wash. Acad; cor. mem. Phila. Acad; fel. Royal Soc. Can. (pres); Can. Min. Inst. (pres, 10); fel. London Geol. Soc; fel. Royal Soc; hon. mem. Inst. Min. and Metal. Gt. Britain; cor. mem. Stockholm Geol. Soc; hon. mem. Russian Geol. Soc; hon. mem. Ekaterinburg Nat. Hist. Soc. Igneous rocks and crystalline schists; experimental geology; movements set up in rocks by pressure; geology of the Laurentian of Canada; geology of the Monteregian Hills; conservation.
- Adams, Prof. Geo(rge) I(rving)**, University of Alabama, Tuscaloosa, Ala. *Geology*. Lena, Ill, Aug. 17, 70. A.B, Kansas, 93, A.M, 95; Sc.D, Princeton, 96; Munich, 97; Yale, 11. Instr. nat. science, Kans. State Nor. Sch, 93-94; asst. Univ. of Kans. Geol. Surv, summers, 94-97; field asst, U. S. Geol. Surv, 98-99, asst. geologist, 00-04; chief hydrologist, Cuerpo de Ingenieros de Minas del Peru, 04-06; mine examinations, Peru, Bolivia and Chile, 06-07; geologist, div. of mines, Bur. Science, P. I, 08-10; *prof. geol. and mining*, Pei Yang Univ, Tientsin, China, 12-15; Peking Govt. Univ, 15-20; *geol. and miner, Alabama, 20-* Decorated by Chinese Govt. Geol. Soc; Min. Eng; Miner. Soc; Wash. Geol. Soc. Economic and structural geology.
- Adams, Dr. H(arold) S(tanard)**, The Naugatuck Chemical Co, Naugatuck, Conn. *Biochemistry*. Pittsfield, Mass, May 20, 88. A.B, Williams, 11; fellow, Chicago, 12-14, Ph.D, 15. Asst. chem, Mass. Col, 11-12; instr. physiol. chem. Chicago, 14-16; physiol. chemist, E. R. Squibb and Sons, 16-20; *director, research, Naugatuck Chem. Co, 20-* A.A; Chem. Soc. Respiration of nerve tissue; physiological standardization; internal secretion; overvoltage.
- Adams, Dr. H(enry) F(oster)**, Ann Arbor, Mich. *Psychology*. Oak Park, Ill, Nov. 11, 82. Ph.B, Wesleyan, 05; Ph.D, Chicago, 10. Asst. prof. *psychol*, Kansas, 10; asst, Chicago, 11-12; inst, *Michigan, 12-18*, asst. prof, 18-20, *assoc. prof, 20-* A.A. Visual perception; kinesthetic sensations; behavior of blind rats; memory; attention value in advertising; business psychology; psychology of character.
- Adams, Prof. J(ames) F(owler)**, University Club, State College, Pa. *Botany*. Charlestown, Mass, March 5, 88. B.S, Mass. Col, 11; M.S, Pa. State, 14; fellow, Columbia, 17-18, Ph.D, 18. Asst. plant path, Mass. Col, 11; *Pa. State, 12*, asst. prof. bot, 14-18, *assoc. prof. plant path, 18-* Bot. Soc; Phytopath. Soc; Torrey Bot. Club. Plant pathology; cytology of Uredinales; rusts.
- Adams, J(ohn)**, 68 Fairmount Ave, Ottawa, Can. *Botany*. Antrim, Ireland, Jan. 20, 72. Queen's (Ire); A.B, Cambridge, 00, A.M, 03. Asst. prof. bot, Royal Col. Science, Dublin, 02-14; prof, Royal Vet. Col, 07-14; *asst. Dominion botanist, Can, 14-* A.A.
- Adams, Prof. John Mead**, University of California, Los Angeles, Calif. *Physics*. Reading, Mass, June 6, 82. A.B, Harvard, 03, A.M, 05, Ph.D, 07, John Tyndall scholar, 08-09. Asst. *physics, Harvard, 04-08*; instr, Simmons, 07-08; prof, Occidental, 09-12; asst. prof. Queen's (Can), 12-16; Saskatchewan, 16-19; *assoc. prof, California, 19-* A.A; Physical Soc. Röntgen rays.
- Adams, L(eason) H(eberling)**, Geophysical Laboratory, Washington, D. C. *Chemistry*. Cherryvale, Kans, Jan. 16, 87. B.S, Illinois, 06. Tech. branch, U. S. Geol. Surv, 08-10; *physical chemist, geophys. lab, Carnegie Institution, 10* Manufacturer optical glass, W. I. B, 17-18; nitrate div, O. D, 18. Physical Soc; Chem. Soc; Wash. Acad; Wash. Philos. Soc. Physical and chemical constants of substances under high pressures; temperature measurements; gaseous equilibria and rate of reaction; optical glass.
- Adams, Dr. L(everett) A(llen)**, Greeley, Colo. *Anatomy*. Lawrence, Kans, Sept. 23, 77. A.B, Kansas, 03, A.M, 06; Ph.D, Columbia, 15. Museum instr, Kansas, 04-05; asst. *biol, Colo. State Teachers Col, 06-13*; *head of dept, 15-* Kans. Univ. *biol. exped, 06*; Colo. State Teachers Col. *exped, 07*; Frick scholar, Am. Museum Nat. Hist, 14. A.A; Paleont. Soc; fel. N. Y. Acad. Vertebrate anatomy; phylogeny of the jaw muscles.
- Adams, Prof. Maxwell**, 29 W. Ninth St, Reno, Nev. *Chemistry*. St. George, W. Va, Feb. 28, 69. West Virginia, 90-91; A.B, Stanford, 95, A.M, 96; Ph.D, Chicago, 04. Lecture asst. *chem, Stanford, 95-97*; prof, Calif. State Nor. Sch, 97-06, v. pres, 02-06; *prof, Nevada, 06-*, *dean, col. arts and sciences, 17-* Instr, exten. dept, Chicago, 00-01; director, state soils lab, Nev, 14-16. A.A; Chem. Soc. Salts of tin; hydroxylamin; molecular weight of lactimid; action of hydroxylamin on salts of copper; wood distillation under diminished pressure; composition of wood turpentine; flotation and essential oils.
- Adams, Oscar S(herman)**, 325 Seventh St, N. E, Washington, D. C. *Applied mathematics*. Near Mt. Vernon, Ohio, Jan. 9, 74. B.S, Kenyon, 96, A.M, 15. Supt. schools, Centerburg, Ohio, 99-03; Dover, 03-05; Rock Creek, 05-06; principal, Madison Township High Sch, North Madison, 06-10; *geod. computer, U. S. Coast and Geod. Surv, 10-* Math. Ass. (see'y-treas, Md.-Va.-D. C. sect, 19); Math. Soc; Wash. Acad; Wash. Philos. Soc. Application of the theory of least squares to the adjustment of triangulation; theory of projections.
- Adams, Prof. R(ichard) L(aban)**, University of California, Berkeley, Calif. *Agriculture*. Dorchester, Mass, Aug. 27, 83. B.S, Mass. Col, 05; Boston, 05; M.S, California, 10. Plant pathologist, California, 06-07; director, exp. sta, Spreckels Sugar Co, 07-12; asst. gen. manager, Miller and Lux, 12-14; *prof. farm management, California, 14-* Economics of farming.
- Adams, Prof. Roger**, University of Illinois, Urbana, Ill. *Chemistry*. Boston, Mass, Jan. 2, 89. A.B, Harvard, 09, A.M, 10, Ph.D, 12; Berlin and Kaiser Wilhelm Inst, 12-13. Instr. *org. chem, Harvard, 13-16*; asst. prof, *Illinois, 16-19*, *prof, 19-* Major, C. W. S. A.A; Chem. Soc. (sec'y, org. div); Chem. Gesell. Alkali insoluble phenols; organic reagents; action of acid halids on aldehydes.
- Adams, Dr. Samuel S(hugert)**, 1801 Connecticut Ave, N. W, Washington, D. C. *Medicine*. Wash-

- ington, July 12, 53. A.B, West Virginia, 75, A.M, 78; M.D, Georgetown, 79. Lecturer diseases of children, Georgetown, 79-83; *prof. theory and practice of med*, National Univ, 83-91; *clin. pediat*, George Washington, 91-95; *theory and practice of med. and diseases of children*, Georgetown, 95-15; *chief, sch. of med*, 15-Am. Physicians; *Pediat. Soc*; *Am. Med. Ass*; *Wash. Obstet. and Gynec. Soc*; *Wash. Acad.*
- Adams, Capt. Walter H(olbrook)**, Whipple Barracks, Ariz. *Mechanical engineering*. Worcester, Mass, April 17, 82. B.S, Mass. Inst. Tech, 03. Asst. mech. eng, Mass. Inst. Tech, 03-05; instr, Brooklyn Polytech, 05-08; *prof*, Pei Yang Univ, Tientsin, 08-13; *Calif. Inst. Tech*, 13-19; *capt. engineers, U.S.A*, 18-20, *C.A.C*, 20- *Mech. Eng*; *Eng. Educ.* Heat power engineering.
- Adams, Walter S(ydney)**, Solar Observatory, Mt. Wilson, Calif. *Astronomy*. Antioch, N. Syria, Dec. 20, 76. A.B, Dartmouth, 98, Sc.D, 13; A.M, Chicago, 99; Munich, 00-01. Asst. Yerkes Observatory, 01-03; *instr. astrophys*, 03-04; *asst. astronomer, solar observatory, Carnegie Institution*, 04-09, *astronomer and asst. director*, 09- *Gold medal*, Royal Astron. Soc, 17; *Draper medal*, Nat. Acad, 18. *Nat. Acad*; A.A; *Philos. Soc*; *Astron. Soc*; *Royal Astron. Soc*. Stellar motions in the line of sight; stellar and solar spectroscopy; rotation of the sun.
- Adamson, George P**, General Chemical Co, 25 Broad St, New York, N. Y. *Chemistry*. Philadelphia, Pa, Aug. 24, 64. B.S, Lafayette, 84, M.S, 87. *Manager, the Baker and Adamson branch (Easton, Pa)*, *Gen. Chem. Co, manager, research dept, Gen. Chem. Co*. A.A; *Chem. Soc.* (asst. ed, 'Eng. Jour'); *Soc. Chem. Indust*; *Electrochem. Soc*; *Chem. Eng.* Laboratory reagents; P-amido phenol; metol; oxidation products of anilin and phenols; urea; diphenyl amin.
- Addicks, Lawrence**, 51 Maiden Lane, New York, N. Y. *Metallurgy*. Philadelphia, Pa, March 3, 78. B.S, Mass. Inst. Tech, 99. With Santa Rita Mining Co, 99-05; *asst. to supt, Raritan Copper Works*, 00-05; *gen. supt, U. S. Metals Ref. Co*, 05-14; *consulting engineer*, 14- *Mem. Naval Con. Board*. Min. and Metal. Soc; *Min. Eng*; *Mech. Eng*; *Electrochem. Soc.* (pres, 15); *fel. Elec. Eng*; *Soc. Test. Mat*; *Int. Ass. Test. Mat*; *Inst. Min. Metal. London*. Smelting, refining, leaching and properties of copper, lead and zinc.
- Addis, Prof. T(homas)**, Lane Hospital, San Francisco, Calif. *Pathology*. Edinburgh, Scotland, July 27, 81. M.B, Edinburgh, 05, M.D, M.R.C.P, 08; *Carnegie research scholar*, Edinburgh Royal Infirmary, 08-09, *fellow*, 09-11. *Clin. asst, outpatient dept*, Edinburgh Royal Infirmary, 10-11; *asst. prof. med, Stanford*, 11-13, *assoc. prof*, 13- *Registrar*, Leith Hosp, 11. *Am. Physicians*; *Soc. Exp. Biol*; *Ass. Path. and Bact*; *Soc. Clin. Invest*; *Am. Med. Ass.* Coagulation of blood; hereditary hemophilia; plasma; urobilin; hemoglobin pigment; glycosuria; urea in nephritis.
- Addison, Dr. William H(enry) F(itzgerald)**, School of Medicine, University of Pennsylvania, Philadelphia, Pa. *Anatomy*. Whitby, Ont, April 23, 80. B.A, Toronto, 02, M.B, 05, M.D, 17. Asst. biol, Toronto, 02-04; *demonstrator histol. and embryol, Pennsylvania*, 05-12, *asst. prof*, 12-19, *prof*, 19-; *anat, grad. sch. med*, 20-A.A; *Ass. Anat*; *Path. Soc. Phila*; *Physiol. Soc. Phila*; *Phila. Col. Physicians*. Regeneration and transplantation of normal tissues; histogenesis of cerebellar cortex and hypophysis; prenatal and neonatal lung; incisor teeth of albino rat; rhinencephalon of dolphin; hypophysis after castration; phagocytosis; comparative histology of spleen.
- Adkins, Prof. Homer (Burton)**, University of Wisconsin, Madison, Wis. *Chemistry*. Newport, Ohio, Jan. 16, 92. B.S, Denison, 15; A.M, Ohio State, 16, Ph.D, 18. *Instr. org. chem*, Ohio State, 18-19; *asst. prof. Wisconsin*, 19- *Research chemist, exp. sta, American*, summer, 18; *E. I. duPont de Nemours and Co*, summer, 19. *Chem. Soc.* Organic chemistry; oxidation with alkaline permanganate; catalytic decomposition of esters.
- Adkins, W(alter) S(cott)**, University of Texas, Austin, Tex. *Geology*. Tenn, Dec. 24, 90. B.S, Tennessee, 10; Columbia, 12-13, 15-16. *Instr. anat, col. med, Illinois*, 17-18; *curator collections, bur. econ. geol, Texas*, 19-20, *assoc geologist*, 20- *Paleont. Soc*; *Ass. Petrol. Geol*; *Southwest. Geol. Soc*; *Soc. géol. de France*. Comanchean invertebrate paleontology and stratigraphy.
- Adler, Dr. Cyrus**, 2041 N. Broad St, Philadelphia, Pa. *Archeology, Oriental history*. Van Buren, Ark, Sept. 13, 63. A.B, Pennsylvania, 83, A.M, 86; Ph.D, Hopkins, 87. *Instr. Semitic languages*, Hopkins, 87-90, *assoc*, 90-93; *librarian*, Smithsonian Inst, 92-05; *asst. sec'y*, 05-08; *curator hist. religions and hist. archeol, U. S. Nat. Museum*, 08; *pres, Dropsie Col. for Hebrew and Cognate Learning*, 08-; *acting pres, Jewish Theol. Sem*, 16- *Representative of Columbian Expos. to Turkey, Egypt, Morocco, etc.* Delegate for U. S. Govt. to Conf. on Int. Catalogue of Sci. Lit, London, 98; *chairman, board of editors, Jewish Translation of Bible*; *Jewish Classics Board*. A.A; *Archeol. Inst*; *Am. Jewish Hist. Soc.* (pres); *Anthrop. Ass*; *Philol. Ass*; *Oriental Soc*; *Philos. Soc*; *Wash. Acad*; *Wash. Philos. Soc*; *Wash. Anthropol. Soc.* Assyriology; Jewish antiquities and history; history of the Jews on the American continent.
- Adler, Dr. Herman M(orris)**, 721 S. Wood St, Chicago, Ill. *Criminology*. New York, N. Y, Oct. 10, 76. A.B, Harvard, 97; A.M, M.D, Columbia, 01. Asst. theory and practise of physic, Harvard Med. Sch, 07-09, *instr. neuropath. and psychiat*, 09-12, *asst. prof. psychiat*, 12-16; *mental disease and mental deficiency investigation*, Nat. Committee Mental Hygiene, Rockefeller Foundation, 16-17; *state criminologist, Ill*, 17-; *prof. criminol. and head, dept. social hygiene, med. jurisprudence and criminol, med. dept, Illinois*, 19- *Asst. clin. path, Boston City Hosp*, 07-09; *pathologist and asst. physician, Danvers State Hosp*; *major, M.C*, 18-19. A.A; *Ass. Path. and Bact*; *Soc. Biol. Chem*; *Psychopath. Ass*; *Soc. Clin. Invest*; *Chem. Soc*; *Soc. Exp. Biol*; *Neur. Ass*; *Medico-Psychol. Ass*; *Am. Med. Ass*; *Boston Soc. Med. Sci*; *N. Y. Acad. Med.* Personality and behavior difficulties; mental factors in criminology.

- Adriance, Prof. John S(abin)**, Williamstown, Mass. *Chemistry*. New York, Feb. 18, 61. A.B., Williams, 82, A.M., 85, Ph.D., 90. *Prof. chem. and toxicol.*, N. Y. *Homeop. Med. Col.*, 97- A.A.; Chem. Soc.; Soc. Chem. Indust.; fel. London Chem. Soc. Breast milk; ash of breast milk.
- Agard, Dr. H(arry) L(eslie)**, Williamstown, Mass. *Mathematics*. Waterbury, Conn., March 19, 83. A.B., Wesleyan, 04; A.M., Yale, 08, Ph.D., 11. Instr. math, Wesleyan Acad., 04-05; Phillips Andover, 05-07; Hopkins Grammar, 07-10; Yale, 10-11; Williams, 11-15, asst. prof., 15- A.A.; Math. Soc.
- Agg, Prof. T(ansey) R(adford)**, 707 Hodge Ave., Ames, Iowa. *Engineering*. Fairfield, Iowa, May 17, 78. B.S., Ames, 05, C.E., 14. Instr. drawing, Illinois, 05-06, mech., 06-08; road engineer, Ill. State Highway Dept., 08-13; *prof. highway eng. and in charge highway investigations*, Iowa State, 13- Mem. div. eng., Nat. Research Council. Civil Eng.; Soc. Test. Mat.; Ass. State Highway Eng. (chairman, committee on tests and investigations). Load distribution on highway bridge floors; gravel surfacing; concrete road failures; weight of traffic; proportioning unscreened gravel; tractive resistance.
- Agnew, Dr. J(ames) Howard**, Houston, Tex. *Internal medicine*. Pittsburgh, Pa., July 31, 84, A.B., Michigan, 07, A.M., 08, M.D., 10. Asst. hygiene, Michigan, 07-08, med., 10-12, instr. clin. micros., 12-13, physical diagnosis, 13-14; prof. med., Alabama, 14-17; major, M.C., 17-19; internist, Houston, Tex., 19- A.A. Pulse wave; incoagulable blood nitrogen.
- Agnew, Dr. P(aul) G(ough)**, 29 W. 39th St., New York, N. Y. **Physics*. Hillsdale, Mich., July 3, 81. B.L., Hillsdale, 01; A.M., Michigan, 02; Ph.D., Hopkins, 11. Instr. physics, high sch., Pontiac, Mich., 02-05; lab. asst., Bur. Standards, 06-07, asst. physicist, assoc. physicist, and later physicist, 08-19; sec'y. Am. Eng. Standards Committee, 19- A.A.; Physical Soc.; Elec. Eng.; Wash. Acad.; Wash. Philos. Soc. (sec'y., 16). Electrical measurements; transformers.
- Agramonte, Prof. Aristides**, 146 K St., Vedado, Havana, Cuba. *Microbiology, Tropical medicine*. Camagüey, Cuba, June 3, 69. A.B., N. Y. Univ., 86; M.D., Columbia, 92; M.B., Havana, 99, M.D., 00; hon. Sc.D., Columbia, 14. Sanit. inspector and asst. bacteriologist, Health Dept., N. Y. City, 97-98; acting asst. surgeon, U.S.A., 98-02; *prof. bacter. and exp. path.*, Havana, 00- Sec'y Board of Infectious Diseases, Havana, 02-09, chairman, 09; mem. Nat. Board of Health, 09- Breant prize, Paris Acad., 12; Cuban Govt. delegate, Int. Med. Congresses, 06, 09, 13; Int. Hygiene and Demog. Cong., 10; Int. Sanit. Conf., 11; Pan-Am. Sci. Cong., 15. Hon. mem. Soc. Trop. Med.; Pub. Health Ass.; Cuban Nat. Med. Cong. (pres., 17); Havana Clin. Soc. (pres., 15-17); Havana Acad.; Soc. de Path. Exotique; Hungarian Med. Soc.; Int. Soc. Trop. Med. Yellow fever; plague; dengue fever; intermarriage of lepers; trachoma; malaria; water purification; uncinariasis; tuberculosis.
- Ahern, Major George**, U. S. A. (retired), War Department, Washington, D. C. *Forestry, Geography*. New York, N. Y., Dec. 29, 59. Grad. U. S. Mil. Acad.; LL.B., Yale, 95. *Officer, U.S.A.*, 82- Prof. forestry, Mont. Col., 97-98; director forestry, P. I., 00-14. A.A.; Soc. Foresters; Ass. Geog. Tropical forestry.
- Ahern, Prof. M(ichael) J(oseph), S.J.**, Canisius College, Buffalo, N. Y. *Geology*. New York, N. Y., May 25, 77. A.B., St. Francis Xavier, 96; A.M., Woodstock, 02; Innsbruck, Austria, 07-11. Instr. chem. and geol., Boston Col., 02-06; geol. and math., Woodstock, 06-07; prof. and director, dept. science, Canisius, 11-14; prof. chem. and head, dept. chem. and geol., Boston Col., 15-19; *pres. and director chem. laboratories*, Canisius, 19- A.A.; Chem. Soc.; Boston Col., 15-19; *pres. and director chem. Soc. Nat. Sci.* Prehistoric archeology.
- Aikins, Prof. H(erbert) Austin**, 2038 Cornell Road, Cleveland, Ohio. *Philosophy, Psychology*. Toronto, Can., March 1, 67. B.A., Toronto, 87; Ph.D., Yale, 91; hon. fellow, Clark, 92-93. Instr. philos., Southern California, 88; lecturer, Yale, 90-91; *prof. philos. and logic*, Trinity (N. C.), 91-92; *philos. col. for women*, Western Reserve, 93- A.A.; Philos. Ass.; Psychol. Ass.; Ass. Prof. (v. pres., 19). Logic; mental tensions.
- Ainslie, Charles N(icolas)**, 5009 Orleans Ave., Sioux City, Iowa. *Entomology*. Amsterdam, N. Y., Oct. 13, 56. A.B., Beloit, 77, A.M., 80. Banker, Rochester, Minn., 81-06; field agent, bur. entom., U. S. Dept. Agr., 06-12, entom. asst., in charge entom. lab., Sioux City, 12- A.A.; Entom. Soc.; Ass. Econ. Entom.; Wash. Entom. Soc.; Iowa Acad.; Sioux City Acad.
- Ainslie, Prof. Geo(rge) G(ooding), R.R. 9** Knoxville, Tenn. *Entomology*. Rochester, Minn., March 7, 86. B.S. (Agr.), Minnesota, 08. Asst. to state entomologist, Minn., 06-08; agent and expert, bur. entom., U. S. Dept. Agr., 08-09; asst. entom., Clemson, 09-10; entom. asst., bur. entom., U. S. Dept. Agr., 10- A.A.; Entom. Soc.; Ass. Econ. Entom. Crambidae; Aphididae.
- Aitken, Prof. Robert G(rant)**, Lick Observatory, Mt. Hamilton, Calif. **Astronomy*. Jackson, Calif., Dec. 31, 64. A.B., Williams, 87, A.M., 92, Sc.D., 17; Pacific (Calif.), 03. Instr. math., Livermore, 88-91; prof. math. and astron., Pacific (Calif.), 91-95; asst. astronomer, Lick Observatory, 95-07, astronomer, 07- Principal, acad., Pacific (Calif.), 93-95. Lalande gold medal for double star discoveries, French Acad., 06. Nat. Acad.; A.A.; Philos. Soc.; Astron. Soc.; Pacific Astron. Soc. (ed., 97-08, 11-, pres., 98, 15); Wash. Acad.; assoc. Royal Astron. Soc. Double Stars; faint satellites; comets; photometry; rapid binary stars; statistical studies relating to binary stars; orbits of binary stars.
- Akeley, Prof. Lewis E(llsworth)**, Vermilion, S. Dak. *Physics*. Clarendon, N. Y., Feb. 22, 61. A.B., Rochester, 86, A.M., 88, LL.D., 12. Prof. nat. and physical sciences, South Dakota, 87-88, physics and chem., 88-04, *prof. physics*, 04-, dean, col. eng., 08- Physical Soc.; Eng. Educ. Teaching of physics and electrical engineering.
- Akers, Prof. O(scar) P(erry)**, Allegheny College, Meadville, Pa. *Mathematics*. Trenton, Mo., June 16, 72. A.B., Colorado, 00, A.M., 02; Ph.D., Cornell, 05. Asst. math., Cornell, 04-05; asst. prof., Allegheny, 05-07, *prof.*, 07- A.A.; Math.

- Soc; Math. Ass; Circolo Mat. di Palermo. Line geometry.
- Akimoff, Nicholas W(ladimir)**, 303 Harrison Building, Philadelphia, Pa. *Engineering*. Russia, May 15, 77. Mech. E, Moscow, 01. Practising engineer, 02-18; *engineer and manager, Vibration Specialty Co*, 18- Lecturer dynamics, Pennsylvania. Mech. Eng; Automotive Eng; Math. Soc; Naval Eng; Franklin Inst. Dynamics; vibratory motion.
- Albert, Prof. Henry**, Iowa City, Iowa. *Pathology, Bacteriology*. Walcott, Iowa, Oct. 11, 78. B.S, Iowa, 00, fellow, 01-02, M.D, M.S, 02; Vienna, 03. Instr. *path and bacter*, Iowa, 02-03, *prof*, 03-; *director, State Bacter. Lab*, 04- Asst. physician, State Insane Asylum, Independence, Iowa; pathologist, univ. hosp, Iowa, 03-14. A.A; Ass. Path. and Bact; Soc. Bact; Am. Med. Ass. Leucocytes; sarcoma of the spleen; pseudo-parasites; typhoid bacillus carriers; hypernephroma; disinfectants; hypertrophy of the mammary glands; chordoma; influenza; diphtheria.
- Albrecht, C(larence) J(ohn)**, State Museum, Seattle, Wash. *Zoology*. Waverly, Iowa, Sept. 28, 91. A.B, Iowa, 13. *Curator zool, state museum, Washington (Seattle)*, 13- Mem. Hawaiian Bird Reservation exped. to Laysan Isl, 11; Carnegie Alaska-Siberia exped, 13; collector for Wash. game exhibit, Panama-Pacific Expos, 15; director, Field Museum exped. to Olympic Mountains, 15; Calif. Acad. exped. to Olympic Mountains, 17; director, Iowa exped. to north-west coast, 19. Mus. Ass. Birds and mammals; mountain beavers.
- Albrecht, Prof. Sebastian**, Dudley Observatory, Albany, N. Y. *Astrophysics*. Milwaukee, Wis, Aug. 22, 76. B.S, Wisconsin, 00; fellow, Lick Observatory, 03-06, Ph.D, California, 06. Teacher science, high sch, West Bend, Wis, 00-02; asst, Lick Observatory, 06-08, asst. astronomer, 08-10; first astronomer, Cordoba Observatory, 10-12; acting junior prof. astron, Michigan, 12-13; *astronomer, Dudley Observatory*, 13- Mem. L. O. Crocker eclipse exped. to Flint Island, 03. A.A; Astron. Soc; Soc. Astron. de Mex. Comets; satellites; Mars; variable stars of the third and fourth class; the relation between stellar spectral types and the intensities of lines in the spectra; distortions of photographic films; personal scale; anomalous dispersion in the sun.
- Albrecht, Prof. W(illiam) A(lbert)**, University of Missouri, Columbia, Mo. *Agronomy*. Flanagan, Ill, Sept. 12, 88. A.B, Illinois, 11, B.S, 14, M.S, 15, Ph.D, 19. Instr. *soils, Missouri*, 16-19, *asst. prof*, 19- Soc. Agron; Soc. Bact; Am. Acad. Soils; soil bacteriology.
- Alburger, Prof. H(enry) R(ihl)**, 3264 N. Pennsylvania St, Indianapolis, Ind. *Pathology*. Germantown, Pa, April 16, 74. M.D, Pennsylvania, 02. Demonstrator path, Pennsylvania, 05-07; junior prof, Indiana, 08, prof, 08-14; pathologist, *Methodist Hosp*, 13-19, *consulting pathologist*, 19- Various hosp. positions. Am. Med. Ass; Phila. Path. Soc. Focal infections; vaccine therapy.
- Alcock, Dr. Frederick James**, Geological Survey of Canada, Ottawa, Can. *Geology*. Griersville, Ont, Nov. 16, 88. B.A, Toronto, 12; Ph.D, Yale, 15; Wisconsin, 15-16. *With Can. Geol. Surv*, 11- Am. Geog. Soc. The Pre-Cambrian of northern Canada.
- Alden, Prof. Geo(rge) I(ra)**, 48 Queen St, Worcester, Mass. *Mechanical engineering*. Templeton, Mass, April 22, 43. B.S, Harvard, 68; M.M.E, Cornell, 90. Head, dept. meech. eng, Worcester, 68-96; treas. and consulting engineer, Norton Emery Wheel Co. and Plunger Elevator Co; *v. chairman, board of directors, Weston Co*. Mem. Worcester sch. committee, 94- (chairman, 2 years). Mech. Eng. (v. pres, 91-93.) Cylinder condensation in steam-engine; power transmission and measurement.
- Alden, Prof. Harold L(ee)**, University, Va. *Astronomy*. Chicago, Ill, Jan. 10, 90. A.B, Wheaton, 12; M.S, Chicago, 13; fellow, Virginia, 14-17, Ph.D, 17. Asst. photog. photom, Yerkes Observatory, 12-14; instr. *astron, Virginia*, 14-17, *adj. prof*, 18-, *asst, McCormick Observatory*, 14- Instr. navig. U. S. Shipping Board, 18-19. A.A; Astron. Soc; Meteorol. Soc; Ass. Prof. Stellar parallax; visual and photographic photometry.
- Alden, Dr. W(illiam) C(linton)**, U. S. Geological Survey, Washington, D. C. **Geology*. Mitchell, Iowa, Sept. 27, 71. A.B, Cornell (Iowa), 93; fellow, Chicago, 97-98, A.M, 98, Ph.D, 03. Asst. principal, high sch, Parker, S. Dak, 93-94; principal schools, Centerville, 94-95; special field asst, *U. S. Geol. Surv*, 96-01, asst. geologist, 01-10, *geologist*, 10-12, *in charge, sect. glacial geol*, 12- Non-res. docent geol, Chicago, 03-11. Geol. Soc; Wash. Geol. Soc; Wash. Acad. Glacial geology; glacial geology of Wisconsin, Iowa, Montana and New England.
- Alderman, Prof. W(illiam) H(orace)**, 1380 Raymond Ave, St. Paul, Minn. *Horticulture*. Holley, N. Y, April 6, 85. B.S.A, Cornell, 08. Asst. and later assoc. horticulturist, N. Y. Exp. Sta, Geneva, 08-11; prof. hort, West Virginia, 11-19; dean col. agr. and director, Exp. Sta, 18-19; *chief, div. hort, Minnesota*, 19- A.A; Soc. Hort. Sci. Culture of plums, apples and peaches; breeding of strawberries, Irish potatoes and sweet potatoes.
- Alderson, Pres. Victor C(lifton)**, Colorado School of Mines, Golden, Colo. *Mathematics, Technical education*. Plymouth, Mass, June 4, 63. A.B, Harvard, 85; hon. Sc.D, Beloit and Armour, 03. Supt. schools, Dublin, Ind, 85-87; instr. math, high sch, Englewood, Ill, 87-93; prof, Armour, 93-99, dean, tech. col, 99-03; pres, Colo. Sch. Mines, 03-13; Winnemucca Mt. Mining Co, 13-15; consulting engineer, 15-17; *pres, Colo. Sch. Mines*, 17- Mem. advisory committee Carnegie Tech. Schools, Pittsburgh, 01. A.A; Eng. Educ; Colo. Sci. Soc; Inst. Petrol. Tech. London.
- Aldrich, Prof. J(ohn) M(erton)**, U. S. National Museum, Washington, D. C. *Entomology*. Little Valley, Minn, Jan. 28, 66. B.S, S. Dak. Col, 88, M.S, 91; Mich. Agr. Col, 89-90; M.S, Kansas, 93; Ph.D, Stanford, 06. Asst. zool, S. Dak. Col, 89-92; prof. zool, Idaho, and entomologist, Exp. Sta, 93-05, biol, 05-13; entomologist, bur. entom, U. S. Dept. Agr, 13-19; *assoc. curator, U. S. Nat. Museum*, 19- Editor, Say foundation, 16- Entom. Soc. (sec'y-treas, 15-);

- Ass. Econ. Entom.; Wash. Entom. Soc. Classification and literature of Diptera; catalogue of North American Diptera.
- Aldrich, L(oyal) B(laine)**, Smithsonian Institution, Washington, D. C. *Astrophysics*. Milwaukee, Wis., Nov. 20, 84. A.B., Wisconsin, 07, A.M., 09. Asst. physics, Wisconsin, 07-09; *bolometric asst, Smithsonian Astrophys. Observatory*, 09- Mem. Smithsonian solar eclipse exped. to Mt. Wilson, 18. A.A. Solar radiation; reflecting power of clouds.
- Aldrich, Dr. T(homas) B(ell)**, Parke, Davis and Co, Detroit, Mich. *Physiological chemistry*. Port Jefferson, N. Y., June 10, 61. Albany Nor. Col., 79-82; Ph.D., Jena, 92. Principal pub. schools, 82-88; asst. chem., Jena, 91; prof. physics and chem., Lake View High Sch., Chicago, 92-93; assoc. physiol. chem., Hopkins, 93-98; *research chemist, Parke, Davis and Co*, 98- Physiol. Soc.; Soc. Biol. Chem.; Chem. Soc. New derivatives of phenylmethylpyrazolons; secretion of the anal glands of *Mephitis mephitis*; derivatives of chlorotone and brometone; isolation and synthesis of adrenalin; pituitary; enzymes; antitoxins; toxins; halogen tertiary butyl alcohols.
- Aldrich, T(ruman) H(eminway)**, Birmingham, Ala. *Paleontology*. Palmyra, N. Y., Oct. 17, 48. M.E., Rensselaer, 69. Asst. Ala. Geol. Surv.; *mining engineer, Birmingham, Ala.* Mem. 54th Cong. A.A.; Paleont. Soc.; Geol. Soc.; Min. Eng.; Civil Eng. Tertiary paleontology and stratigraphy.
- Aldrich, W(illiam) S(leeper)**, 122 S. Michigan Ave., Chicago, Ill. *Engineering education*. Philadelphia, Pa., March 3, 63. Grad. U. S. Naval Acad., 83; M.E., Stevens, 84. Asst. Boys' High Sch., Reading, Pa., 85-87; Phila. Manual Training Sch., 87-89; instr. drawing, Hopkins, 89-91, assoc. mech. eng., 91-92; head dept. and prof. mech. eng., West Virginia, 93-99; head dept. and prof. elec. eng., Illinois, 99-01; director, Clarkson Mem. Sch. Tech., 01-11; with U. S. Reclamation Service, 11-13; acting prof. mech. and elec. eng., Arizona, 13-14; assoc. prof. elec. eng., Colo. Agr. Col., 14-18; *engineer, Am. Bridge Co, Gary, Ind.*, 18- Past asst. engineer (lieut.), U. S. N., Spanish-Am. War. Mech. Eng.; Elec. Eng.; Eng. Educ. Engineering administration; education.
- Alexander, Dr. Charles P(aul)**, State Natural History Survey, Urbana, Ill. *Entomology*. Gloversville, N. Y., Sept. 25, 89. B.S., Cornell, 13, Ph.D., 18. Asst. biol., Cornell, 11-14, instr. nat. hist., 15-17; *curator, Snow collection, Kansas*, 17-; *syst. entomologist, State Nat. Hist. Surv.*, Ill., 19- Special syst. entomologist, Maine Exp. Sta., summer, 13. A.A.; Entom. Soc. Biology, phylogeny and taxonomy of crane-flies.
- Alexander, D(aniel) Basil W(illiam)**, Office of Borough Engineer, Durban, South Africa. *Chemistry*. Ipswich, England, Feb. 24, 62. Victoria, Manchester, 82. With Aleatraz Asphalt Co, 98-01; Barber Asphalt Paving Co, 01-13; chief chemist, Gen. Petrol. Co, 13-16; *with Barber Asphalt Paving Co*, 16- A.A.; Chem. Soc. (councilor, S. Calif. sect., 12, pres., 13); Chem. Eng.; Soc. Chem. Indust.; Soc. Test. Mat. Formation of carbenes; pavements; lubricating oils.
- Alexander, Prof. H(artley) B(urr)**, University of Nebraska, Lincoln, Neb. *Philosophy*. Lincoln, April 9, 73. A.B., Nebraska, 97; Harrison fellow, Pennsylvania, 98-00; fellow, Columbia, 00-01, Ph.D., 01. Asst. ed., 'New Int. Encyclopedia,' 03; 'Webster's Dictionaries,' G. and C. Merriam Co, 03-08; *prof. philos. Nebraska*, 08- Butler silver medal, 17. Leopold Zunz Mem. lecturer, 19. A.A.; Philos. Ass. (pres., 19); West. Philos. Ass. (pres., 17). Metaphysics; esthetics; American Indian mythology.
- Alexander, Dr. J(ames) W(addell)**, 29 Cleveland Lane, Princeton, N. J. *Mathematics*. Sea Bright, N. J., Sept. 19, 88. B.S., Princeton, 10, A.M., 11, Ph.D., 15; Paris and Bologna, 13-14. Instr. math., Princeton, 11-12, 15-16, asst. prof., 20- Math. Soc. Analysis situs; algebraic geometry.
- Alexander, Jerome**, 255 W. 108th St., New York, N. Y. **Chemistry*. New York, Dec. 21, 76. B.S., Col. City of N. Y., 96, M.S., 99. *Treas. and chief chemist, Nat. Gum and Mica Co. and Nat. Glue and Gelatine Works*, 96- Mem. committee on colloids, Nat. Research Council. A.A.; Chem. Soc.; Soc. Chem. Indust.; N. Y. Chemists Club; Soc. de Chim. indust. (councilor, N. Y. sect). Colloid chemistry; ultramicroscopy.
- Alexanderson, E(rnst) F(redrik) W(erner)**, 8 Adams Road, Schenectady, N. Y. *Electrical engineering*. Upsala, Sweden, Jan. 25, 78. Lund, Sweden, 96-97; grad., Stockholm Polytech., 00; Tech. Hochschule, Berlin, 00-01. Draftsman, C. and C. Elec. Co., 01; *consulting engineer, Gen. Elec. Co*, 02-, *chief engineer, Radio Corp. of America*, 20- Elec. Eng.; Radio Eng. (v. pres., 16). Electric locomotives; single-phase railway and induction motors; self-exciting alternator; physiological tolerance of alternating current strengths; dielectric hysteresis at radio frequencies; electrical propulsion of ships; magnetic properties of iron; high frequency alternator; magnetic amplifier; multiple tuned antennae; barrage receiver.
- Aley, Pres. Robert J(udson)**, University of Maine, Orono, Maine. *Mathematics*. Arney, Ind., May 11, 63. B.S., Valparaiso, 82; A.B., Indiana, 88, A.M., 90; Harrison fellow, Pennsylvania, 96-97, Ph.D., 97; LL.D., Pennsylvania, 17; Franklin, 09. Instr. math., Indiana, 91-10; supt. pub. instruction, Ind., 09-10; *pres, Maine*, 10- Acting asst. prof. math., Stanford, 94-95; ed., 'Educator-Jour,' 03-13. A.A.; Math. Soc.; Nat. Council Educ. (pres., 13); fel. Ind. Acad. Modern pure geometry.
- Alger, Philip L(angdon)**, 24 Rosa Road, Schenectady, N. Y. *Electrical engineering*. Washington, D. C., Jan. 27, 94. B.S., St. John's (Md.), 12, A.M., 16; B.S., Mass. Inst. Tech., 15. Asst. instr. and research asst., Mass. Inst. Tech., 16-17; *engineer, Gen. Elec. Co*, 19- Second lieut. and lieut. ordnance dept., 17-19; capt., O.R.C., 19- Elec. Eng.; Math. Soc. Induction motors; ballistics.
- Algué, Rev. J(oseph), S.J.**, Manila Observatory, Manila, P. I. *Meteorology*. Manresa, Spain, Dec. 28, 56. Toulouse, France, 72-77; Georgetown, 91-93, Ph.D., 03; Sc.D., Manila, 12. Prof. physics, Zaragoza, Spain, 78-84; Tortosa, 84-88; asst. director, *Manila Observatory*, 94-97, *director*, 97- Commissioner from Spanish Govt. to Columbian Expos, 93; asst. director, observatory, Georgetown, 91-93. Int. Cong. Paris, 00; St. Louis, 04; Innsbruck, 05. Hon. mem. Royal

- Meteor. Soc. Cyclones; climate of the Philippine Islands.
- Allan, Prof. F(rancis) B(arclay)**, 380 Brunswick Ave, Toronto, Can. *Chemistry*. Simcoe Co, Ont, Nov. 4, 67. B.A., Toronto, 93, fellow, 93-95, M.A., Ph.D., 00. Asst. lecturer chem, Toronto, 95-00, lecturer, 00-07, assoc. prof. *org. chem*, 07-19, *prof*, 19- Chem. Soc; Royal Soc. Can; Chem. Gesell. Bismuth salts; derivatives of phthalic acid.
- Allan, Prof. John A(ndrew)**, University of Alberta, Edmonton, Alta, Can. *Geology*. Aubrey, Que, July 31, 84. B.A., McGill, 07, M.S., 08; Ph.D., Mass Inst. Tech, 12. Asst. geol, Mass. Inst. Tech, 08-11; *prof. geol. and miner, Alberta*, 12-, in charge, *dept. mining eng*, 14- Field geologist, Can. Geol. Surv, 06-15. A.A.; Geol. Soc; Can. Min. Inst. Mining; petrography; structural geology and physiography of the Canadian Rocky Mountains; oil gas; coal; experimental ceramics.
- Allard, H(arry) A(rdell)**, U. S. Department of Agriculture, Washington, D. C. *Botany*. Oxford, Mass, Jan. 28, 80. B.S., North Carolina, 05. *Scientist, bur. plant indus, U. S. Dept. Agr*, 06- Wash. Entom. Soc. Plant breeding and nutrition; cotton; the distribution of Fowler's toad; musical Orthoptera; mosaic diseases of tobacco; day length and plant growth.
- Allardice, Prof. R(obert) E(dgar)**, Stanford University, Calif. **Mathematics*. Edinburgh, Scotland, March 2, 62. M.A., Edinburgh, 82. Asst. *prof. math*, Edinburgh, 82-92; *prof, Stanford*, 92- Math. Soc; fel. Edinburgh Royal Soc; Edinburgh Math. Soc. (ed, 'Proc,' 89-91), Math. Soc. Geometry; properties of certain systems of conics.
- Allee, Prof. W(arder) C(lyde)**, University of Chicago, Chicago, Ill. **Zoology*. Bloomington, Ind, June 5, 85. B.S., Earlham, 08; M.S., Chicago, 10, Ph.D., 12. Asst. zool, Chicago, 10-12; instr. bot, Illinois, 12-13; zool, Williams, 13-14; asst. *prof*, Oklahoma, 14-15; *prof. biol*, Lake Forest Col, 15-21; *assoc. prof. zool*, Chicago, 21- Instr. zool, Woods Hole, summers, 14-, in charge invert. zool, 18- A.A.; Soc. Nat; Soc. Zool. (sec'y); Ecol. Soc; Entom. Soc. Seasonal succession in ponds; rheotaxis in Isopoda; ecology and behavior of isopods, fish, May-fly nymphs and Woods Hole invertebrates.
- Alleman, Prof. Gellert**, Swarthmore College, Swarthmore, Pa. *Chemistry*. Littlestown, Pa, July 23, 71. B.S., Pennsylvania Col, 93; Ph.D., Hopkins, 97. *Instr. chem*, Maine, 97-98; Washington (St. Louis), 98-02; *prof, Swarthmore*, 02- A.A.; Chem. Soc; Electrochem. Soc; Soc. Chem. Indus; Franklin Inst; Chem. Gesell. Diazo-compounds; Portland cements; action of chemicals on wood fiber; phenol ethers; antiseptics; coal tars; creosote oils; asphalts; strength of treated timbers; oxidation of petroleum; electrolysis; occluded gases in ferrous alloys.
- Allen, Dr. Arthur A(ugustus)**, Cornell University, Ithaca, N. Y. *Zoology*. Buffalo, N. Y, Dec. 28, 85. A.B., Cornell, 07, A.M., 08, fellow, 08-09, Ph.D., 11. *Instr. zool*, Cornell, 09-15, *asst. prof. ornith*, 15- Am. Museum Nat. Hist. exped. to S. Am, 12. A.A.; mem. Ornith. Union; Soc. Mammal. Ornithology; mammalogy; conservation; ecology.
- Allen, Prof. B(ennet) M(ills)**, 1653 Indiana St, Lawrence, Kans. **Embryology*. Greencastle, Ind, July 4, 77. Ph.B., DePauw, 98; Ph.D., Chicago, 03. *Instr. anat*, Wisconsin, 03-08, asst. *prof*, 08-11, *zool*, 11-13; *prof, Kansas*, 13- A.A.; Soc. Nat; Soc. Zool; Soc. Exp. Biol; Ass. Anat; Wis. Acad. Embryonic development of ovary and testis of the mammals; anatomy of Hirudo; eye of Bdellostoma; development of rete cords, sex cords and sex cells of Chrysemys; origin of sex-cells; effect of extirpation of thyroid gland and hypophysis of amphibians on bodily growth; influence of glands of internal secretion on growth and differentiation.
- Allen, Prof. C(alvin) Frank (Francis)**, Montview St, West Roxbury, Mass. *Engineering*. Roxbury, Mass, July 10, 51. B.S., Mass. Inst. Tech, 72. Civil engineer, water works and sewerage, 72-78; railroad engineer, 79-85; attorney-at-law, 85-86; asst. *prof*, later assoc. *prof*. and *prof*. railroad eng, Mass. Inst. Tech, 87-16. Civil Eng; Eng. Educ. (sec'y and pres); R. R. Eng; New Eng. R. R. Club (pres, 06); Mass. Highway Ass. (pres); Boston Soc. Civil Eng. (pres, 99). Railroad engineering.
- Allen, Prof. Charles E(lmer)**, 2014 Chamberlin Ave, Madison, Wis. **Botany*. Horicon, Wis, Oct. 4, 72. B.S., Wisconsin, 99, Ph.D., 04. *Instr. bot, Wisconsin*, 01-04, asst. *prof*, 04-07, assoc. *prof*, 07-09, *prof*, 09- Research asst, Carnegie Institution, 04-05; ed-in-chief, 'Am. Jour. Bot,' 18- A.A.; Soc. Nat; Bot. Soc; Wis. Acad. (sec'y, 05-07, v. pres, 15-18). Middle lamella in thickened cell walls; spindle formation in pollen mother-cells of larch; nuclear division and chromosome reduction in pollen mother-cells of lily; germination of egg and chromosome reduction in Coleochaete; spermatogenesis in mosses; inheritance in Sphaerocarpos.
- Allen, Prof. Charles M(etcalf)**, Polytechnic Institute, Worcester, Mass. *Mechanical engineering*. Walpole, Mass, Dec. 12, 71. B.S., Worcester, 94, M.S., 99. Asst. mech. eng, Worcester, 95-97, instr. hydraul. and lab. work, 97-02, asst. *prof*. exp. eng, 02-06, *prof*, 06-09, *hydraul. eng*, 09- A.A.; Mech. Eng; Eng. Educ; Civil Eng. Absorption dynamometers; application of the steam-engine indicator to rowing; current meter rating stations; water-wheels; absorption dynamometers of large powers; large gears; rope and belt drivers.
- Allen, Charles R(icketson)**, Federal Board for Vocational Education, Washington, D. C. *Chemistry, Education, Physics*. New Bedford, Mass, Aug. 6, 62. B.S., Mass. Inst. Tech, 85; A.M., Harvard, 02. Senior teacher science, high sch, New Bedford, 86-09; director, New Bedford Indus. Sch, 09-11; agent, Mass. Board of Educ, 11-17; with Emergency Fleet Corp, 17-18; *special agent, Fed. Board for Vocational Educ*, 18- Asst. gen. chem, Mass. Inst. Tech, 86; private asst. to Prof. Wolcott Gibbs, Harvard, 86. Chem. Soc; Eastern Ass. Physics Teachers; New Eng. Ass. Chem. Teachers. Nitrogen in sewage; dissociation of acetylene; industrial education.
- Allen, Dr. Edward Riley**, E. I. du Pont de Nemours and Co, Wilmington, Del. *Chemistry*.

- Pana, Ill., July 28, 84. B.S., Illinois, 06; Ph.D., Cornell, 13. Asst. org. chem., Cornell, 11-12; assoc. soil biol., Ohio Exp. Sta., 13-15, in charge soil technol., 15-17; assoc. biochem., Washington (St. Louis), 17-19; *org. chemist. E. I. du Pont de Nemours and Co.*, 19- Visiting investigator, Mo. Bot. Garden, 17-19. Chem. Soc. Organic and biological chemistry; soil biology and technology.
- Allen, Prof. Edward S(witzer)**, West Virginia University, Morgantown, W. Va. *Mathematics*. Kansas City, Mo., Dec. 12, 87. A.B., Harvard, 09, A.M., 10, Ph.D., 14; Rome, 11-13; Göttingen, 12. Instr. *math.*, Dartmouth, 13-14; Brown, 14-15; Michigan, 15-19; *asst. prof.*, West Virginia, 19- Math. Soc.; Circolo Mat. di Palermo. Algebraic geometry.
- Allen, Dr. E(dwin) W(est)**, 1923 Biltmore St., Washington, D. C. *Agriculture*. Amherst, Mass., Oct. 28, 64. B.S., Mass. Col., 85; Ph.D., Göttingen, 90. Asst. chemist, Mass. Exp. Sta., 85-88; *asst. office of exp. stations, U. S. Dept. Agr.*, 90-93, *asst. director*, 93-15, *chief*, 15- Ed., 'Exp. Sta. Record,' 95-; *exec. sec'y*, Committee on Country Life. A.A. (sec'y, M., 14-18, v. pres, 20); Soc. Prom. Agr. Sci. (sec'y-treas, 10-14). Agricultural chemistry.
- Allen, Dr. E(ugene) T(homas)**, Geophysical Laboratory, Washington, D. C. **Chemistry*. Athol, Mass., April 2, 64. A.B., Amherst, 87; Ph.D., Hopkins, 92; Harvard, 93-95. Assoc. chem., Woman's Col. of Baltimore, 90-91; acting prof., Colorado, 92-93; prof., Mo. Sch. Mines, 95-01; chem. geologist, U. S. Geol. Surv., 00-06; *research chemist, geophysical lab, Carnegie Institution*, 07- Instr., summer sch., Harvard, 93-95. Chem. Soc. (pres, Wash. sect., 04). Inorganic and mineralogical chemistry; optical glass; vein formation; volcanic phenomena.
- Allen, Dr. E(zra)**, Ursinus College, Collegeville, Pa. *Zoology*. Coudersport, Pa., May 8, 70. A.B., Bucknell, 95; fellow, Clark, 00-01; Chicago, 05; Ph.D., Pennsylvania, 14. Teacher science, Perkiomen Sem., 96-00; *prof. biol.*, State Nor. Sch., Mont., 03-07; Phila. Sch. Pedag., 07-18; *Ursinus*, 19- Investigator, Wistar Inst., 10-18; hon. investigator zool., Pennsylvania, 15-19; educ. adviser, A.E.F., 19; lecturer biol., A.E.F. Univ. Beaune, 19. A.A.; Ass. Anat.; Soc. Zool.; Phila. Acad. Cytology; mammalian nerve and germ cells; cytological methods.
- Allen, Francis H(enry)**, 4 Park St., Boston, Mass. *Ornithology*. Jamaica Plain, Mass., Aug. 3, 66. Grad., Roxbury Latin Sch., 84. *Mem. ed. staff, Houghton Mifflin Co.*, 94- Mem. Ornith. Union; Nuttall Ornith. Club (council). Distribution of birds; bird-song; habits of birds.
- Allen, Dr. Frank**, University of Manitoba, Winnipeg, Can. *Experimental physics*. Canterbury, N. B., Feb. 6, 74. A.B., New Brunswick, 95; A.M., Cornell, 00, fellow, 00-01, Ph.D., 02. Instr. *physics*, Cornell, 01-04; *prof.*, Manitoba, 04- Fel. Royal Soc. Can. Color and color vision; sound sensations; physiological optics; liquid air production.
- Allen, Prof. F(rank) W(isdom)**, University Farm, Davis, Calif. *Horticulture*. Columbia, Mo., July 18, 87. B.S.(Agr), Missouri, 10; M.S., Iowa State, 13. Instr. hort., Iowa State, 10-13; Wash.
- State, 13-14, *asst. horticulturist*, Exp. Sta., 14-17; bur. markets, U. S. Dept. Agr., 17-20; *asst. prof. pomol.*, California, 20- Pomology; apples.
- Allen, Dr. Frederick Madison**, Physiatrie Institute, Morristown, N. J. **Medicine*. Des Moines, Iowa, March 16, 79. A.B., California, 02, M.D., 07. Research fellow, Harvard Med. Sch., 09-12; assoc. med., Rockefeller Inst., 13-18; practising physician, 19-20; *director, Physiat. Inst.*, 20- Lecturer, Harvey Soc., 16. Am. Physicians; Soc. Exp. Path.; Harvey Soc.; N. Y. Acad. Med. Diabetes; nephritis; metabolism.
- Allen, Dr. Glover M(orrill)**, 234 Berkeley St., Boston, Mass. *Zoology*. Walpole, N. H., Feb. 8, 79. A.B., Harvard, 01, A.M., 03, Ph.D., 04. *Sec'y and librarian, Boston Soc. Nat. Hist.*, 01- A.A.; Soc. Zool.; mem. Ornith. Union; Soc. Mammal; Appalachian Mt. Club; Wash. Biol. Soc.; Boston Soc. Nat. Hist. (sec'y, 01); Nuttall Ornith. Club (pres, 19); Harvard Travellers Club. Systematic zoology; heredity.
- Allen, Dr. J(oel) A(saph)**, American Museum of Natural History, New York, N. Y. **Vertebrate zoology*. Springfield, Mass., July 19, 38. Lawrence Sci. Sch., Harvard, 62-67; hon. Ph.D., Indiana, 86. Asst. ornith., museum comp. zool., Harvard, 71-85; curator mammal and ornith., *Am. Museum Nat. Hist.*, 85-19, *curator mammal*, 20- Chief, scientific staff of govt. exped. North. Pacific R. R. Surv., 73; special collaborator, U. S. Geol. and Geog. Surv. (Hayden), 78-83; ed., 'Bul. Nuttall Ornith. Club,' 76-83; 'The Auk,' 84-12; 'Bul.' and 'Memoirs,' Am. Museum Nat. Hist., 87-17. Walker grand prize, Boston Soc. Nat. Hist., 03. Nat. Acad.; Soc. Nat.; Soc. Zool.; Soc. Mammal; fel. Ornith. Union (pres, 83-91); Ass. Geog.; Philos. Soc.; Am. Acad.; fel. N. Y. Acad. (v. pres, 92); Wash. Acad.; hon. mem. British Ornith. Union; hon. mem. Ornith. Gesell.; etc. Mammals and birds; geographical zoology; mammals of Patagonia and Nicaragua, mammals and birds of northeastern Siberia, South America and Africa.
- Allen, Prof. John R(obins)**, U. S. Bureau of Mines, Pittsburgh, Pa. *Mechanical engineering*. Milwaukee, Wis., July 23, 69. B.S., Michigan, 92, M.E., 96. Sec'y, L. K. Comstock Construction Co., 93-95; inst. mech. eng., Michigan, 96-99, *asst. prof.*, 99-02, junior prof., 02-05, *prof.*, 05-11; dean eng., Robert Col., Constantinople, 11-13; head of dept., Michigan, 13-17; dean, dept. eng. and archit., Minnesota, 17-19; *research dept., Bur. Mines*, 19- Consulting engineer, Detroit. A.A.; Mech. Eng.; Soc. Heat. and Vent. Eng.; Eng. Educ.; hon. mem. Nat. Ass. Sta. Eng.; Mich. Eng. Soc.; Detroit Eng. Soc. Heating and ventilation; manufacture of peat into a fuel.
- Allen, Prof. Joseph**, 9 Myrtle St., White Plains, N. Y. *Mathematics*. New Bedford, Mass., March 21, 70. A.B., A.M., Harvard, 92, 92-94. Instr. *math.*, Cornell, 94-97; *assoc. prof.*, Col. City of N. Y., 97- A.A.; Math. Soc. Analytical geometry.
- Allen, Kenneth**, 1235 Municipal Building, New York, N. Y. *Hydraulic and sanitary engineering*. New Bedford, Mass., April 6, 57. C.E., Rensselaer, 79. Consulting engineer, 85-89; city supt. construction, Kansas City, Mo., 89-90; principal asst. engineer, Baltimore Sewerage

- Commission, 95-99; consulting engineer, Baltimore, 00-02; engineer and supt, Water Dept, Atlantic City, N. J, 02-06; div. engineer, Baltimore Sewerage Commission, 06-08; engineer, Metropolitan Sewerage Commission, N. Y. City, 08-14, *sanit. engineer, Board of Estimate and Apportionment*, 14- Civil Eng; Soc. Munic. Improv; Pub. Health Ass.
- Allen, Prof. R(eginald) B(ryant)**, Kenyon College, Gambier, Ohio. *Mathematics*. Medford, N. J, Jan. 3, 72. B.S. Rutgers, 93, M.S. 97; Ph.D. Clark, 05. Acting prof. *math*, Mass. Col, 95; asst. prof. Adelphi, 97-01; instr. Clark, 05-06; *prof*, Kenyon, 06- A.A; Math. Soc; Math. Ass. (chairman, Ohio sect, 16). Hypercomplex number systems; multiple algebras.
- Allen, R(oland) C(raten)**, Lake Superior Iron Ore Association, Cleveland, Ohio. *Geology*. A.B. Wisconsin, 05, A.M. 08. Instr. econ. geol, Michigan, 08-09, lecturer, 09-13; state geologist, Mich, 09-19; *v. pres*, Lake Superior Iron Ore Ass, 19- A.A; Geol. Soc; Ass. Econ. Geol; Min. and Metal. Eng. Geology of the Iron River district of Michigan.
- Allen, Dr. Ruth F(lorencia)**, Hilgard Hall, Berkeley, Calif. *Plant pathology*. Sturgeon Bay, Wis, May 23, 79. A.B. Wisconsin, 05, A.M. 07, Ph.D. 09. Asst. bot, Wisconsin, 05-10; instr. Mich. Agr. Col, 10-14; inst. and later asst. prof, Wellesley, 14-18; *plant pathologist, bur. plant indust, U. S. Dept. Agr*, 18- A.A; Bot. Soc; Phytopath. Soc. Cereal diseases; cytology.
- Allen, Prof. Samuel J(ames) M(cIntosh)**, University of Cincinnati, Cincinnati, Ohio. **Physics*. Maitland, N. S. Oct. 5, 77. B.S. McGill, 00, M.S. 01; fellow, Hopkins, 03-04, Ph.D. 06. Demonstrator physics, McGill, 00-03; instr. Cincinnati, 06-09; asst. prof, 09-14, assoc. prof, 14-19, *prof. exp. physics*, 19- Physical Soc; Can. Civil Eng; Ohio Acad. (v. pres, 19). Radio activity; passage of α rays of radium and X-rays through matter; radio-activity of smoky atmosphere; relations between X-ray wave lengths, atomic numbers and absorption coefficients.
- Allen, W(alter) S(tearns)**, 224 State St, Flushing, N. Y. *Chemistry*. Aeworth, N. H, Dec. 1, 77. A.B. Amherst, 00. Asst. geol, Amherst, 00-02; *anal. and research chemist, Gen. Chem. Co*, 03-, *in charge, Laurel Hill Lab*, 10- A.A; Chem. Soc; N. Y. Chemists Club. Analytical chemistry.
- Allen, William Fitch**, Oregon University Medical School, Portland, Oregon. *Anatomy*. Oneonta, N. Y, 75. A.B. Stanford, 00, A.M. 02; Ph.D. Minnesota, 15. Asst. to Dr. E. P. Allis, 01-06; *physiol*, California, 06-10; *inst. embryol. and comp. anat*, Illinois, 10-11; *histol. and embryol*, Minnesota, 11-16; *prof. anat. and head of dept, Oregon*, 16- Ass. Anat; Wash. Acad. Anthropology; microscopical technique; morphological and experimental neurology; blood vessels and lymphatics in fishes.
- Allen, W(illiam) M(arshall)**, Department of Agriculture, Raleigh, N. C. *Chemistry*. Wadsworth, N. C, Jan. 70. North Carolina, 89-92; Hopkins, 97-98. Asst. chemist, N. C. Exp. Sta, 94-97; asst. to state chemist, Ga, 97-98; first asst. state chemist, N. C, 99-06, food chemist, 06-19, *chemist*, 19- Chem. Soc. (pres, N. C. sect, 09-10); Agr. Chem; Ass. Food and Dairy Departments (v. pres, 08, sec'y, 09). Food adulteration.
- Allen, W(infred) B(mory)**, Scripps Institution, La Jolla, Calif. *Biology*. West Newton, Ind, June 6, 73. B.L. Earlham, 98; A.M. Lawrence, 04; Nebraska, 99-00, 04-05; Illinois, 10-11. Athletic coach, Earlham, 96-99; asst. physical director, Nebraska, 99-00; physical director and registrar, Lawrence, 03-04; head, biol. dept, high sch, Spokane, Wash, 00-02; State Nor. Sch, Kearney, Nebr, 05-08; asst. zool, Illinois, 10-11; head, biol. dept, high sch, Stockton, Calif, 12-16; Fresno, 16-19; *biologist, Scripps Inst, California*, 19- A.A; Ecol. Soc; Micros. Soc; West. Soc. Nat; Calif. Acad. Morphology; regeneration; fresh-water plankton; marine phytoplankton.
- Aller, Henry D(ay)**, Bureau of Fisheries, Washington, D. C. *Zoology*. N. J, 80. B.S. Rutgers, 02; Cornell, 02-03. Bur. Forestry, 03-04; supt. and director, U. S. Fisheries Lab, Beaufort, N. C, 07-12, *agent, fur-seal fisheries, Pribilof Islands, Bur. Fisheries*, 12- A.A. The marine Mollusca of Beaufort, North Carolina.
- Alling, Harold L(attimore)**, 400 Oxford St, Rochester, N. Y. *Geology*. Rochester, Feb. 7, 88. A.M. Columbia, 17, Ph.D. 20. *Expert geol*, N. Y. State Museum, 17-; *instr, Rochester*, 20- A.A; assoc. Min. and Metal. Eng; Chem. Soc; Rochester Acad. Crystallization of rock forming minerals; Adirondack Precambrian.
- Allis, Dr. Edward Phelps, Jr**, Milwaukee, Wis, or Palais de Carnolès, Menton, France. **Vertebrate morphology*. Milwaukee, Sept. 14, 51. C.E. Del. Lit. Inst, 66; Antioch, 67-68; Mass. Inst. Tech, 68-69, 71; LL.D. Wisconsin, 03; hon. M.D. Groningen, 14. *Mem. and officer of Edw. P. Allis Co, Milwaukee*, 71- Laureat, Paris Inst, 98; Officier d'Acad; Chevalier Légion d'honneur. A.A; Soc. Nat; Ass. Anat; Am. Geog. Soc; Mus. French Art; fel. N. Y. Acad; Boston Soc. Nat. Hist; fel. London Linnean Soc; London Zool. Soc; London Royal Micros. Soc; London Royal Meteor. Soc; London Soc. Arts; Anat. Soc. Gt. Britain and Ireland; North British Acad; Soc. astron. de France; Soc. météo. de France. The anatomy and development of the head of vertebrates.
- Allport, Dr. F(loyd) H(enry)**, 27 Everett St, Cambridge, Mass. *Psychology*. Milwaukee, Wis, Aug. 22, 90. A.B. Harvard, 13, Ph.D. 19. *Instr. psychol, Harvard*, 19- With A.E.F, 17-18. Psychol. Ass. Experimental and social psychology.
- Almy, Charles, Jr**, Dewey and Almy Chemical Co, Cambridge, Mass. *Chemical engineering*. Cambridge, April 6, 88. B.S. Mass. Inst. Tech, 10. Research assoc. applied chem, Mass. Inst. Tech, 10-11; tech. director, Am. Vulcanized Fibre Co, 12-15; gen. manager and sec'y, Va. Red Oil Products Corp, 16-17; lieut. col, C.W.S., 18-19; *v. pres. and sec'y, Dewey and Almy Chem. Co*, 19- Chem. Soc; British Soc. Chem. Indust. Animal and vegetable oils and fats; vulcanized fibre.

- Almy, Prof. Frank F(ayette)**, 436 East St, Grinnell, Iowa. *Physics*. Little Compton, R. I, Jan. 12, 66. B.S. Nebraska, 90; Hopkins, 90-93; Chicago, 99, 01-02. *Prof. physics, Grinnell, 93*-Lecturer physics, Columbia, 09-10; asst. educ. director, district eight, S.A.T.C., 18. A.A.; Physical Soc; Iowa Acad. (pres, 09). Some properties of coherers; pressure shift of lines in the spectrum of iron; electrodeless discharge in gases.
- Almy, Dr. John E(dwain)**, 2300 A St, Lincoln, Nebr. *Physics*. Centralia, Ill, Oct. 13, 75. B.S. Nebraska, 96, A.M., 97; Ph.D., Berlin, 00. Instr. *physics, Nebraska, 00-02*, adj. prof., 02-05, asst. prof., 05-07, assoc. prof., 07-09, *prof., 09-*, chairman of dept, 19-20. A.A.; Physical Soc; Nebr. Acad. Accidental double refraction; spark potentials; discharge through gases; dielectric strength of various glasses and double refracting media; cathode potential.
- Alperin, Dr. David**, 750 Green Ave, Brooklyn, N. Y. *Biological chemistry*. Bucharest, Roumania. M.S. Freiburg, 02; M.D. N. Y. Univ, 07; Ph.D., Columbia, 12. Lecturer physiol. chem. and director chem. and path. laboratories, Eclectic Med. Col., 03-12; *assoc. prof. ophthal.*, N. Y. *Post-Grad. Med. Sch.* Nucleoprotein metabolism; uriccolysis and uricase.
- Alsberg, Dr. C(arl) L(ucas)**, U. S. Department of Agriculture, Washington, D. C. **Biochemistry*. New York, N. Y, April 2, 77. A.B. Columbia, 96, A.M., M.D., 00. Asst. physiol. chem., Harvard Med. Sch., 02-05, instr. biol. chem., 05-06, faculty instr., 06-08; chem. biologist, bur. plant indust., U. S. Dept. Agr., 08-12, *chief, bur. chem., 12-* Investigator, Bur. Fisheries, 07-08. A.A.; Agr. Chem. (sec'y-treas, 20, ed, 'Jour'); Am. Med. Ass. (mem. council pharmacy and chem); Physiol. Soc; Soc. Exp. Biol; Chem. Soc. (councilor at large); Soc. Biol. Chem. (past pres); Soc. Pharmacol; Boston Soc. Med. Sci. (past sec'y). Chemistry of nucleic acids and of proteins; cystinuria; enzymes; phosphoric acid metabolism; poisonous plants; oxidizing enzymes; biology and toxicology of molds of the genus *Penicillium*; cyanogenesis in plants; pharmacology; food and agricultural chemistry.
- Altenburg, Prof. Edgar**, Rice Institute, Houston, Tex. *Zoology*. Jersey City, N. J, June 11, 88. A.B. Columbia, 11, A.M., 12, Ph.D., 16. Instr. biol., Rice Inst., 17-20, *asst. prof., 20-* A.A. Genetics.
- Alter, Prof. Dinsmore**, University of Kansas, Lawrence, Kans. *Astronomy, Physics*. Colfax, Wash, March 28, 88. B.S. Westminster (Pa), 09; M.S. Pittsburgh, 10; Ph.D. California, 16. Instr. physics and astron., Alabama, 11-12, asst. prof., 12-13, adj. prof., 13-14; instr. astron., California, 14-17; asst. prof., Kansas, 17-19, *assoc. prof., 19-* Major, C.A.R.C. A.A.; Physical Soc; Astron. Soc. Orbits; meteorology; perturbations; gravitational theory.
- Alter, Dr. Nicholas M**, New Haven Hospital, New Haven, Conn. *Pathology*. Hungary, 86. M.D. Univ. of Hungary, 11. Instr. anat., Univ. of Hungary, 10-11, path., 11-13; *pathologist*, Montefiore Home and Hosp., N. Y. City, 14-15; How-
- ard A. Kelly Hosp., 15-19; *Yale, 19-* Physical chemistry applied to cancer research.
- Alvarez, Prof. Arthur Carl**, 1909 Dwight Way, Berkeley, Calif. *Civil engineering*. San Francisco, Calif., Nov. 2, 86. B.S. California, 08. Instr. *civil eng, California, 08-13*, asst. prof., 13-19, *assoc. prof., 19-* Assoc. Civil Eng; Soc. Test. Mat. Building construction; structural engineering.
- Alvarez, Dr. Walter Clement**, 177 Post St, San Francisco, Calif. *Medicine*. San Francisco, July 22, 84. M.D., Cooper Med. Col., 05; Harvard, 13. Asst. path., Cooper Med. Col., 05-06; asst. med., Stanford, 12-13; instr. *research med., Hooper Foundation for Med. Research, California, 14-20*, *asst. prof., 20-* Caldwell lecturer, Röntgen Ray Soc, 20. Physiol. Soc; Soc. Exp. Biol; Am. Med. Ass; Calif. Acad. Physiology and pathology of digestion; intestinal peristalsis.
- Alvord, John Watson**, 5203 Kenwood Ave, Chicago, Ill. *Hydraulic and sanitary engineering*. Newton Center, Mass, Jan. 25, 61. Prep. sch; Europe, 88, 94; hon. C.E., Wisconsin, 13. City engineer, Lake View, Chicago, 84-88; Cicero, Ill, 89; Columbian Expos, 90-93; *consulting engineer, 94-* Mem. numerous appraisal boards; consulting engineer to many municipalities in the Central West; govt. war work, two years. Chanute medal, West. Soc. Eng, 02; medal as one of the designers of the Columbian Expos, 93. A.A.; Civil Eng. (director, 18-); Water Works Ass. (pres, 10); West. Soc. Eng. (pres, 10); Ill. Soc. Eng. (pres, 02, 04); Pub. Health Ass. Sewage purification; economics of valuation and appraisement; flood prevention.
- Alway, Prof. Frederick J(ames)**, 1386 Grantham Ave, St. Paul, Minn. **Chemistry*. Waterford, Ont, May 28, 74. B.A. Toronto, 94; Ph.D., Heidelberg, 97. Prof. chem., Nebr. Wesleyan, 98-06; agr. chem., Nebraska, 06-09, head prof., 09-13; *prof. soil chem, Minnesota, and chief, div. soils Exp. Sta., 13-* A.A.; Chem. Soc; Soc. Agron; Peat Soc. Reduction of nitro-compounds; hydroxylamino- and nitroso-compounds; bleaching of flour; soils of northern steppes; prairie soils; humus; soil moisture; glacial and peat soils.
- Amberg, Dr. Emil**, David Whitney Building, Detroit, Mich. *Aural surgery*. Santa Fe, N. Mex, May 1, 68. M.D. Heidelberg, 94; Berlin, 97, 98; Vienna, 95, 97, 07. House surgeon, aural dept, Eye and Ear Infirmary, Boston, 96-97. Otol. Soc; Am. Med. Ass; Acad. Ophthal. and Otolaryngol. The ear; the lateral sinus; instruments; influence of the work-pause on mental efficiency; interstate reciprocity for the license to practice medicine.
- Amberg, Dr. Samuel**, Children's Memorial Hospital, 735 Fullerton Ave, Chicago, Ill. *Medicine*. Cannstatt, Germany, Aug. 15, 74. Gymnasium, Cannstatt; Berlin, 95-96; M.D., Heidelberg, 98. Asst. and instr. pediat., Hopkins, 99-03, assoc., 03-10, assoc. prof., 10-12; *mem, Sprague Mem. Inst., and assoc. prof. exp. med, Rush Med. Col., 12-* Pharmacologist, C. W. S., 18. Physiol. Soc; Soc. Biol. Chem; Soc. Pharmacol; Am. Med. Ass; cor. mem. Vienna Gesell. für Innere Med. und Kinderheilkunde. Pediatrics; pharmacology; physiological chemistry.

- Ambler, Dr. Joseph A (lfred)**, 5105 13th St, N.W., Washington, D. C. *Chemistry*. Danbury, Conn., June 30, 89. Ph.B., Yale, 10, Ph.D., 13. Prof. chem., Acadia, 13-16; *asst. petroleum chemist, color lab, bur. chem, U. S. Dept. Agr.*, 16- Chem. Soc. Coal-tar intermediates; pyrimidins; pseudo-thiohydantoins; amines; sulphonic acids.
- Ames, Dr. Adeline**, Normal, Nebr. *Botany*. Henderson, Nebr., Oct. 6, 79. B.S., Nebraska, 03, A.M., 04; Ph.D., Cornell, 13. Asst. bot., Nebraska, 02-04; scientific asst., bur. plant indust., U. S. Dept. Agr., 04-11, asst. pathologist, 13-20; *asst. prof. bot., Sweet Briar*, 20- Bot. Soc.; Phytopath. Soc. Systematic mycology; plant pathology.
- Ames, Prof. E(dward) S(cribner)**, University of Chicago, Chicago, Ill. *Philosophy*. Eau Claire, Wis., April 21, 70. A.B., Drake, 89; B.D., Yale, 92; Ph.D., Chicago, 95. *Prof. philos., Chicago*, 97- A.A.; Philos. Ass.; Psychol. Ass.; West. Philos. Ass. Psychology of religion.
- Ames, Prof. J(oseph) S(weetman)**, Charlecoate Place, Guilford, Baltimore, Md. **Physics*. Manchester, Vt., July 3, 64. A.B., Hopkins, 86, fellow, 87-88, Ph.D., 90; Berlin, 86-87; LL.D., Washington (Md.), 07. Asst. *physics, Hopkins*, 88-91, assoc., 91-93, assoc. prof., 93-99, *prof.*, 99-, *director, physical lab*, 01- Ed. board, 'Astrophys. Jour'; Harris lecturer, Northwestern, 13. Nat. Acad.; Physical Soc. (pres, 19, 20); Philos. Soc.; Am. Acad.; hon. mem. Royal Inst.; Soc. de Physique. Electrodynamics; spectroscopy; spectrum of hydrogen.
- Ames, Dr. L(ewis) D(arwin)**, Delano, Calif. *Mathematics*. Keeseville, N. Y., July 11, 69. B.Litt., Missouri, 99; A.B., Harvard, 01, A.M., 02, Ph.D., 04. Instr. math., Chillicothe Nor. Sch., Mo., 90-98, 99-00; Harvard, 01-02; Missouri, 02-06, asst. prof., 06-12, assoc. prof., 12-20. Slowly convergent series; analysis situs; continuous groups.
- Ames, Prof. Oakes**, Bussey Institution, Forest Hills, Boston, Mass. *Botany*. North Easton, Mass., Sept. 26, 74. A.B., Harvard, 98, A.M., 99. Asst. bot., Harvard, 99-00, instr., 00-10, *asst. prof.*, 15-, asst. director, *bot. garden*, 99-09, *director*, 09- A.A.; Soc. Nat.; Bot. Soc.; Am. Acad.; New Eng. Bot. Club; Mass. Hort. Soc. (past v. pres); Boston Soc. Nat. Hist.; Wash. Biol. Soc.; N. Y. Acad.; Int. Ass. Bot.; fel. London Linnean Soc. Economic botany; orchidology.
- Ames, Dr. J(ohn) W(illiam)**, 624 Metropolitan Building, Denver, Colo. *Medicine*. Eagle River, Mich., Jan. 15, 74. M.D., Michigan, 98. Sanit. officer, U. S. Pub. Health Service, Honolulu, 98-00, Manila, 00-04, Havana, 06-09, mem. staff, hygienic lab, 07; *lecturer diseases of children and of tropics, Colorado*, 10- Ed. 'Denver Med. Times', 13-14; lieut. col. M.C., A.E.F., 17-19; mem. Colo. Board of Health, 18- A.A.; Soc. Trop. Med.; Ass. Study Int. Secretions; Cong. Int. Med.; N. Y. Acad. Med. Pediatrics; diseases of the tropics; yellow fever; hemorrhage of infants.
- Ami, Dr. Henry M**, Stratheona Park, Ottawa, Can. *Geology, Paleontology*. Belle Riviere, Can., 58. A.B., McGill, 82, A.M., 85, hon. Sc.D., 07; Sc.D., Queen's (Can.), 91. *Paleontologist, Can. Geol. Surv.*, 82- Mem. various commissions for Govt. of Can. Bigsby gold medalist, London Geol. Soc., 03. A.A.; Geol. Soc.; Paleont. Soc.; Wash. Geol. Soc.; Montreal Nat. Hist. Soc.; Ottawa Field Nat. Soc. (past pres, curator, archeol. museum); N. B. Nat. Hist. Soc.; N. S. Inst.; Hamilton Ass.; fel. Royal Soc. Can.; fel. London Geol. Soc.; Schweiz. Geol. Gesell. Chronological geology; paleontology; bibliography; graptolites; first Eparechean formation; Paleozoic fossils of Canada; Utica formation in Canada; Carboniferous faunas and floras of Nova Scotia and New Brunswick; Quebec Group and Devonian-Carboniferous of Quebec and the maritime provinces of Canada; the St. Lawrence-Champlain-Appalachian fault; resources of Canada along the line of the National Trans-Continental Railway.
- Amoss, Dr. Harold L(indsay)**, Rocketteller Institute, New York, N. Y. *Pathology*. Cobb, Ky., Sept. 8, 86. B.S., Kentucky, 05, M.S., 07; M.D., Harvard, 11, D.P.H., 12. Chemist, Ky. Exp. Sta., 05-06; hygienic lab, U. S. Pub. Health Service, 06-07; bur. chem., U. S. Dept. Agr., 07-08; West. Pa. Hosp., 09; asst. prev. med., Harvard Med. Sch., 09-12; *bacter. and path., Rockefeller Inst.*, 12-14, assoc., 14-19, *assoc. mem.*, 19- Ass. Path. and Bact.; Public Health Ass.; Soc. Immunol.; assoc. mem. Am. Physicians. Bacteriology; acidity of gastric contents; oxidases in the blood; expired air; dysentery; poliomyelitis.
- Amsden, Dr. George S(amuel)**, Bloomington Hospital, White Plains, N. Y. *Psychiatry*. Ash-tabula, Ohio, May 7, 70. A.B., Harvard, 01, M.D., 05; Munich, 09-10. Pathologist, *Bloomington Hosp.*, 05-14, *asst. physician*, 14- Lecturer, Barnard, Columbia; Smith. Medico-Psychol. Ass.; Psychopath. Ass. Relation of personality to behavior and education.
- Anderegg, Prof. Frederick**, 207 E. College St., Oberlin, Ohio. *Mathematics*. Meiringen, Switzerland, June 11, 52. A.B., Oberlin, 85, A.M., Oberlin and Harvard, 88. *Instr. math.*, Harvard, 89-90; *prof., Oberlin*, 90- A.A.; Math. Soc.; Math. Ass. Trigonometry.
- Anderegg, Prof. F(rederick) O(sband)**, Purdue University, Lafayette, Ind. *Chemistry*. Oberlin, Ohio, Sept. 20, 87. A.B., Oberlin, 10; A.M., Harvard, 12, Ph.D., 15. Chemist, Mallinckrodt Chem. Works, 14-16; *instr. chem.*, Illinois, 16-18; *asst. prof., Purdue*, 18- A.A.; Chem. Soc.; Ind. Acad. Silent electrical discharge through gases.
- Anderegg, L(ouis) T(heodore)**, 1132 College St., Fargo, N. Dak. *Chemistry*. Rogersville, Ohio, March 11, 88. A.B., Oberlin, 11, A.M., 13; M.S., Michigan, 15. Instr. inorg. chem., Michigan, 13-15; teacher, high sch., Delphos, Ohio, 15-16; Decatur, Ill., 16-18; asst. agr. chemist, Kans. Exp. Sta., 18-19; *agr. chemist, N. Dak. Exp. Sta.*, 19- Agricultural chemistry.
- Anders, Dr. Howard S**, 1823 Spruce St., Philadelphia, Pa. *Medicine*. Norritonville, Pa., Nov. 12, 66. A.B., Cent. High Sch., Phila., 85, A.M., 92; M.D., Pennsylvania, 90. Intern., Presbyterian Hosp., Phila., 90-91; instr. clin. med., Medico-Chirurg. Col., Phila., 94-96, lecturer, 97-99, prof. physical diagnosis, 99-13. Physician to Samaritan and Phila. Gen. Hospitals. A.A.; Am. Med. Ass.; Climat. Ass.; Pub. Health Ass;

- Pa. Soc. Tuber. (past pres); Royal Meteorol. Soc. Street-width and pulmonary tuberculosis; the weather and epidemic influenza; dust and tuberculosis; physical diagnosis.
- Anderson, Dr. Alexander P(ierce)**, Tower View Laboratory, Red Wing, Minn. **Botany, Industrial chemistry*. Red Wing, Nov. 22, 62. B.S., Minnesota, 94, M.S., 95; Ph.D., Munich, 97. Botanist and bacteriologist, Clemson, 97-99; asst. prof. bot., Minnesota, 99-00; biologist and entomologist, Clemson, 00-01; curator, herbarium, Columbia, 01; *private research*. A.A.; Forestry Ass; Am. Geog. Soc; Bot. Gesell. Formation of abnormal resin-canals in Coniferae; growth of fruits determined by weighing; plant diseases; starch and starchy products.
- Anderson, C(arl) O(tto)**, Golden, Colo. *Metalurgy*. Rosedale, Kans., March 14, 96. B.S., Kansas, 17; U. S. Bur. Mines fellow, Washington (Seattle), 17-18, M.S., 18. With corps eng., U.S.A., and C.W.S., 18-19; *asst. metallurgist, U. S. Bur. Mines*, 19- Chem. Soc. Flotation and electrochemistry.
- Anderson, Prof. Douglas S(mith)**, Tulane University, New Orleans, La. *Electrical engineering*. Lexington, Va., Sept. 6, 71. A.B., Washington and Lee, 90; A.M., Tulane, 92; Polytech. Sch., Zürich, 06-07. Asst. prof. physics, Tulane, 93-97, assoc. prof., 97-00; prof. *elec. eng.*, Mississippi, 00-01; assoc. prof., Tulane, 01-06, *prof. and head of dept.*, 07-, *dean, col. tech.*, 19- A.A.; Elec. Eng; Eng. Educ.
- Anderson, Prof. Ernest**, University of Nebraska, Lincoln, Nebr. *Chemistry*. Kaufman, Texas, 81. B.S., Texas, 03, M.S., 04, fellow, 04-05; fellow, Chicago, 06-09, Ph.D., 09. Research instr. *chem.*, Chicago, 09-12; asst. prof., Mass. Col., 12-14, assoc. prof., 14-17; *prof. agr. chem.*, Transvaal, 17-20; *chem.*, Nebraska, 20- A.A.; Chem. Soc; Royal Soc. S. Africa. Organic and physical chemistry; sugars; aldehydes; calorimeter; alkali soils of South Africa; toxic principles of South African poisonous plants.
- Anderson, Frank M.**, 2604 Etna St, Berkeley, Calif. *Geology*. Ashland, Oregon, June 4, 63. A.B., Willamette, 89; A.B., Stanford, 95; M.S., California, 97. Prof. nat. science, Siskiyou Co. High Sch., Calif., 95-96; instr. miner, California, 97-98; geologist, S. P. Co., 02-11, 15-16; Standard Oil Co., 13-15; *consulting oil geologist*, 16- Curator paleont., Calif. Acad. Sciences, 03-17. Geol. Soc; Paleont. Soc. Geology; paleontology; economic geology of northern California.
- Anderson, Col. Geo(rge) L(ucius)**, Palo Alto, Calif. *Electrical engineering*. Delafield, Wis., April 9, 49. A.M., Lawrence, 70; grad., U. S. Mil. Acad., 74; Naval War Col., 97. Second lieut., 74-81, lieut., 81-98; instr. math., U. S. Mil. Acad., 85-89; elec. and mines, Officers' Sch., Ft. Monroe, 89-95; capt., Seventh Art., 98-02; major, U. S. Art. Corps, 02-06, lieut.-col., 06-08, col., 08- Mem. ordnance board, U. S. Proving Ground, Sandy Hook, 03-07; ordnance and fortification board, Washington, D. C., 17-19. Philos. Soc; hon. mem. Franklin Inst. Range-finders and sights; electric control of heavy guns; operation of submarine mines; telescopes for sights.
- Anderson, Prof. H(arry) W(arren)**, 811 Michigan Ave, Urbana, Ill. *Botany*. Ladoga, Ind., Oct. 14, 85. A.B., Wabash, 07, A.M., 10; research fellow, Shaw Sch. of Bot., 10-11; Ph.D., Illinois, 17. Instr. bot., Wabash, 08-10; pathologist, Ill. Exp. Sta., 11-12; prof. bot., Wabash, 12-17; *asst. prof. pomol.*, Illinois, 17- A.A.; Phytopath. Soc; fel. Ind. Acad. Plant pathology; chestnut blight fungus; fruit diseases.
- Anderson, J(acob) P(eter)**, P. O. Box 1074, Juneau, Alaska. *Botany*. Glenwood, Utah, April 7, 74. Nebraska, 93-95; B.S., Iowa State, 13, M.S., 16. Instr. science, Graceland, 02-06; horticulturist, Sitka Exp. Sta., U. S. Dept. Agr., 14-16; *florist*. Instr. hort., Iowa State, summer, 13. A.A.; Bot. Soc; Soc. Hort. Sci; Iowa Acad. Horticulture; mycology; local floras; plant diseases.
- Anderson, Prof. J(ohn) A(ugust)**, Mt. Wilson Solar Observatory, Pasadena, Calif. **Astronomy*. Rollag, Minn., Aug. 7, 76. B.S., Valparaiso, 00; Ph.D., Hopkins, 07. Instr. *astron.*, Hopkins, 08-09, assoc., 09-11, assoc. prof., 11-15; *mem. staff*, Mt. Wilson Observatory, Carnegie Institution, 16- Asst., U. S. Naval Observatory, eclipse exped. to Spain, 05; asst., Carnegie Institution, 07. A.A.; Astron. Soc; Physical Soc; Optical Soc; Chem. Soc. Spectroscopy; ruling of gratings.
- Anderson, Dr. John E(dward)**, Yale Station, New Haven, Conn. *Psychology*. Laramie, Wyo., June 13, 93. A.B., Wyoming, 14; A.M., Harvard, 15, Ph.D., 17. Instr. *psychol.*, Yale, 17- Lieut., Sanit. C., 17-19. Psychol. Ass. Experimental psychology; mental tests; circulatory reactions in physical and mental work.
- Anderson, Dr. John F.**, 195 College Ave, New Brunswick, N. J. *Bacteriology*. Fredericksburg, Va., March 14, 73. M.D., Virginia, 96; Vienna; Paris; Sch. Trop. Med., Liverpool. Asst. surgeon, U. S. Pub. Health Service, 98-03, past asst. surgeon, 03-12, surgeon, 12-15, asst. director, hygienic lab., 02-09, director, 09-15; *director, research and biol. laboratories*, E. R. Squibb and Sons, 15- Lecturer hygiene, Rutgers, 16-; prof., exp. med., Georgetown, 12-15; Cutter lecturer, Harvard; lecturer, Harvey Soc., 07. A.A.; Ass. Path. and Bact. (pres, 15); Am. Physicians; Soc. Exp. Biol; Soc. Exp. Path. (v. pres); Pub. Health Ass. (pres, 15); Am. Med. Ass. Hygiene; sanitation; immunology; anaphylaxis; serum therapy; etiology of typhus and measles.
- Anderson, Dr. Leroy**, Box 109, R. R. 2, San José, Calif. *Horticulture*. Magee, N. Y., Dec. 4, 66. B.S., Cornell, 96, fellow, 96-97, M.S.A., 97, Ph.D., 02. Asst. dairy husbandry, Cornell, 97-00; instr. animal and dairy indust., California, 00-02; director, Calif. Polytech. Sch., 02-08; prof. agr. practise and supt., farm schools, California, 08-13. N. Y. State Dairy Ass; Calif. Dairy Ass. Cooperative marketing of farm products.
- Anderson, Dr. P(aul) J(ohnson)**, Massachusetts Agricultural College, Amherst, Mass. *Botany*. Ladoga, Ind., March 27, 84. A.B., Wabash, 10; fellow, Cornell, 10-12, Ph.D., 14. Instr. *bot.*, Mass. Col., 15-16, asst. prof., 16-17, assoc. prof., 18-19, *prof.*, 20-, *assoc. plant pathologist*, Exp. Sta., 17- Field pathologist, Pa. State Chestnut Blight Commission, 12-14. A.A.; Bot. Soc; Phytopath. Soc. Injury to fruit trees; diseases

- of rose, cauliflower and onion; N. American phyllostictas.
- Anderson, Prof. Philip Arthur**, 1343 Cleveland Ave, St. Paul, Minn. *Animal husbandry*. St. Paul, May 1, 90. B.S., Minnesota, 14. Instr. *animal husbandry, col. agr. Minnesota*, 15-17, *asst. prof.*, 17-
- Anderson, Robert van V(leck)**, Menlo Park, Calif. *Geology*. Galesburg, Ill, April 18, 84. A.B., Stanford, 06. Field asst. and geol. aid, U. S. Geol. Surv., 06-09, asst. geologist, 09-12, geologist, 12-13; S. Pearson and Son, 13-18; representative, W. T. B. and Am. delegate on Inter-Allied Trade Committee, Stockholm, 18-19; director, *Whitehall Petroleum Corp, Ltd*, 19-Scientific exped. to Japan, 05; examiner oil fields in Mexico and Trinidad, 11. A.A.; Geol. Soc.; Ass. Geog.; Paleont. Soc.; Seismol. Soc.; Archeol. Inst.; Wash. Acad.; Wash. Geol. Soc. (sec'y, 10); Wash. Biol. Soc. Cretaceous and Tertiary geology of California; geology of oil fields.
- Anderson, Prof. R(oss) P(eter)**, 212 W. Fourth St, Oil City, Pa. *Chemistry*. Savannah, N. Y., Feb. 22, 87. A.B. Cornell, 08, Ph.D, 12. Asst. chem., Cornell, 07-11, instr., 11-14, asst. prof., 14-17; chief chemist, *United Nat. Gas Co*, 17- Capt. C.W.S., 18. A.A.; Chem. Soc.; Optical Soc. Gasoline in natural gas; gas analysis.
- Anderson, Dr. Rudolph J(ohn)**, New York Agricultural Experiment Station, Geneva, N. Y. *Biochemistry*. Hürna, Sweden, Sept. 13, 79. B.S., Tulane, 06; Upsala, Berlin and London; Ph.D., Cornell, 19. *Biochemist, N. Y. Exp. Sta, Geneva*, 11- Capt. S. C. 17-19. A.A.; Soc. Biol. Chem.; Chem. Soc. Nutrition; calorimetry; organic phosphorus compounds of plants; metabolism of inosite.
- Anderson, Dr. Rudolph M(artin)**, Geological Survey of Canada, Ottawa, Can. *Zoology*. Decorah, Iowa, June 30, 76. Ph.B., Iowa, 03, Ph.D., 06. Asst. museum, Iowa, 01-06; instr., Bles Mil. Acad., 06-08; field worker, Am. Museum Nat. Hist., 08-12, asst. mammal, 13; zoologist in charge mammals, *Nat. Museum, Can. Geol. Surv.*, 13-, acting chief, *biol. div.*, 20- Mem. Stefansson-Anderson exped. of Am. Museum Nat. Hist. to arctic regions, 08-12; Can. arctic exped., 13-18; advisory board, wild life protection (Canada). Ornith. Union; Soc. Mammal; Cooper Ornith. Club; Wash. Biol. Soc. Mammalogy; ornithology; distribution, ecology and life histories of arctic and sub-arctic animals; wild life conservation.
- Anderson, Prof. S(amuel) Herbert**, University of Washington, Seattle, Wash. *Physics*. Berrien Springs, Mich, Aug. 21, 80. A.B., Park, 02, A.M., 03; Ph.D., Illinois, 12. Prof. physics and chem., Albany (Oregon), 05-07; asst. prof. physics, Occidental, 07-10; instr. and later asst. prof., *Washington (Seattle)*, 12- A.A.; Physical Soc. Effect of frequency on capacity; photo-electric cells; photo-electric properties of vapors of alkali metals.
- Anderson, Prof. W(illiam) E(lijah)**, Miami University, Oxford, Ohio. *Mathematics*. Arcadia, Ohio, Oct. 2, 75. A.B., Wittenberg, 02; Chicago, summers, 05, 08, 09; Harrison fellow, Pennsylvania, 11-12; Ph.D., 13. Teacher math, high sch,
- Mansfield, Ohio, 02-05; prof., Midland, 03-08; Wittenberg, 08-18; instr., Pennsylvania, 12-13; assoc. prof., *Miami*, 18- A.A.; Math. Ass.; Astron. Soc. Astronomy.
- Andrews, Dr. A(ibert) LeRoy**, Cornell University, Ithaca, N. Y. *Botany*. Williamstown, Mass., Dec. 27, 78. A.B., Williams, 99; A.M., Harvard, 03; Ph.D., Kiel, 08. Instr. *German*, West Virginia, 03-04; Dartmouth, 04-05; *Cornell*, 09-Systematic botany, especially, bryology; North American Sphagnaceae.
- Andrews, C(lement) W(alker)**, The John Crerar Library, Chicago, Ill. *Chemistry, Library economy*. Salem, Mass., Jan. 13, 58. A.B., Harvard, 79, A.M., 80; LL.D., Northwestern, 11. Instr. chem., Mass. Inst. Tech., 83-95, librarian, 89-95; *John Crerar Library*, 95- Ed., 'Tech. Quarterly,' 91-95. A.A.; Chem. Soc.; Soc. Chem. Indust.; Library Ass. (pres, 06); Library Inst.; Chem. Gesell. Optical analysis of sugar; the arrangement of a scientific and technical reference library.
- Andrews, Prof. E(than) A(llen)**, Johns Hopkins University, Baltimore, Md. *Zoology*. New York, N. Y., Sept. 10, 59. Ph.B., Yale, 81; Polytech, Hanover, 83; fellow, Hopkins, 84-86, Ph.D., 87. Asst. U. S. Fish Commission, 79-81; asst. *biol.*, *Hopkins*, 87-92, assoc. prof., 92-08, *prof.*, 08- A.A.; Soc. Nat.; Soc. Zool. (v. pres, 91, pres, 04); Ecol. Soc. Eyes of annelids; anatomy and embryology of invertebrates; reproduction in crayfish; Folliculina.
- Andrews, Mrs. Ethan Allen (Gwendolen Foulke)**, Bellona and Lake Avenues, Govans, Md. *Biology*. Bala Farm, Pa, June 26, 63. Private sch; hearer in biol., Bryn Mawr, 88. A.A. Structure and habits of protoplasm; animal and child psychology; biological philosophy; education; Infusoria; Rotatoria.
- Andrews, Dr. Frank M(arion)**, Indiana University, Bloomington, Ind. *Botany*. Vienna, Ind., 72. A.B., Indiana, 94, A.M., 95; Ph.D., Leipzig, 02; Smithsonian table, Naples Zool. Sta., 08. Asst. *bot.*, *Indiana*, 94-97, instr., 97-04, asst. prof., 04-07, *assoc. prof.*, 07- A.A.; Bot. Soc.; Ind. Acad. Physiological botany; effects of gases on plant cells.
- Andrews, Dr. Grace**, 116 Cambridge Place, Brooklyn, N. Y. *Mathematics*. Brooklyn, May 30, 69. B.S., Wellesley, 90; A.M., Columbia, 99, Ph.D., 01. Asst. math., Barnard, Columbia, 00-02. The primitive double minimal surface of the seventh class and its conjugate.
- Andrews, Horace**, 125 Lancaster St, Albany, N. Y. *Civil engineering*. New Haven, Conn, March 19, 52. Ph.B., Yale, 71, C.E., 72. U. S. Coast and Geod. Surv., 72-78; N. Y. State Trigonometric Surv., 78-84; city engineer, Albany, 86-00; consulting engineer, 00- Instr. surveying, Sheffield Sci. Sch., Yale, 72-73; eng. inspector, N. Y. State Board of Health, 84-86; mem. Albany Board of Health, 86-00; examiner for eng. positions, N. Y. State Civil Service, 88-94. Civil Eng. (director, 08-10); Soc. Munic. Improv.; Geom. Verein. Geodetic and higher surveying; municipal engineering.
- Andrews, Dr. Launcelot W(inchester)**, Williamstown, Mass. *Chemistry*. London, Ont, June 13, 56. Ph.B., Yale, 75; Ph.D., Göttingen, 82.

Prof. chem, Iowa, 85-04; research chemist, Mallinckrodt Chem. Works, 04-10; pres, Andrews Chem. Works, 10. Teacher physics, high sch, Springfield, Mass, 76. A.A.; Chem. Soc. (pres, St. Louis sect, 08-10); St. Louis Acad. (v. pres, 09); Iowa Acad. (past pres); Iowa Eng. Soc; hon. mem. Davenport Acad; London Chem. Soc; Chem. Gesell. Volumetric methods of chemical analysis; rational relations between densities and optical properties of aqueous solutions and their molecular composition; synthesis of formic and oxalic acids.

Andrews, R(oy) C(hapman), American Museum of Natural History, New York, N. Y. *Zoology*. Beloit, Wis, Jan. 26, 84. A.B, Beloit, 06; A.M, Columbia, 13. *Assoc. curator mammals*, Am. Museum Nat. Hist, 06- Am. Museum Nat. Hist. exped. to Alaska, 08; St. Lawrence, 09; special naturalist, 'Albatross' exped. to the Orient, 09-10; exped. to Korea, 11, 12; naturalist, Borden exped. to Alaska, 13; leader, Am. Museum Nat. Hist. expeditions to Asia, 16-20. A.A.; Soc. Mammal; Wash. Biol. Soc; N. Y. Acad; cor. mem. London Zool. Soc. Water mammals; Asiatic zoology.

Andrews, W(illiam) S(ymes), 136 Park Ave, Schenectady, N. Y. *Electrical engineering*. Saltford, England, Sept. 10, 47. Private education; Beckington Commercial Col, England. With Thomas A. Edison, 79-81; supt, testing dept, Edison Lighting Co, 81-83, construction of cent. stations, Edison Co, 83-85, chief engineer, 85-86; gen. supt, Marr Constr. Co, 86-88; partner, Leonard and Izard Co, 88-89; supt. constr. and later asst. gen. manager, Gen. Elec. Co, 89-92; gen. supt, Petersborough works, Can. Gen. Elec. Co, 92-93; Edison Lighting Co, 93-94; *consulting engineer*, Gen. Elec. Co, 94-A.A.; Elec. Eng; Illum. Eng. Soc; Electrochem. Soc; Nat. Elec. Light Ass; Franklin Inst; London Soc. Arts. Fluorescence and phosphorescence; spectral analysis of rare gases; analysis of rare gases; safety glasses for arc welders; selenium cells; electrical apparatus and devices.

Andronescu, Dr. D(emetriu) I(ou), Emerson, N. J. *Botany*. Targoviste, Roumania, March 18, 80. Agr.E, Roumania Col. Agr, 06; M.S, Illinois, 14, Ph.D, 15. Director, Govt. Exp. Sta, Anadalkioi, Roumania, 07; lecturer, Studina, 08; director, Herastrau, 11; official commissioner to the U. S. for the Roumanian Govt, 13-16. A.A.; Bot. Soc. Plant physiology; cytology; genetics; Mendelism; vitality of pollen; effects of endosperm removal.

Andros, S(tephen) O(sgood), 910 Michigan Ave, Chicago, Ill. *Mining*. Gardiner, Maine, 76. A.B, Bowdoin, 97; B.S, Mich. Col. Mines, 02, M.E, 03. Asst. supt, Imp. Coffee Co, 03-05; pres, Coffee Primo Mining Co, 05-09; field asst, Ill. coal mining investigations, 11-15; asst. prof. mining research, Illinois, 15-16; *pres, sec'y and director, various land companies*, 16- Chairman, board directors, N. Mex. Naval Consulting Board. A.A; Min. Eng; Eng. Educ; Ill. Acad. Placer mining; coal mining.

Andrus, L(ucius) B(uckley), Kelsey Brewer and Co, Grand Rapids, Mich. *Electrical engineering*. Columbus, Ohio, Sept. 22, 75. E.E, 10; M.S, (E.E), 16. Supt, fire alarm, telegraph and

police signal systems, Columbus, Ohio, 00-02; with Westinghouse Elec. and Mfg. Co, 02-04; gen. supt, Ind. and Mich. Electric Co, 04; *chief engineer*, Kelsey Brewer Co. Lecturer elec. eng, Notre Dame. A.A.; Elec. Eng. Effect of synchronous motors on line regulation; effect of inertia on speed regulation; water wheel tests in place.

Angela, Sister Helen (Dorety), College of Saint Elizabeth, Convent Station, N. J. *Botany*. Kaolin, S. C, May 4, 70. A.B, St. Elizabeth, 03; A.M, Chicago, 07, fellow, 08-09, Ph.D, 09. *Prof. bot. and head of dept, St. Elizabeth*, 09-A.A; Bot. Soc. Plant anatomy and physiology; anatomy of eyecads.

Angell, Dr. F(rank), Stanford University, Calif. **Psychology*. Rhode Island, 57. B.S, Vermont, 78, L.H.D, 92; Ph.D, Leipzig, 91. Teacher, high sch, Washington, D. C, 80-87; asst. prof. *psychol*, Cornell, 91-92; *prof. Stanford*, 92- Investigator, Belgian Relief Commission, 16- Psychophysics; sensory discrimination for different intervals of time.

Angell, Dr. James R(owland), Yale University, New Haven, Conn. **Psychology*. Burlington, Vt, May 8, 69. A.B, Michigan, 90, A.M, 91; A.M, Harvard, 92; Berlin and Halle, 93; Sc.D, Vermont, 15. Instr. philos, Minnesota, 94; asst. prof. exp. psychol, Chicago, 95-01, assoc. prof, 01-04, prof. and head, dept. psychol, 04-20, dean, senior colleges, 08-11; dean, faculties, arts, lit. and science, 11-20; acting pres, 13, 18; chairman Nat. Research Council, 19; *pres*, Carnegie Corp, 20-21; *Yale*, 21- Lecturer psychol, California, 03; Wellesley, 04; Ichabod Spencer lecturer, Union Col, 11; Sorbonne lecturer, Paris, 15. Nat. Acad; Psychol. Ass. (pres, 06); West. Philos. Ass. (v. pres, 03). Psychology of attention; organic accompaniments of conscious processes; auditory localization; reaction time; effect of partial tones on localization of sound; dermal space-perception; memory and development in motor coordination; animal intelligence; rhythm; vision; affection.

Angell, Prof. M(artin) F(uller), University of Idaho, Moscow, Idaho. *Physics*. Delavan, Wis, Dec. 29, 78. B.S, Wisconsin, 02, A.M, 05, Ph.D, 11. Asst. physics, Wisconsin, 02-03, 04-05; *prof. physics and math*, New Mexico, 03-04, physics and elec. eng, 05-13, dean, col. science and eng, 08-13; *prof. physics, Idaho*, 13-, acting dean, univ. faculty, 18-19, col. letters and sciences, 19-20. A.A; assoc. mem. Physical Soc. Absorption of infra-red radiations; self-recording electrometer for atmospheric potential; atmospheric potential; gradient measurements; thermal conductivity of metals at high temperatures.

Angier, Prof. Roswell P(arker), Yale Station, New Haven, Conn. *Psychology*. St. Paul, Minn, Oct. 21, 74. A.B, Harvard, 97, A.M, 01, Ph.D, 03; Berlin, 04-06. Asst. physiol. lab, Berlin, 05-06; instr. *psychol*, Yale, 06-08, asst. prof, 08-17, *prof*, 17-, acting director, *psychol. lab*, 09-14, *director*, 14-, *dean of freshmen*, 20-A.A; Psychol. Ass; Physiol. Soc; Philos. Ass. Esthetics; psychology and physiology of vision.

Angle, Dr. Edward H(artley), 1025 N. Madison Ave, Pasadena, Calif. *Orthodontia*. Herriek, Pa,

- June 1, 55. D.D.S., Pa. Col. Dental Surg, 78; hon. M.D., Marion-Sims-Beaumont Col. Med, 99; hon. Sc.D., Pennsylvania, 15. Prof. histol. comp. anat. of teeth and orthodontia, Minnesota, 89-91; orthodontia, Northwestern, 92-98; Marion-Sims-Beaumont Col. Med, 96-98; Washington (St. Louis), 98; founder and prof. orthodontia, *Angle Sch. Orthodontia*, St. Louis and New London, 00-13; *Pasadena, Calif.*, 16- Special surgeon, Great North R.R., 92-95; Wabash R.R., 96-08. A.A.; Soc. Orthodont. (pres, 00); hon. mem. Soc. Dental Mex; hon. mem. Verein Zahnärzte; hon. mem. Verein Öster. Zahnärzte; hon. mem. Vienna Orthodont. Gesell; hon. mem. Verein Wiener Zahnärzte; hon. mem. Dental Soc. Sweden; hon. mem. Med-Dental Soc. Finland. Fractures of the maxillae; malocclusion of the teeth; orthodontic mechanism.
- Angle, Dr. E(dward) J(ohn)**, 2219 B St, Lincoln, Nebr. *Medicine*. Cedarville, Ill, April 1, 64. B.S., Wisconsin, 90; M.D., Pennsylvania, 95; A.M., Nebraska, 98. Prof. genito-urinary surg. and dermat., Nebraska, 05-10; *specialist, skin and genito-urinary diseases*. A.A.; Am. Med. Ass; Urol. Ass. Zoology; genito-urinary and skin diseases; kidneys of the pig.
- Anthony, A(lfred) W(ebster)**, Natural History Museum, San Diego, Calif. *Ornithology*. Cayuga Co., N. Y., Dec. 25, 65. Pub. schools. *Mining engineer*. Fel. Ornith. Union; Soc. Mammal; Carinus Club. Pelagic and insular ornithology.
- Anthony, Charles**, Vieytes y Gorriti, Bahia Blanca, Argentina. *Engineering*. Hereford, England, 65. Royal Sch. Mines, Bristol; Cambridge. Asst. engineer, Bateman and Parsons, 90-91; engineer first class, Argentine Govt, 91-93; principal res. engineer, Buenos Aires Sanit. Improvement Works Commissioners, 93-02; consulting engineer, Cape Colonial Govt, 03-06; legal representative and chief engineer, Dirks and Dates, 06-08; *gen. manager, Bahia Blanca Water Works Co.*, 09- Civil Eng; fel. Royal Astron. Soc; British Inst. Civil Eng. (pres, 86-89); fel. British Sanit. Inst; fel. Edinburgh Royal Soc; fel. R. Met. Soc. Hydraulic and sanitary engineering; sewage disposal; color determination; filtration.
- Anthony, Prof. Gardner C(hace)**, Tufts College, Mass. *Graphics*. Providence, R. I., April 24, 56. Brown, 75-77; Tufts, 77-78, A.M., 90, hon. Sc.D., 05. Mechanical engineer, 78-85; instr. R. I. Sch. of Design, 85-87; director, R. I. Sch. Tech. Drawing, 87-93; *prof. tech. drawing and dean, Bromfield-Pearson Sch., Tufts*, 93-, *dean, eng. sch.*, 98- A.A.; Mech. Eng; Eng. Educ. (pres, 13). Mechanical and machine drawing; gearing; descriptive geometry.
- Anthony, H(arold) E(lmer)**, American Museum of Natural History, New York, N. Y. *Zoology*. Beaverton, Oregon, April 5, 90. B.S., Columbia, 15, A.M., 20. Asst. zool. and chem, Pacific (Oregon), 10-11; *mammal, Am. Museum Nat. Hist.*, 11-18, *assoc. curator*, 19- Field asst, U. S. Biol. Surv, summers, 10, 11. Lieut, F.A., 17-18, *capt*, 18-19. Mem. or leader, scientific expeditions to west. states, Mexico, Ecuador, Panama, Isthmus of Darien, P. R. and Cuba. Soc. Mammal; assoc. Ornith. Union; fel. N. Y. Acad; Wash. Biol. Soc; Explorers' Club. Mam-
- alogy; mammals of Oregon, Panama, Cuba and Porto Rico; Pleistocene Mammalia of the West Indies.
- Anthony, R(oy) D(avid)**, State College, Pa. *Horticulture*. Rochester, N. Y., April 2, 84. B.S., Rochester, 08; B.S.A., Cornell, 10, M.S.A., 13, Ph.D., 20. Asst. pomol., Cornell, 10-11, instr., 12-13; assoc. horticulturist, N. Y. Exp. Sta., Geneva, 13-19; *research horticulturist, Pa. State*, 19-A.A.; Soc. Hort. Sci. Fruit breeding.
- Appleby, Dean W(illiam) R(emsen)**, University of Minnesota, Minneapolis, Minn. *Metallurgy, Assaying*. Hoboken, N. J., Feb. 11, 65. A.B., Williams, 86, A.M., 93; sch. mines, Columbia, 87. Asst. anal. and pharmaceut. chem, N. Y. Col. Pharmacy, 88-89; *prof. mining and metal, Minnesota*, 91-92, *metal and dean, sch. of mines*, 00- Consulting metal. engineer, U. S. Bur. Mines, 18- Mem. jury awards, Panama-Pacific Expos. Min. and Metal. Eng; Min. and Metal. Soc; Chem. Soc; Soc. Chem. Indust; Lake Superior Min. Inst; London Inst. Min. and Metal; N. of England Inst. Min. and Mech. Eng.
- Appleman, Dr. Cha(rlie)s O(rval)**, College Park, Md. *Botany*. Millville, Pa., Dec. 6, 78. Ph.B., Dickinson, 03; Ph.D., Chicago, 10; Cold Spring Harbor, summer, 05. Instr., Swarthmore Prep. Sch., 03-04; *prof. biol., Lombard*, 04-08; *plant physiologist, Md. Exp. Sta.*, 10-, *prof. plant physiol. and biochem. and dean, grad. sch., Maryland*, 13-A.A.; Bot. Soc; Chem. Soc. Physiology and biochemistry of plants.
- Appleton, Prof. J(ohn) H(oward)**, 209 Angell St, Providence, R. I. **Chemistry*. Portland, Maine, Feb. 3, 44. Ph.B., Brown, 63, A.M., 69, Sc.D., 00. Instr. chem, Brown, 63-68, Newport-Rogers prof., 68-14, *emer. prof.*, 14- Mem. U. S. Mint Commission, 91; consulting chemist. A.A.; Chem. Soc. (v. pres); N. Y. Acad. Industrial chemistry; artificial dyes.
- Appleton, Dr. L(illa) Estelle**, Oxford College, Oxford, Ohio. *Psychology*. Victory, Vt., Nov. 9, 58. B.Litt., Oberlin, 86, Ph.B., 90; Ph.M., Chicago, 03, M.S., 04, Ph.D., 09; fellow, Clark, 08-09; Columbia, 10-11. Various school positions, 75-01; director, sch. educ, Upper Iowa, 07-08; acting head, dept. educ. and supt, training sch, Marshall, 09-10; acting head, dept. philos. and educ, Milwaukee-Downer, 11-12; instr. psychol. and educ, Kindergarten Training Sch., 12-16; editorial work, 16-18; *head, dept. psychol. and eduo, Oxford (Ohio)*, 18- A.A.; Brussels Solvay Inst. de Sociol. Comparative phylogenetic and ontogenetic psychology; art; play activities of adult savages and civilized children.
- Arbuckle, Dr. H(oward) B(ell)**, Davidson, N. C. *Chemistry*. Lewisburg, W. Va., Oct. 5, 70. A.B., Hampden-Sidney, 89, A.M., 90; Virginia; Ph.D., Hopkins, 98. Fellow and instr., Hampden-Sidney, 89-90; instr. dept. chem. and physics, Florida State, 91-95; asst. chem, Hopkins, 96-98; dept. chem. and biol., Agnes Scott Col., 98-06, *prof. chem.*, 06-13; *Davidson*, 13- Chem. Soc. (pres, Ga. sect, 07); N. C. Acad. (pres, 16). Death in shell during artificial incubation; toxic effects of fertilizers on tobacco.
- Arbuthnot, Dr. Thomas S(haw)**, 6425 Fifth Ave., Pittsburgh, Pa. *Medicine*. Pittsburgh, Feb. 18, 71. A.B., Yale, 94; M.D., Columbia, 98; L.R.C.P.,

M.R.C.S, London, 00. Dean and assoc. prof. med, Pittsburgh, 09-19. Mem. staff, Mercy Hosp, Pittsburgh; trustee, Shadyside Acad. Am. Med. Ass; Am. Acad. Med; Pittsburgh Col. Physicians; Pittsburgh Acad. Med. Internal medicine.

Archibald, Prof. E(benezzer) H(enry), University of British Columbia, Vancouver, B. C, Can. **Chemistry*. Brookvale, N. S, Sept. 27, 73. B.S, Dalhousie, 97, M.S, 98; A.M, Harvard, 00, Ph.D, 02. Demonstrator chem, McGill, 02-04; instr, Syracuse, 04-06, asst. prof, 06-09, assoc. prof, 09-12, prof, 12-15; asst. prof, *British Columbia*, 15-17, assoc. prof, 17-20, *prof. chem, and head of dept*, 20- A.A; Chem. Soc; fel. Royal Soc. Can; fel. Royal Soc. Edinburgh. Conductivity of salt solutions; freezing-point of dilute solutions; atomic weight of caesium, rubidium, potassium and platinum; the electric conductivity of organic bodies dissolved in the liquefied halogen hydrides; basic properties of oxygen; compounds of the halogen acids and organic substances containing oxygen; separation of platinum from iridium; separation of iron from manganese by means of nitrosophenylhydroxylamine.

Archibald, Dr. Edward William, 52 Westmount Boulevard, Montreal, Can. *Surgery*. Montreal, Aug. 5, 72. B.A, McGill, 92, M.D, C.M, 96. Asst. surgeon, *Royal Victoria Hosp*, 04-; *assoc prof. clin. surg, McGill*, 08- Surgeon, Children's Mem. Hosp. Ass. Path. and Bact; Surg. Ass; Int. Soc. Surg. Pancreatitis; cerebral injuries; intestinal tuberculosis.

Archibald, Prof. Ray(mond) C(lare), Brown University, Providence, R. I. **Mathematics*. South Branch, N. S, Oct. 7, 75. A.B, Mt. Allison, 95, teacher's diploma in violin, conservatory of music, 94, artist's diploma, 95; A.B, Harvard, 96, A.M, 97, 97-98; Berlin, 98-99; Ph.D, Strasbourg, 00; Paris, 09-10. Teacher *math, Mt. Allison Ladies' Col*, 94-95, *prof*, 00-07; *prof. and head of dept, Acadia*, 07-08; *instr, Brown*, 08-11, asst. prof, 11-17, *assoc. prof*, 17- Librarian and head, violin dept, Mt. Allison Ladies' Col, 00-07; ed.-in-chief, 'Am. Math. Monthly,' ed, 'Rev. semestrielle publ. math.' A.A; Math. Soc. (librarian, mem. ed. board, 'Bul'); Math. Ass. (councilor, 16); Am. Acad; London Math. Soc; British Math. Ass; Edinburgh Math. Soc; Soc. math. de France; Math. Verein. The cardioid and some of its related curves; mathematical instruction in France; restoration of Euclid's book on division of figures; mathematical education; bibliography of Simon Newcomb; projective geometry.

Arctowski, Dr. Henryk (Bronislaw), New York Public Library, New York, N. Y. *Geography, Climatology*. Warsaw, Poland, July 15, 71. Liège, 88, 93-95; Paris, 89-92; Zürich, 96; Ph.D, Lemberg, 12. Oceanographer and meteorologist, Belgian antarctic exped, 97-99; mem. Belgica Commission; asst, Royal Observatory, Belgium, 04-09; chief, science div, N. Y. Pub. Library, 11-19. Medal, Belgian Royal Geog. Soc; Order of Leopold; Murchison grant, London Geog. Soc. A.A; Ass. Geog; N. Y. Acad; fel. London Geog. Soc; Belgian Geog. Soc; cor. mem. Soc. Belge de Géol; Polish Soc. Nat.

Antarctic geology; oceanography; meteorology; aurora australis; climatic fluctuations; solar faculae; reactions of vapors; solutions; crops.

Ardagh, Prof. E(dward) G(owan) R(ussell), University of Toronto, Toronto, Can. *Chemical engineering*. B.A.Sc, Toronto, 01. *Assoc. prof. chem. eng, Toronto*. Soc. Chem. Indust. (chairman, Toronto Branch, 18-20, asst. ed, 'Abstracts'). Natural gases of Ontario.

Arey, Prof. Leslie B(rainerd), 2421 S. Dearborn St, Chicago, Ill. *Anatomy*. Camden, Maine, Feb. 15, 91. A.B, Colby, 12; Ph.D, Harvard, 15. Austin teaching fellow, Harvard, 13-15; instr. anat, *Northwestern*, 15-16, *assoc. prof*, 17-19, *prof. micros, anat*, 19- Ass. Anat; Soc. Zool. Experimental anatomy; physiology of the sense organs and sensory behavior; retinal physiology; normal shape of red blood corpuscle; mammalian histology.

Arey, Prof. M(elvin) F(ranklin), 2320 Normal St, Cedar Falls, Iowa. *Geology*. Hampden, Maine. A.B, Bowdoin, 67, A.M, 70. Private and corporal, 22d Maine Volunteers, 62-63; principal, sem, Bucksport, Maine, 68-72; supt. schools, Cedar Falls, Iowa, 74-77; Fort Dodge, Iowa, 77-90; *prof. nat. science, Iowa Teachers' Col*, 90-, head of dept, 09-17, *curator, museum*, 17- Iowa Univ. exped. to Bahamas, 93; sec'y, Iowa State Educ. Council, 25 years; special asst, Iowa Geol. Surv; mem. City Council, 99-15. A.A; Iowa Acad. (pres, 05). Underground waters of Iowa.

Argall, Philip, First National Bank Building, Denver, Colo. *Chemistry, Metallurgy, Geology*. Belfast, Ireland, Aug. 27, 54. Wicklow and Dublin schools. Manager, various mines in foreign countries and in the U. S.; *consulting mining and metallurgical engineer*, 01- Gold medal, London Inst. Min. and Metal. Min. Eng; Min. and Metal. Soc; Colo. Sci. Soc; London Inst. Min. and Metal; Royal Irish Acad. Nickel ore deposits; sampling and dry crushing in Colorado; cyanid process; siderit and sulphids of Leadville, Colo.

Arkell, Prof. T(homas) R(eginald), Hamilton, Ontario, Canada. *Animal husbandry*. Arkell, Ont, March 30, 87. B.S.A, Toronto, 08. Prof. animal husbandry, N. H. Col, and animal husbandman, N. H. Exp. Sta, 09-12; chief, sheep and goat div, Can. Dept. Agr, 12-18; *manager, Can. Wool Growers, Ltd*, 18- A.A; Soc. Animal Nutrition. Nutrition in sheep; Mendelian inheritance in sheep.

Arkin, Prof. Aaron, 519 Front St, Morgantown, W. Va. *Pathology*. Libau, Russia, Sept. 6, 88. Fellow, Chicago, 08-09, 12-13, B.S, 09, Ph.D, 13; fellow, Rush Med. Col, 10-12, M.D, 12; A.M, Wisconsin, 10. Instr. pharmacol, Wisconsin, 09-10; *prof. path. and bacter, West Virginia*, 13- Chief bacteriologist and pathologist, W. Va. State Hygienic Lab, 14-17; mem. Mem. Inst. for Infectious Diseases, Chicago, 10-12; Sprague Mem. Inst, Chicago, 12. A.A; Am. Med. Ass; Physiol. Soc; Ass. Path. and Bact; Soc. Pharmacol; Pub. Health Ass; Soc. Bact. Syphilis of the bowel; catalytic activity of blood and tissue; phagocytosis; immune reactions; sodium salts.

- Arlitt, Dr. Ada Hart**, Low Buildings, Bryn Mawr, Pa. *Psychology*. New Orleans, La, July 27, 90. A.B., Tulane, 13; Ph.D., Chicago, 17. Fellow, Sprague Mem. Inst., Chicago, 17; *assoc. educ. psychol.*, Bryn Mawr, 17— *Psychol. Ass.*; S. Soc. Philos. and Psychol. Educational and animal psychology; mental tests.
- Arms, Dr. B(urdett) L(oomis)**, State Board of Health, Jacksonville, Fla. *Bacteriology*. Springfield, Vt., Sept. 27, 69. M.D., Vt. Col. Med., 05. Bacteriologist, Boston Board of Health Lab., 06-08; asst. director, 08-10, director, 10-13; lecturer munic. lab. methods, Mass. Inst. Tech., 10-13; state bacteriologist, Oregon, 13-14; prof. prev. med., Texas, 14-16; state bacteriologist, Ala., 16-17; *director, div. diagnostic laboratories, Fla. State Board of Health*, 17— *Ass. Path. and Bact.*; Am. Med. Ass.; Pub. Health Ass.; Nat. Committee Milk Standards. Laboratory studies of diphtheria, tuberculosis, glanders, and hookworm.
- Armsby, Dr. H(enry) P(rentiss)**, State College, Pa. **Animal nutrition*. Northbridge, Mass., Sept. 21, 53. B.S., Worcester, 71; Ph.B., Yale, 74, Ph.D., 79, Sc.D., 20; Leipzig, 76; LL.D., Wisconsin, 04. Asst. chem., Worcester, 71-72; teacher nat. science, high sch., Fitchburg, Mass., 74-75; asst. chem., Rutgers, 76-77; chemist, Conn. Exp. Sta., 77-81; v. principal, Conn. Col., 81-83; prof. agr. chem., Wisconsin, and *assoc. director*, Exp. Sta., 83-87; *director*, Exp. Sta., Pa. State, 87-07, dean, sch. of agr., 90-02, *director, inst. of animal nutrition*, 07— *Chairman, committee on coop. exp. sta. exhibits*, Columbian Expos, 93; Paris, 00; *mem. committee on dairy tests*, Columbian Expos, 93; *expert animal nutrition*, U. S. Dept. Agr., 98-20; *mem. Commission on Agr. Research*, 06-08; *delegate, Inter-Allied Scientific Food Commission*, 18. Nat. Acad.; A.A.; Soc. Prom. Agr. Sci.; Physiol. Soc.; Ass. Agr. Col. (pres, 99); Soc. Animal Nutrition (pres, 08); Soc. Biol. Chem.; for. mem. Stockholm Royal Acad. Agr. Stock feeding; utilization of the potential energy of the food of domestic animals.
- Armstrong, Prof. A(ndrew) C(ampbell)**, Middletown, Conn. **Philosophy, Psychology*. New York, N. Y., Aug. 22, 60. A.B., Princeton, 81, fellow, 81-82, A.M., 84, theol. sem., 82-85, hon. Ph.D., 96; Berlin, 85-86; A.M., Wesleyan, 94. *Assoc. prof. ecclesiastical hist.*, Princeton Theol. Sem., 86-87, *instr. hist.*, Princeton, 87-88; *prof. philos., Wesleyan*, 88— *Cooperating ed.*, 'Psychol. Rev.', 04-10. *Psychol. Ass.*; *Ass. Prof.*; *Philos. Ass.* (*mem. exec. committee*, 01-03, pres, 15). *Historical philosophy*; history of intellectual progress; eras of 'Aufklärung' in western thinking; historical development of the philosophy of values.
- Armstrong, Dr. Charles**, U. S. Public Health Service, Washington, D. C. *Medicine*. Alliance, Ohio, Sept. 25, 86. B.S., Mt. Union, 10; M.D., Hopkins, 15. Supt. schools, Greentown, Ohio, 10-11; intern, New Haven Gen. Hosp., 15-16; *asst. surgeon, U. S. Pub. Health Serv.*, 16— *Botulism*; milk sickness; trachoma.
- Armstrong, Prof. Geo(rge) E**, 320 Mountain St., Montreal, Can. *Surgery*. Can., June 15, 54. M.D., C.M., McGill, 77; LL.D., Queen's (Can.); D.Sc., Liverpool. *Prof. anat.*, Bishop's Col., 77-83, *physiol.*, 83-85; *surg. and clin. surg.*, McGill, 95— *Col.*, C.O.M., 14-19; C.M.G., 18. *Surg. Ass.*; *Col. Surg.* (pres); *Can. Med. Ass.*; *Int. Soc. Surg.*. Embryology and physiology of the intestinal tract; gastric hemorrhage.
- Armstrong, Prof. G(ordon) N(elson)**, Delaware, Ohio. *Mathematics*. Adelphi, Ohio, Feb. 14, 75. A.B., Ohio Wesleyan, 93; A.M., Harvard, 03; D.Tech., Munich, 13. *Teacher math. and physics*, high sch., E. Liverpool, Ohio, 97-02; *instr. math.*, Oberlin, 05-07; *assoc. prof. applied math.*, Ohio Wesleyan, 07-10, *prof.*, 10— *Research worker*, dept. terrestrial magnetism, Carnegie Institution, summer, 14. A.A.; Math. Soc. Hidden periodicities; magnetic and sunspot phenomena.
- Arnold, Dr. Bion J(oseph)**, 105 S. La Salle St., Chicago, Ill. *Electrical engineering*. Casnovia, Mich., Aug. 14, 61. Nebraska, 79-80, E.E., 98, hon. D. Eng., 11; B.S., Hillsdale, 84, M.S., 87, hon. Ph.M., 89; Cornell, 88-89; hon. Sc.D., Armour, 07. *Industrial positions*, 84-88; with Thomson-Houston Elec. Co., 89-93; *pres.*, *Arnold Elec. Power Sta. Co.*, 96—; *consulting engineer street railways*, Chicago, 02—, *chief subway engineer*. *Consulting engineer*, Pub. Service Commission, First Dist., N. Y. State; *univ. lecturer*. Medal, Trans-Miss. Expos, 98; La. Purchase Expos, 04; diploma, Pan-Am. Expos, 01; Longstreth medal, Franklin Inst., 03. *Delegate*, Int. Elec. Cong., Paris, 00, St. Louis, 04 (*chairman exec. committee and v. pres.*). A.A.; Elec. Eng. (pres, 03); Civil Eng.; Eng. Educ.; West. Soc. Eng. (pres, 06). The magnetic clutch; storage batteries for traction work; power plants for large buildings; single phase railway construction; traffic needs of large American and Canadian cities; aerial torpedoes.
- Arnold, Dr. F(elix)**, 824 St. Nicholas Ave., New York, N. Y. *Psychology, Education*. New York, June 15, 79. A.B., Col. City of N. Y., 98; Pd.M., N. Y. Univ., 02, Pd.D., 03; Ph.D., Columbia, 05. *Teacher, pub. sch.*, N. Y. City, 99-08, *principal*, 08— *Lecturer philos.*, Columbia, 07; *educ. psychol.*, dept. educ., Baltimore, Md., 06, *lecturer school management*, N. Y. Univ., 10. A.A.; Psychol. Ass.; N. Y. Acad. The psychology of association; attention and interest; school and class management; mental and physical retardation; methods of instruction; theory of education; social ethics; genetic psychology; applied psychology.
- Arnold, Dr. H(arold) D(eForest)**, 463 West St., New York, N. Y. *Physics*. Woodstock Valley, Conn., Sept. 3, 83. Ph.B., Wesleyan, 06, M.S., 07; fellow, Chicago, 07-09, Ph.D., 11. *Asst. physics*, Wesleyan, 06-07; Chicago, 08; *prof.*, Mt. Allison, 09-10; *research engineer*, Western Elec. Co., 11— A.A.; Physical Soc.; Elec. Eng. Are between metallic electrodes; viscosity; telephone transmission.
- Arnold, Dr. Ralph**, 425 Union Oil Building, 120 Broadway, New York, N. Y. **Paleontology, Geology*. Marshalltown, Iowa, April 14, 75. Throop, 94-96; A.B., Stanford, 99, A.M., 00, Ph.D., 02. *Asst. miner*, Stanford, 99; *instr. chem. and physics*, Hoitt's Sch., Menlo Park, Calif., 99-00; *field asst.*, Wash. Sch. of Mines Mining Surv., 00; *asst. geol.*, Stanford, 00-02; *aid*, U. S. Geol. Surv., 03-05, *paleontologist*, 05—

- 08, geologist, 08-09; *consulting geologist and engineer*, 09- Temporary field asst, U. S. Geol. Surv, 00-03; lecturer petrol. geol. and tech, Chicago, 14; Harvard and Mass. Inst. Tech, 16; chief, oil, gas and mines sect, Bur. Int. Revenue, 17-19. A.A.; Geol. Soc; Paleont. Soc; Soc. Econ. Geol; Seismol. Soc; Min. and Metal. Eng. (chairman, southwest. sect, chairman, petrol. committee, 19-20); Min. and Metal. Soc. (mem. council, 18-); Ass. Petrol. Geol; Pacific Astron. Soc; Cooper Ornith. Club; LeConte Geol. Soc. (sec'y, 01); Geol. Soc. of Am. Univ. (pres, 02); Wash. Geol. Soc. (sec'y, 07); Wash. Biol. Soc; Wash. Acad; London Geol. Soc; London Malacol. Soc; Royal Geog. Soc. Pleistocene and Tertiary paleontology and stratigraphy of the western coast of North America; geology, paleontology and technology of the California oil fields; paleontology of San Pedro, California; Tertiary and Quaternary Pecten of California; paleontology of the Santa Cruz Mountains; geology and oil resources of Coast Ranges; oil resources of the world; taxation of mines.
- Arnold, Prof. S(amuel) T(omlinson)**, Brown University, Providence, R. I. *Chemistry*. Fall River, Mass, 92. A.B, Brown, 13, A.M, 14, Ph.D, 16. Inst. chem, Brown, 16-18, asst. prof, 18- Chem. Soc. (sec'y, R. I. sect, 18). Analytical chemistry.
- Arny, Prof. A(lbert) C(edric)**, 2115 Dudley St, St. Paul, Minn. *Agriculture*. Washington Co, Minn, Nov. 4, 77. B.S.(Agr), Minnesota, 09. Asst. prof. agr, Minnesota, 09-, and asst. agriculturist, Exp. Sta, 09-14, in charge farm crops, 14- Soc. Agron. Farm crops; forages; small grains; corn; rotations.
- Arny, Prof. H(enry) V(inecome)**, 115 W. 68th St, New York, N. Y. *Pharmacy*. Philadelphia, Pa, Feb. 28, 68. Ph.G, Phila. Col. Pharm, 89, Ph.M, 19; Ph.D, Göttingen, 96. Prof. pharmacy, Western Reserve, 97-11; chem, Col. Pharmacy, Columbia, 11- A.A; Pharmaceut. Ass; Chem. Soc; Franklin Inst. Pharmaceutical chemistry; revision of the United States Pharmacopœia and of the national formulary.
- Arps, Prof. George F(rederick)**, 216 E. Lane Ave, Columbus, Ohio. *Psychology*. Cary, Ill, Jan. 23, 75. A.B, Stanford, 04; A.M, Indiana, 05; Ph.D, Leipzig, 08. Assoc. prof. educ. and psychol, Indiana, 08-10; asst. prof. psychol, Illinois, 10-12; prof, Ohio State, 12- Major, Sanit, C, 18-19. A.A; Psychol Assoc. Sensations of pressure; attention and rhythm; the influence of intensity on the acoustic perception of depth; awareness as an efficiency factor; visual discrimination; color induction; regeneration.
- Arsem, William C(ollins)**, Schenectady, N. Y. *Chemistry*. Chelsea, Mass, May 1, 80. B.S, Mass. Inst. Tech, 01. Chem. engineer, Gen. Elec. Co, 01-18; pres. and treas, Org. Products Corp, 16-; pres, Indust. Tech. Corp, 18- Silver medal, Panama-Pacific Expos, 15. Chem. Soc. (pres, east. N. Y. sect, 15-17); Electrochem. Soc; Elec. Eng. Electrochemistry; organic chemistry; transformation of carbon into graphite; electric vacuum furnaces; valency and molecular structure; electrode surface and dielectric phenomena.
- Arthur, Prof. J(oseph) C(harles)**, La Fayette, Ind. **Botany*. Lowville, N. Y, Jan. 11, 50. B.S, Iowa State, 72, M.S, 77, Sc.D, 20; Hopkins, 78-79; Harvard, 79; Sc.D, Cornell, 86; Bonn, 96; LL.D, Iowa, 16. Instr. bot, Minnesota and Wisconsin, 79-82; botanist, N. Y. Exp. Sta, Geneva, 84-87; prof. bot, Purdue, 87-88, veg. physiol. and path. and botanist, Exp. Sta, 88-15, emer. prof. bot, 15- Int. Cong. Arts and Sciences, St. Louis, 04 (speaker). A.A. (sec'y, F, 86, asst. gen. sec'y, 87, v. pres, 95); Soc. Nat; Bot. Soc. (pres, 02, 19); Soc. Prom. Agr. Sci; Philos. Soc; Ind. Acad. (pres, 93); Iowa Acad; Phila. Acad; Torrey Bot. Club; Int. Ass. Bot; Cong. Int. Bot. (mem. committee nom. crypt, 05-10). Fungous diseases of cultivated crops; development of plant rusts; the connection of aecial and telial stages of heteroecismal Uredinales.
- Artschwager, Dr. Ernst**, Cornell University, Ithaca, N. Y. *Botany*. Linkuhnen, Germany, July 9, 89. B.S, Colorado, 15; Ph.D, Cornell, 18. Scientific asst, bur. plant indust, U. S. Dept. Agr, 16-17; asst. plant physiol, Cornell, 18- Collaborator, bur. plant indust, U. S. Dept. Agr, 17- Bot. Soc; Phytopath. Soc. Plant anatomy, physiology and pathology.
- Ashcraft, Prof. T(homas) B(ryce)**, 34 Pleasant St, Waterville, Maine. *Mathematics*. Marshville, N. C, Nov. 27, 82. A.B, Wake Forest, 06; Ph.D, Hopkins, 11. Principal, Wingate High Sch, 06-07; assoc. prof. math, Colby, 11-13, prof, 13- Math. Soc. Quadratic involutions on the plane rational quartic.
- Ashford, Col. Bailey K(elly)**, M. C, U. S. A, 17 Nereidas Ave, San Juan, P. R. *Medicine*. Washington, D. C, Sept. 18, 73. M.D, Georgetown, 96, Sc.D, 11. Army med. officer, 97- Mem. P. R. Inst. Trop. Med. and Hygiene, 13-; Rockefeller Foundation med. exped. to Brazil, 16; in charge battle training of med. officers, A.E.F, 17-18; mem. trop. diseases prevention committee, London; consulting ed, Med. and Surg. Hist. of the World War, 20. U. S. delegate, Int. Cong. Indust. and Alimentary Hygiene, Brussels, 11. Am. Physicians; Soc. Clin. Invest; Soc. Trop. Med; Col. Surg; P. R. Med. Ass. (pres, 15). Tropical diseases; application of medical science to war.
- Ashhurst, Dr. Astley P(aston) C(oooper)**, 1629 Spruce St, Philadelphia, Pa. *Surgery*. Philadelphia, Aug. 21, 76. A.B, Pennsylvania, 96, M.D, 00. Surgeon Episcopal Hosp, 15-; Orthopedic Hosp, 14-; prosector, Pennsylvania, 04-11, inst, 11-20, assoc. 20- Col. M.R.C, A.E.F, 17-18. Gross prize, Phila. Acad. Surg, 10. Col. Surg; Surg. Ass; Soc. Int. de Chirurg. Enlargement of the prostate; fractures of the humerus; upper abdomen; multiple fractures; perforation of intestine and gall-bladder in typhoid fever; tetanus; empyema; birth injuries of shoulder.
- Ashley, Prof. Geo(rge) H(all)**, Capitol, Harrisburg, Pa. **Geology*. Rochester, N. Y, Aug. 9, 66. M.E, Cornell, 89; A.M, Stanford, 92, Ph.D, 94. Paleontologist, Ward's Nat. Science Estab, Rochester, N. Y, 89-91; asst. geologist, Ark. Geol. Surv, 91-93; teacher, high schools, Stockton and San Bernardino, Calif, 94-96; asst. state geologist, Ind, 96-00; prof. biol. and geol,

- Col. of Charleston, 00-03; asst. geologist, U. S. Geol. Surv., 01-05, geologist, 05-12, administrative geologist, 12-19; *state geologist*, Pa., 19- Prof. pharmacog., Med. Col. of S. C., 01-03; mem. juries of awards, S. C. I. and W. I. Expos, 02; state geologist, Tenn., 10-12; acting prof. geol., Vanderbilt, 17. A.A.; Geol. Soc.; Min. Eng.; Social Sci. Ass.; Wash. Geol. Soc.; cor. mem. Ind. Acad.; hon. mem. S. C. Pharmaceut. Ass.; hon. mem. Tenn. Acad. Geology of coal; sources of power.
- Ashman, Dr. George C (romwell)**, Bradley Polytechnic Institute, Peoria, Ill. *Chemistry*. Frankfort, Ind., Aug. 19, 69. B.S., Wabash, 95, A.M., 06; M.S., Chicago, 05, Ph.D., 08. Asst. chem., Wabash, 95-96; *instr.* physics and chem, high sch., Frankfort, Ind., 96-01; Ill. State Nor. Sch., 01; *chem.*, Bradley Polytech., 02- A.A.; Chem. Soc.; Central Ass. Sci. and Math. Teachers; Ind. Acad.; Ill. Acad. Determination of the radium emanation in the atmosphere; preparation of urano-uranic oxid, U_3O_8 , and a standard of activity; the specific radio-activity of thorium and its products.
- Ashton, Prof. Charles H (amilton)**, 1200 Ohio St., Lawrence, Kans. *Mathematics*. Cambridge, N. Y., Aug. 12, 66. A.B., Union, 87, A.M., 90; A.M., Harvard, 93; Ph.D., Munich, 09. Teacher, private sch., 87-89; prof. *math.*, State Nor. Sch., Mansfield, Pa., 89-92; *instr.*, Harvard, 94-03; asst. prof., Kansas, 03-10, assoc. prof., 10-15, *prof.*, 15- Math. Soc.; Math. Ass.; Circolo Mat. di Palermo. Theory of functions of complex variables.
- Atchison, Dr. Clyde S (hepherd)**, 403 E. Chestnut St., Washington, Pa. *Mathematics*. Carnegie, Pa., June 28, 82. A.B., Westminster (Pa.), 03; fellow, Hopkins, 06-07; Ph.D., 07. *Instr.*, *math.*, Williams, 07-11, asst. prof., 11-12; *prof.*, *Washington and Jefferson*, 12- With eng. dept., Erie R. R., several summers; auditor, U. S. Shipping Board, summer, 18. Math. Soc.; Math. Ass. Geometry; rational curves.
- Atkeson, Prof. Thomas C (lark)**, 1831 Lamont St., N.W., Washington, D. C. *Agriculture*. Buffalo, W. Va., Feb. 15, 52. LL.B., Kentucky, 74; Ph.D., Morris Harvey, 97. Prof. agr., West Virginia, 91-93; pres., Morris Harvey, 93-97; prof. agr. and dean, col. agr., *West Virginia*, 97-10, *prof. animal husbandry*, 10-14, *emer. prof.*, 14-; *Washington representative*, *Nat. Grange Ass.*, 19- Ed., 'Ashland (Ky.) Jour'; 'Big Sandy Herald'; 'W. Va. Farmer.' Soils; crop production; animal husbandry; animal feeding; wool production.
- Atkinson, Prof. Albert A (lgernon)**, Athens, Ohio. *Physics*, *Electrical engineering*. Nelsonville, Ohio, March 7, 67. B.S., Ohio (Athens), 91, M.S., 95; Michigan, 92-93. Supt. schools, E. Townsend, Ohio, 91-92; assoc. prof. physics, Ohio (Athens), 93-95, *prof. physics and elec. eng.*, 95- A.A.; Physical Soc.; Elec. Eng.; Ohio Acad. The relative actinic power of the spectrum colors; surface tension and osmotic pressure; deposition of copper and silver; elongation of nickel in transverse magnetic fields.
- Atkinson, Pres. Alfred**, Montana Agricultural College, Bozeman, Mont. *Agriculture*. Seaforth, Ont., Oct. 6, 79. Ont. Agr. Col., 99-02; B.S.A., Iowa State, 04, Sc.D., 20; M.S., Cornell, 12. Asst. agron., Iowa Exp. Sta., 02-04; prof., *Mont. Col. and Exp. Sta.*, 04-19, *pres.*, 19- State food administrator, Mont., 17-19. Soc. Agron.; Dry Farming Cong. (chairman exec. committee, 5th Cong); Corn Ass. (v. pres); Plains Coop. Exp. Ass. (v. pres). Dry farming; soil moisture control and nitrate formation.
- Atkinson, Dr. Daniel A (rmstrong)**, 132 Oakwood Ave., West View, Pittsburgh, Pa. *Zoology*. Cincinnati, Ohio, Aug. 7, 75. M.D., Pittsburgh, 01. *Custodian Reptilia and Batrachia*, *Carnegie Museum*. A.A.; Pittsburgh Acad. Geographic distribution.
- Atkinson, Dr. Elizabeth A (llen)**, 4106 Locust St., Philadelphia, Pa. *Chemistry*, *Geology*. Wilmington, Del., Oct. 7, 68. Certificate in chem., Pennsylvania, 95, Ph.D., 98. Asst. demonstrator chem., Woman's Med. Col. of Pa., 99-02; *treas.*, Phila. Clin. Lab., 01-07. Chem. Soc. Metal separation by means of hydrobromic acid gas; indium in tungsten minerals.
- Atkinson, Frederick C (ornelius)**, 1857 Gent Ave., Indianapolis, Ind. *Chemistry*. Newton, Ala., Jan. 13, 81. B.S., Ala. Polytech., 02, M.S., 03. Asst. chemist, Southern Cotton Oil Co., 03-04; S. C. Exp. Sta., 05; district chemist, Southern Cotton Oil Co., 05-08; chemist, Am. Hominy Co., 08; assoc. chemist and sec'y, McCandless Lab., Atlanta, Ga., 09-12; *chief chemist*, *Am. Hominy Co.*, 12- Chem. Soc. (v. pres, Ind. sect, 13, pres, 16-18, councilor, 15, 16, 19, 20); Soc. Chem. Indust.; Electrochem. Soc.; Oil Chemists Soc.; Ass. des Chim. de Sucre et Distillerie; Chem. Gesell. Biological and industrial chemistry; cereals and cereal products; destructive distillation; leather.
- Atkinson, James (Purviance)**, New York City Department of Health, New York, N. Y. *Chemistry*. Elizabeth, N. J., Jan. 3, 70. A.B., Princeton, 92, M.S., 96. Asst. miner. and anal. chem., Princeton, 92-96; asst. chem. research lab., *Dept. Health*, N. Y. City, 96-04, *chief chemist*, 04- Adj. prof. diseases of digestion, Fordham, 10. Soc. Biol. Chem.; Soc. Exp. Biol. Experimental immunity; toxicology of foods and drugs.
- Atkisson, Major Earl J (ames)**, U. S. A., Edgewood Arsenal, Md. *Chemistry*, *Engineering*. Broken Bow, Nebr., Aug. 12, 86. Grad. U. S. Mil. Acad., 08; M.E., Cornell, 11; grad., Army Eng. Sch., 12. Director elec. and mech. eng., Army Eng. Sch., 13-15; asst. supt., Gatun Locks, Gatun, C. Z., 15-17; commanding officer, first gas regt., 17-19; with Peace Commission and corps engineers, 19; senior instr., The Inf. Sch., 19-20; *commanding officer*, *Edgewood Arsenal*, 19- D. S. medal. A.A.; Elec. Eng.; Chem. Soc.
- Attix, Prof. James C (onner)**, 2355 N. 13th St., Philadelphia, Pa. *Chemistry*, *Metallurgy*. Near Kenton, Del., Feb. 28, 70. B.S., Lafayette, 95, M.S., 98; D.D.S., Medico-Chirurg. Col., Phila., 01, M.D., 04. Asst. chem., Lafayette, 95-96; Pa. State, 96; chemist, various iron and steel works, 96-98; asst. chem. and metal, Medico-Chirurg. Col., Phila., 98-01; supt., St. Ignace furnace, Mich., and Goshen furnace, Va., 01-03; *prof. chem. and toxicol.*, *Temple*, 04- A.A.; Chem. Soc.; Am. Med. Ass.; Agr. Chem.; Phila. Röntgen Ray Soc. Volatile combustible matter in coal and coke; poisons; poisoning by permanganate of potash; utilization of fine ore and fine dust

in the blast furnace; hippuric acid secreted and excreted in certain infections; blood pressure instruments.

- Atwater, Miss Helen W(oodard)**, U. S. Department of Agriculture, Washington, D. C. *Home economics*. Somerville, Mass, May 29, 76. B.L, Smith, 97. Personal ed. asst. to Prof. W. O. Atwater, Wesleyan, 97-04; expert, scientific asst. and later in charge ed. work, office home econ, U. S. Dept. Agr, 09- Exec. chairman, food production and home econ. dept, woman's committee, C. N. D. Home Econ. Ass. Nutrition; economics of clothing, household equipment and management.
- Atwell, Prof. C(harles) B(each)**, 1938 Sherman Ave, Evanston, Ill. *Botany*. Theresa, N. Y, April 11, 55. Ph.B, Syracuse, 79, Ph.M, 82; Harvard, 87; Freiburg, 91. Asst. principal, acad, Lowville, N. Y, 79-80; instr, acad. dept, Northwestern, 80-82; principal pub. schools, South Evanston, Ill, 82-84; instr, acad. dept, Northwestern, 84-87, *Northwestern*, 87-91, *prof. biol*, 91-94, *bot*, 94- Registrar, col. dept, Northwestern, 90-02; city forester, Evanston, Ill. Soc. Nat; Bot. Soc; Ecol. Soc; Bot. Cent. States; Ill. Acad; Chicago Acad. Algae; chlorophyll; algae of Cook County, Illinois; development of *Lathyrus maritimus*; embryology of *Ribes*.
- Atwell, Prof. Wayne J(ason)**, 24 High St, Buffalo, N. Y. *Embryology*. Fairfield, Nebr, Oct. 19, 89. A.B, Nebr. Wesleyan, 11; A.M, Michigan, 15, Ph.D, 17. Research asst. histol, Michigan, 13-14, instr. *anat*, 14-18; *prof*, Buffalo, 18- Ass. Anat; Ass. Study Int. Secretions. Development and physiology of the hypophysis.
- Atwood, Dr. Charles Edwin**, 14 E. 60th St, New York, N. Y. *Medicine*. Shoreham, Vt, July 21, 61. B.S, Cornell, 80; M.D, Bellevue Med. Col. 83. Physician, Hudson River State Hosp, 85-87; Utica State Hosp, 87-92; Bloomingdale Hosp, 92-05; Vanderbilt Clinic, 92-13. Assoc. ed, 'Jour. Insanity,' 87-92; visiting neurologist, N. Y. Hosp. and Schools for Children, 07-13; clin. asst. neur, Columbia, 92-13. Am. Med. Ass; N. Y. Acad. Med. Insanity; neurology.
- Atwood, Dr. Geo(rge) G(ray)**, 865 Myrtle Ave, Albany, N. Y. *Botany*. Springfield, Mass, March 2, 47. Sc.D, Syracuse, 14. *Chief, bur. plant indust*, N. Y. State Dept. Agr, 00- A.A; Ass. Econ. Entom; N. Y. Forestry Ass. (v. pres). Economic entomology; plant pathology; forestry; gipsy and brown tail moths; blister rust; chestnut fungi; trees and shrubs for parks and lawns; orchard propagation.
- Atwood, Horace**, Morgantown, W. Va. *Agriculture*. Summer Hill, N. Y, Aug. 1, 68. B.S.A, Cornell, 91, M.S.A, 97. Asst. agr, *W. Va. Exp. Sta*, 97-14, *chief, poultry research dept*, 18- Poultry Ass; Int. Ass. Instructors and Investigators Poultry Husbandry. Feeding; soil fertility; breeding; mortality of incubator chicks.
- Atwood, Dr. Wallace W(alter)**, Clark University, Worcester, Mass. *Physical geography*. Chicago, Ill, Oct. 1, 72. B.S, Chicago, 97, Ph.D, 03. Instr. physiog, Lewis Inst, Chicago, 97-99; geol, Chicago, Inst, 99-00, director, 00; asst. physiog, Chicago 01-02, assoc, 02-03, instr. geol, 03-08, asst. prof. physiog. and gen. geol, 08-10, assoc. prof, 10-13; prof. physiog, Harvard, 13-20; *pres*, and *prof. physical geog*, Clark, 20- Asst. geologist, U. S. Geol. Surv, 01-09, geologist, 09- Trustee, Children's Museum, Boston, 14; director, Children's Museum, Cambridge, 15- A.A; Geol. Soc; Ass. Geog; Am. Acad; Ill. Acad; Chicago Acad; Chicago Geog. Soc. Glaciation; ancient glaciers among the Rocky Mountains; structural and economic geology; coal resources of Alaska; physiography of San Juan Mountains; the new geography.
- Atwood, Prof. W(infred) M(cKenzie)**, 214 N. 7th St, Corvallis, Oregon. *Botany*. Aurelia, Iowa, July 25, 83. A.B, Cornell (Iowa), 07, A.M, 10; M.S, Chicago, 11, fellow, 12-13, Ph.D, 13. *Assoc. prof. plant physiol*, Oregon Col, 13- A.A; Bot. Soc. Delay of germination of seeds; respiration of fruits.
- Aub, Dr. Joseph C(harles)**, Harvard Medical School, Boston, Mass. *Physiology*. Cincinnati, Ohio, May 13, 90. A.B, Harvard, 11, M.D, 16. Intern, Mass. Gen. Hosp, 14-15; asst. physician, Russell Sage Inst. Path, 15-16; res. physician, Mass. Gen. Hosp, 16-17; instr. *physiol*, Harvard Med. Sch, 19-20, *asst. prof*, 20- Physiol. Soc; Soc. Clin. Invest. Metabolism.
- Auchincloss, William S(tuart)**, Atlantic Highlands, N. J. *Engineering*. New York, N. Y, March 19, 42. C.E, Rensselaer, 62. Civil engineer, A. and G. W. R. R, 64; U. S. commissioner, Paris Expos, 67; ship builder and car manufacturer, 69-79; commission merchant, 79-95. A.A; Civil Eng; Mech. Eng; Phila. Eng. Club; Inst. Braziliera; British Ass. War-vessel case-mates; indicators for passenger elevators; axle-boxes and trucks for railroad cars; thread spoolers; averaging instruments for calculating accounts; link and valve motions; laws of rainfall.
- Auchter, Prof. E(ugene) C(urtis)**, College of Agriculture, College Park, Md. *Horticulture*. Elingrove, N. Y, Sept. 14, 89. B.S.A, Cornell, 12, M.S, 18. Asst. pomol, Cornell, 11; instr. *hort*, West Virginia, 12-14, asst. prof, 14-17, assoc. prof, 18; *prof. and head of dept*, Md. Col. and pomologist, *Exp. Sta*, 18- A.A; Soc. Hort. Sci; Pomol. Soc. Orchard survey; apple and peach culture; pruning of the pomaceous and drupaceous fruits.
- Auchy, George**, 6948 Hegerman St, Tacony, Philadelphia, Pa. *Chemistry*. Pottstown, Pa, April 23, 62. Lafayette, 78-82. *Chemist*, Durham Iron Works, 82-86; Nashua Iron and Steel Co, 94-97; Keystone Saw Works, 97-11; *private research political econ*, 11- Methods of chemical analysis of iron and steel.
- Auer, Dr. John**, Rockefeller Institute, 66th St. and Ave. A, New York, N. Y. *Physiology. Pharmacology*. Rochester, N. Y, March 30, 75. B.S, Michigan, 98; M.D, Hopkins, 02. Fellow, Rockefeller Inst, 03-05, asst, 05-06; instr. *physiol*, Harvard Med. Sch, 06-07; *assoc. mem*, Rockefeller Inst, 08- House officer, Hopkins Hosp, 02-03; major, M.R.C. A.A; Am. Physicians; Physiol. Soc; Soc. Pharmacol. (sec'y, 12-17); Soc. Exp. Biol; Harvey Soc. Anaphylaxis; edema; motor phenomena of the gastro-intestinal tract; respiration; functional effect of epinephrin, magnesium salts, antiseptics, and war gases.

- Ault, J(ames) P(ercey)**, 36th St. and Broad Branch Road, Washington, D.C. *Physics*. Olathe, Kans., Oct. 29, 81. A.B., Baker, 04; A.M., Columbia, 09. Magnetic observer, dept. *terrestrial magnetism*, *Carnegie Institution*, 04-10, magnetician, 10-12, *alternate commander and magnetician*, 12- Mem. magnetic surv., West Indies and Panama, 05; Pacific Ocean, 05-06; Mex, 06-07; Can, 08; navigating officer and magnetic observer, 'Carnegie,' 09-10; in charge, magnetic surv. exped. to Peru, Bolivia and Chili, 12; in command, 'Carnegie,' N. Atlantic and Arctic Oceans, 14. A.A.; Wash. Philos. Soc. Terrestrial magnetism.
- Aungst, Prof. R(euben) H(arper)**, 244 Willoughby Ave, Brooklyn, N. Y. *Chemistry*. Suedberg, Pa., April 17, 79. B.S., Pa. State, 05, M.S., 19. Instr. chem, Pratt Inst, 06-14; prof, *Adelphi*, 14-
- Austin, Prof. Arthur Everett**, Tufts College Medical School, Boston, Mass. *Biochemistry*. Boston, Mass., April 11, 61. A.B., Bowdoin, 83, A.M., 87; M.D., Harvard, 87. Prof. med. chem. and toxicol, Tufts, 93-06; assoc. prof. physiol. chem, Virginia, 06-07; prof. chem. and toxicol, Texas, 08; *asst. prof. clin. med.*, Tufts. Col. Physicians; Gastro-Enterol. Ass; Soc. Biol. Chem. Diseases of the digestive tract; diathotherapy.
- Austin, Prof. C(lift) F(ay)**, Finca Laguna, Heradadura, Cuba. *Horticulture*. South Haven, Mich., Oct. 23, 73. B.S., Mich. Agr. Col, 99. Asst. horticulturist, Ala. Exp. Sta., 00-02; assoc. prof. hort, Md. Col, 02-04; chief, dept. hort, Estacion Central Agron, Cuba, 04-09; asst. administrator, Cent. Nueva Luisa Sugar Estate, 09. A.A.; Soc. Hort. Sci; Pomol. Soc. Fruit and vegetable culture.
- Austin, Prof. F(rank) E(ugene)**, Box 441, Hanover, N. H. *Electrical engineering*. Amesbury, Mass, 73. B.S., Dartmouth, 95, fellow, 96-97, E.E., 15. *Prof. elec. eng.*, Dartmouth, 02-, mechanics, Thayer Sch, 18; physics, Norwich, 06-08, *elec. eng.*, 08-14, *head of dept.*, 14- A.A.; Eng. Educ. Hydraulics; mechanical engineering; automatic mapper; transformers; alternating currents; magnetism.
- Austin, Dr. J(ames) Harold**, Hospital of Rockefeller Institute, New York, N. Y. *Medicine*. Philadelphia, Pa., Sept. 22, 83. B.S., Pennsylvania, 05, M.D., 08. Assoc. research med, Pennsylvania, 11-14, assoc. med. and asst. physician, Univ. Hosp, 12-17; asst., *Rockefeller Inst*, 19-20, *assoc.*, 20- Am. Physicians; Am. Med. Ass; Ass. Path. and Bact; Soc. Exp. Biol; Soc. Clin. Invest; Phila. Col. Physicians. Nephritis; physiology of the spleen.
- Austin, L(eonard) S(trong)**, 1515 W. Eighth St, Los Angeles, Calif. *Metallurgy*. Stratford, Conn, Feb. 26, 46. Ph.B., Yale, 68. Mech. engineer, 68-71; chemist, exploration in Patagonia, 77-79; practising metallurgist, 81-02; prof. in charge, dept. metal. and ore dressing, Mich. Col. Mines, 03-09; *mining and metal. engineer*, 09- Min. Eng; Min. and Metal. Soc; Min. and Metal. Inst. Silver, lead and copper smelting; common metals.
- Austin, Prof. Louis W(inslow)**, Bureau of Standards, Washington, D. C. **Physics*. Orwell, Vt, Oct. 30, 67. A.B., Middlebury, 98, Sc.D., 20; Strasbourg, 89-90, Ph.D., 93; fellow, Clark, 90-91. Instr. and later asst. prof. physics, Wisconsin, 93-01; on staff, Physik-Tech. Reichsanstalt, Charlottenburg, 02-04; *Bur. Standards*, 04-, *head*, U. S. Naval Radio Research Lab, 03- Radio Eng. (pres, 14); Physical. Soc; Wash. Acad; Wash. Philos. Soc; Soc. de Physique; Physik. Gesell; Int. Union Sci. Radio. (v. pres, 20). Physical measurements; elasticity in metals; magnetostriction discharge of electricity through gases; specific heat of gases at high temperatures, and in radio-telegraphy; transmission formula; high frequency measurements; atmospheric disturbances.
- Austin, Dr. Richard S(isson)**, 735 Fullerton Ave, Chicago, Ill. *Pathology*. Providence, R. I., April 18, 85. M.D., Harvard, 11. Asst. path, Boston City Hosp, 11-13; instr. bacter, Harvard Med. Sch, 13-15; *asst. prof. path*, *Rush Med. Col*, 15-; *pathologist*, *Children's Mem. Hosp*, 15- Ass. Path. and Bact; Am. Med. Ass. Bacteriology; pulmonary tuberculosis in children; hereditary syphilis.
- Austrian, Dr. Charles Robert**, 1417 Eutaw Place, Baltimore, Md. *Medicine*. Baltimore, Md, 85. A.B., Hopkins, 04, M.D., 09. Asst. instr. and later *assoc. med.*, Hopkins, 10- A.A.; Ass. Path. and Bact; Soc. Clin. Invest. Bacteriology; immunology; internal medicine; infectious diseases; tuberculosis; etiology of angio-neurotic edema.
- Avers, H(enry) G(odfrey)**, U. S. Coast and Geodetic Survey, Washington, D. C. *Geodesy*. Elmore, Ohio, March 6, 86. A.B., George Washington, 13. *Geod. computer*, U. S. Coast and Geod. Surv, 08- Math. Ass; Wash. Philos. Soc; Wash. Soc. Eng. Precise leveling.
- Avery, Dr. Elroy M(cKendree)**, New Port Richey, Fla. *Physics*, *Chemistry*. Erie, Mich, July 14, 44. Ph.B., Michigan, 71, Ph.M., 74; Ph.D., Hillsdale, 82, LL.D., 94, D.C.L., 06. Principal, East High Sch. and City Nor. Sch, Cleveland, Ohio, 71-79; mem. Ohio Senate, 92-96. A.A. (see'y, B, 90); Eeon. Ass; Ohio Archeol. and Hist. Soc; Avery Library and Hist. Soc. (founder and pres).
- Avery, Dr. Oswald T(heodore)**, Rockefeller Institute, New York, N. Y. *Bacteriology*. Halifax, N. S. A.B., Colgate, 00; M.D., Columbia, 04. Assoc. director, dept. bact, Hoagland Lab, 07-13; assoc. and *assoc. mem.*, *Rockefeller Inst*, 13- Ass. Path. and Bact; Soc. Bact; Soc. Clin. Invest; Harvey Soc; N. Y. Acad. Med. Bacteriology of acute respiratory disease.
- Avery, Chancellor S(amuel)**, University of Nebraska, Lincoln, Nebr. **Chemistry*. Bureau Co, Ill, April 19, 65. A.B., Doane, 87, LL.D., 09; Idaho, 09; B.S., Nebraska, 92, A.M., 94; Ph.D., Heidelberg, 96. Instr. chem, Nebraska, 95-97, adj. prof, 97-99; prof, Idaho, 99-01; agr. chem, Nebraska, 02-05, chem. and director, chem. lab, 05-06, head prof, 05-08, acting chancellor, 08-09, *chancellor*, 09- Major, C.W.S., 17-18. A.A.; Chem. Soc; Chem. Gesell. Aromatic glutaric acids; determination of arsenic and iron; prus-

sic acid in sorghum and kaffir corn; extermination of prairie dogs; arsenical insecticides; sulphur and lime in cattle dips; constitution of Paris green and its homologues; action of sodium benzyl cyanid with cinnamic ester; synthesis of certain aromatic succinic acids; nitration of b-p-tolylglutaric acid.

Ayer, Dr. James B(ourne), 518 Beacon St, Boston, Mass. *Medicine*. Boston, Dec. 28, 82. A.B., Harvard, 03, M.D. 07. Asst. neuropath. and instr. neur. Harvard Med. Sch; *neurologist*, *Mass. Gen. Hosp.* A.A.; Ass. Path. and Bact; Neur. Ass; Am. Med. Ass; Boston Soc. Psychiat. and Neur. Cerebro-spinal fluid.

Ayers, Dr. Howard, Winding Way and Valley Road, Cincinnati, Ohio. **Biology*. Olympia, Wash, May 21, 61. B.S., Harvard, 83; Heidelberg; Strasbourg; Ph.D., Freiburg, 86; LL.D., Missouri, 99. Instr. zool. Michigan, 86-87; Harvard and Radcliffe, 87-88; Woods Hole, 89-98; director, Allis Lake Lab, Milwaukee, 89-94; prof. biol. Missouri, 94-99; pres. Cincinnati, 99-04. Walker prize, Boston Soc. Nat. Hist, 83. A.A.; Soc. Nat; Soc. Zool; cor. mem. Phila. Acad. Vertebrate morphology; anthropology; morphology and physiology of the vertebrate ear; vertebrate cephalogenesis.

Ayres, H(iram) D(outhitt), B. F. Goodrich Rubber Co, Akron, Ohio. *Physics*. College Hill, Ky, May 30, 78. A.B., DePauw, 02; A.M., Cornell, 04, Ph.D., 13. Asst. physics, DePauw, 02-03; instr. Ohio State, 04-05; physicist, Carnegie Institution, 05-10; *chief physicist*, *The B. F. Goodrich Rubber Co*, 13- A.A.; Physical Soc. Elasticity of metals.

Ayres, H(orace) B(eemer), Kimberly, Minn. *Forestry*. Allamuchy, N. J, Sept. 20, 56. B.S., Lafayette, 78. Timber inspector and geologist, eng. dept, N. P. R. R. Co; Minn. and Pacific R. R.; Northern Transcont. Surv; Adirondack Forest Surv; land departments, St. P. and D. R. R. Co. and N. P. R. R. Co; field asst, U. S. Geol. Surv; forest expert, bur. of forestry, U. S. Dept. Agr; *manager*, *Kimberly Explor. Co.* A.A.; Forestry Ass. Southern Appalachian forests; Cascade Mountain forests; northern Rocky Mountain forests; conditions favoring growth of valuable timber; jack pine in the 'Great American Desert.'

Ayres, Dr. Leonard P(orter), Cleveland Trust Company, Cleveland, Ohio. *Education*. Niantic, Conn, Sept. 15, 79. Ph.B., Boston, 02, A.M., 09, Ph.D., 10; Columbia, 07-09. Supt. schools, Caguas, P. R, 03-04; San Juan, 04-06; gen. supt, P. R, and chief, div. statist, 06-08; director, div. statist. and div. educ, Russell Sage Foundation, 08-21; *v. pres*, *Cleveland Trust Co*, 21- Lecturer educ, Boston, 09; N. Y. Univ, 12; Illinois, 13; Colorado, 13; director, educ. surveys, various cities, 12-15; col. Gen. Staff, 17-19; chief statist. officer, War Dept; statistician, Am. Peace Commission. A.A. (v. pres, 16); Statist. Ass. Statistics; hygiene; psychology.

B

Babasinian, Dr. V(ahan) S, South Bethlehem, Pa. *Chemistry*. Marsovan, Asia Minor, Nov. 28, 76. A.B., Anatolia, 95; A.M., Brown, 03, Ph.D., 06. Instr. chem, Brown, 03-06; *org.*

chem, *Lehigh*, 06-09, asst. prof, 09-11, *assoc. prof*, 11- Instr. chem, summer sch, California, 09; research chemist, C.W.S., 18-19. A.A.; Chem. Soc. Sulphonation of aliphatic compounds; dyes.

Babb, Cyrus C(ates), Granite Falls, N. C. *Hydraulic engineering*. Portland, Maine, June 18, 67. B.S., Mass. Inst. Tech, 90. Engineer, U. S. Geol. Surv, 90-02; U. S. Reclamation Service, 02-09; Maine State Water Storage Commission and U. S. Geol. Surv, 10-16; *consulting engineer*, 16- Civil Eng.

Babb, Prof. M(aurice) J(efferis), 157 Cricket Ave, Ardmore, Pa. *Mathematics*. Marshallton, Pa, Oct. 20, 70. B.S., Haverford, 05; Ph.D., Pennsylvania, 10. Prof. math, Dickinson Sem, 96-00; Bellefonte Acad, 00-01; instr. Pa. State, 01-05; *Pennsylvania*, 05-10, *asst. prof*, 10- Trustee, Phila. Collegiate Inst, 11-; *assoc. ed*, 'Math. Teacher'. A.A.; Math. Soc; Ass. Teachers Math. Middle States and Md. Pedagogy and history of mathematics; theory of numbers.

Babbitt, Dr. James A(ddison), 1901 Chestnut St, Philadelphia, Pa. *Hygiene, Otolology*. Wakesfield, Vt, Oct. 22, 69. A.B. Yale, 93; A.M., Haverford, 96; M.D., Pennsylvania, 98. *Prof. hygiene and physical educ*, *Haverford*; *instr. otol*, *Pennsylvania*. Asst. laryngologist and aurist, German Hosp; laryngologist, Garrett Home for Deaf Children; rhinologist, Children's Hosp. Laryngol. Rhinol. and Otol. Soc; Phila. Col. Physicians; Phila. Laryngol. Soc. Rhinology; laryngology; physical education; tests of equilibrium.

Babcock, Dean E(arle) J(ay), University of North Dakota, Grand Forks, N. Dak. *Chemistry, Engineering*. St. Charles, Minn, June 11, 65. Carleton; B.S., Minnesota, 89; Sc.D., North Dakota, 14. Instr. chem, *North Dakota*, 89-91, *prof. chem. and geol*, 91-02, *chem. metal. and mining and dean, col. mining eng*, 98-, *col. eng*, 16-, acting pres, 17-18. State geologist, N. Dak, 97-02. Director, N. Dak. Min. Exp. Sta. A.A.; Min. Eng; Chem. Soc; Eng. Educ. Mining engineering; industrial chemistry; fire clays; lignite coal; gas; briquetting; cement; building stone.

Babcock, Prof. Ernest B(rown), University of California, Berkeley, Calif. *Plant genetics*. Edgerton, Wis, July 10, 77. B.S., California, 05, M.S., 11. Teacher biol. and nature study, Los Angeles Nor. Sch, 06-07; instr. plant path, *California*, 07-08, *asst. prof*, 08-09, *agr. educ*, 09-12, *prof. genetics*, 13- A.A.; Soc. Nat; Soc. Hort. Sci. Nature and origin of certain forms of *Juglans californica* Wats; nature and mechanism of the germinal substance.

Babcock, Harold D(elos), Mt. Wilson Solar Observatory, Pasadena, Calif. *Physics*. Edgerton, Wis, Jan. 24, 82. B.S., California, 07. Asst. physics, California, 05-06; lab. asst, Bur. Standards, 06-08; *physicist*, *Mt. Wilson Solar Observatory*, 09- A.A. Standard resistances; Zeeman effect; iron arc spectrum; electrostatic field of sun.

Babcock, Dr. H(arold) L(ester), Woodleigh Road, Dedham, Mass. *Herpetology*. Holliston, Mass, May 30, 86. Worcester, 05-06; M.D., Boston,

- 10; Berlin, 11. *Asst. curator reptiles*, Boston Soc. Nat. Hist. Soc. Ichthyol. and Herp. Turtles of New England.
- Babcock, Prof. Henry A(ndrews)**, Northwestern University, Evanston, Ill. *Physics*. Lebanon Springs, N. Y., July 17, 91. B.S., Mass. Inst. Tech, 12, M.S., 13; fellow, Northwestern, 14-16, Ph.D., 16. Instr. *physics*, Northwestern, 16-17, *assoc. prof.*, 19- Second lieut. A. S. A.E.F., 17-19. Physical Soc. Heat; specific heat of ammonia.
- Babcock, Dr. S(tephen) M(oulton)**, 432 Lake St, Madison, Wis. **Agricultural chemistry*. Babcock Hill, N. Y., Oct. 22, 43. A.B., Tufts, 66, LL.D., 01; Ph.D., Göttingen, 79; Sc.D., Wisconsin, 17. Instr. chem, Cornell, 75-77, 81-82; chemist, N. Y. Exp. Sta., Geneva, 82-88; *prof. agr. chem., Wisconsin*, and chief chemist, Exp. Sta., 88-13, *asst. director*, 99-13, *emer. prof.*, 13- Mem. jury of awards, Pan-Am. Expos, 01. Bronze medal, Wis. Legislature, 99; grand prize, Paris Expos, 00; St. Louis Expos, 04; silver medal, Stockholm, 08. A.A. (sec'y, C, 94). Dairy chemistry; influence of low temperatures upon the curing of cheese; conservation of gravity during molecular changes; constitution of matter.
- Babcock, William Henry**, 810 F St, N. W., Washington, D. C. *History*. St. Louis, Mo., Jan. 1, 49. LL.B., Columbian, 69. *Asst. examiner*, U. S. Patent Office, 73-77; *patent lawyer*. Wash. Anthropol. Soc. (sec'y, 12). Ethnology; folk-lore; cartography; pre-Columbian explorations; song games.
- Baber, Dr. E(rl) A(rmitage)**, Dayton State Hospital, Dayton, Ohio. *Psychiatry*. Griggsville, Ill., May 3, 83. M.D., Louisville, 09. *Supt., Dayton State Hosp.*, 11- A.A.; *Medico-Psychol. Ass.*; *Am. Med. Ass.*; *Am. Acad. Med.*; *Ass. Study Int. Secretions*.
- Baber, Miss Zonia**, University of Chicago, Chicago, Ill. *Geography*. Kansas, Ill., Aug. 24, 62. B.S., Chicago. Principal, ward sch., Youngstown, Ohio, 86-88; *critic teacher*, Cook Co. Nor. Sch., 88-90, *head, dept. geog.*, 90-99; *sch. of educ., Chicago*, 01- Principal, element. sch., sch. of educ., Chicago, 02-03. A.A.; *Soc. Sci. Educ.*; *Chicago Geog. Soc.* (pres); *cor. mem. Soc. Géog. de Genève*. Geography in education.
- Bachman, Prof. A(lois)**, Institute of Microbiology, Tucuman, Arg. Rep. *Bacteriology*. Cordoba, Arg. Rep., Aug. 30, 74. M.D., Buenos Aires, 05. Chief, path. lab., Buenos Aires, 00-05, *prof. bacter.*, 05-15; Cordoba, 15-19; *director, Inst. Microbiol. and Hygiene, Tucuman*, 19- *Director*, clin. lab., Buenos Aires Hosp., 05-12; *instr. bacter.*, Cordoba, 15-19. Delegate. Int. Hygiene Committee, Paris, 19. Argentine Med. Soc. Immunity; anaphylaxis.
- Bachmann, Dr. Freda M**, University of Wisconsin, Madison, Wis. *Bacteriology*. Genoa, Ohio, Nov. 7, 78. A.B., Miami, 07, A.M., 08; fellow, Wisconsin, 08-09, Ph.D., 12. *Asst. bot. and plant path.*, Wisconsin, 09-12; *asst. prof. bot. and bacter.*, Milwaukee-Downer, 12-14; *instr. agr. bacter., Wisconsin*, 14- A.A.; *Soc. Bact.* Cytology; morphology and physiology of bacteria; yeasts; molds.
- Bachmann, Prof. J(ean) G(eorge)**, 10 Dixie Ave., Atlanta, Ga. *Physiology*. Mulhouse, Alsace, July 18, 77. M.D., Jefferson Med. Col., 07. *Res. physiologist and lecturer hygiene*, Jefferson Hosp., 07-09; *demonstrator physiol.*, Jefferson Med. Col., 09-10; *prof.*, Atlanta Med. Col., 10-15; *Emory*, 15- A.A.; *Physiol. Soc.* Venous pulse; action of strophanthus in heart block; interauricular time interval.
- Back, Dr. E(mest) A(dna)**, U. S. Department of Agriculture, Washington, D. C. *Entomology*. Northampton, Mass., Oct. 7, 80. B.S., Mass. Col. and Boston, 04; Ph.D., Mass. Col., 07. Deputy state nursery inspector, Mass., 02-06; *instr. entom.*, Mass. Col., 04-06, bot., 06-07; *agent and expert*, bur. entom., U. S. Dept. Agr., 07-10; *entom. investigator*, Cuba and Mexico, 10-12; *entomologist*, Va. Exp. Sta., 12-16; *fruit fly investigations*, Hawaii, Bermuda and Spain, bur. entom., U. S. Dept. Agr., 13-17, *entomologist in charge stored product insect investigations*, 17- A.A.; *Ass. Econ. Entom.*; *Entom. Soc.*; Wash. Entom. Soc. Biology and control of citrus white flies; fumigation and fungous diseases; protection of stored food products; Asilidae; Aleo- didae.
- Bacon, Prof. Arthur A(very)**, Syrian Protestant College, Beirut, Syria. *Physics*. Laconia, N. H., Oct. 26, 75. A.B., Dartmouth, 97, A.M., 01. Tutor physics, Oberlin, 97-98; *asst.*, Dartmouth, 98-00, *instr. math. and astron.*, 00-01; *prof. physics*, Hobart, 03-19, *sec'y and registrar*, 07-17; *prof. physics*, Syrian Protestant Col., 19- Capt., Am. Red Cross, Palestine, 18, *major deputy commissioner*, 19. A.A.; *Physical Soc.* Equilibrium of vapors at curved surfaces of liquids.
- Bacon, Prof. C(harles) S(ummer)**, 2156 Sedgwick St, Chicago, Ill. *Medicine*. Spring Prairie, Wis., July 30, 58. Ph.B., Beloit, 78; M.D., Northwestern, 84. *Prof. gynec.*, Chicago Polyclinic, 91-94, *obstet.*, 95-; *Illinois*, 03- A.A.; *Col. Surg.*; *Am. Med. Ass.* (chairman, sect. obstet., 05); *Chicago Med. Soc.* (pres, 03); *Chicago Gynec. Soc.* (pres, 01); *Chicago Acad. Med. Pathology of pregnancy*; tuberculosis and pernicious vomiting in pregnancy.
- Bacon, Cha(rl)e's V(incent)**, 3 Park Row, New York, N. Y. *Chemistry*. New York, March 24, 85. Grad. Cooper Union, 04, 04-06; Columbia, summer, 10. *Chemist, various companies, and consulting chemist*, 02- A.A.; *Chem. Soc.*; *Soc. Test. Mat.*; *Int. Ass. Test. Mat.* Fixed oils, their various products and lubricants; substitutes for linseed oil; refining fixed oils and the manufacture of lubricants.
- Bacon, Dr. Charles W(alter)**, 1134 12th St, N. W., Washington, D. C. *Chemistry, Plant physiology*. Worcester, Mass., March 11, 86. A.B., Clark, 06, A.M., 07, Ph.D., 11. *Asst. chem.*, Clark, 07-09; *asst. physiologist, bur. plant indust.*, U. S. Dept. Agr., 10- A.A.; *Chem. Soc.* Distillation; tobacco curing; physiological plant diseases.
- Bacon, Prof. Clara Latimer**, 2316 N. Calvert St, Baltimore, Md. *Mathematics*. Hills Grove, Ill., Aug. 13, 66. A.B., Wellesley, 90; A.M., Chicago, 04; Ph.D., Hopkins, 11. Teacher, secondary schools, 90-97; *instr. math.*, Goucher, 97-05, *assoc. prof.*, 05-14, *prof.*, 14- Math. Soc.; Math. Ass.; *Ass. Teachers Math.* Middle States and Md.

- Bacon, Prof. George P(reston)**, Tufts College, Mass. *Physics*. Charlemont, Mass, Aug. 24, 66. A.B., Dartmouth, 87, A.M., 90. Assoc. prof. math, Beloit, 92-02; prof. physics, Wooster, 02-08; assoc. prof. math. and physics, Simmons, 10-19, *prof. physics, Tufts*, 19- A.A.; Physical Soc; Astron. Soc.
- Bacon, N(athaniel) T(erry)**, Peace Dale, R. I. *Chemistry*. Litchfield, Conn, Aug. 16, 58. B.S., Yale, 79. *With Solvay Process Co*, 84-95, *tech. expert*, 95- A.A.; Chem. Soc. Physico-chemistry; soda manufacture; international finance.
- Bacon, Dr. Raymond F(oss)**, Mellon Institute, Pittsburgh, Pa. **Chemistry*. Muncie, Ind, June 29, 80. B.S., DePauw, 99, A.M., 00, hon. Sc.D., 19; fellow, Chicago, 01-04, Ph.D., 04; hon. Sc.D., Pittsburgh, 18. Instr. chem, DePauw, 99-00; prof., Vincennes, 00-01; commercial chemist, Chicago, 04-05; chemist, Bur. Science, P. I., 05-10; asst. chemist, bur. chem, U. S. Dept. Agr, 10-11; senior fellow, *Mellon Inst*, 11-12, assoc. director, 12-14, *director*, 14- Col, C.W.S., A.E.F.; assoc. mem. Naval Con. Board. A.A.; Chem. Soc; Electrochem. Soc; Chem. Eng; Min. and Metal Eng; Ceramic Soc; Soc. Chem. Indust; London Chem. Soc; Soc. Chim. de Paris; Soc. de Chim. indust. Industrial research; tropical oils and resins.
- Badertscher, Prof. J(acob) A**, Bloomington, Ind. *Histology*. Bluffton, Ohio, Jan. 11, 79. Ph.B., Ohio (Athens), 09, Ph.M., 10; Ph.D., Cornell, 14. Asst. biol, Ohio (Athens), 08-09, instr, 09-10; asst. histol. and embryol, Cornell, 10-11, instr, 11-14; *anat, Indiana*, 14-15, asst. prof, 15-17, *assoc. prof*, 17- A.A.; Ass. Anat. Muscle degeneration; the thymus; the ultimobranchial bodies.
- Badger, Prof. Walter Lucius**, 917 Church St, Ann Arbor, Mich. *Chemical engineering*. Minneapolis, Minn, Feb. 18, 86. A.B., Minnesota, 07, B.S., 08, M.S., 09. Chemist, Great West. Sugar Co, 09; instr. chem, Minnesota, 10; lab. asst, Bur. Standards, 10-12; *prof. chem. eng, Michigan*, 12-; *director of research, Swenson Evaporator Co*, 17- Chem. Soc; Chem. Eng; Electrochem. Soc; Mich. Eng. Soc. Design of chemical machinery; water softening; evaporator design; alloys of calcium.
- Baehr, Dr. George**, 987 Madison Ave, New York, N. Y. *Pathology*. New York, April 16, 87. M.D., Columbia, 08; Freiburg, 11-12; Vienna, 12-13. *Assoc. path, Mt. Sinai Hosp, N. Y. City*, 11-, *asst. attending physician*, 19- Research fellow, Mt. Sinai Hosp, 10-11, 14-17, 19-; mem. Red Cross Sanit. Commission to Serbia and Russia, 15-16; lieut. col, M.C., 17-19. A.A.; Ass. Path. and Baet; Soc. Clin. Invest; Soc. Exp. Biol; Harvey Soc; Am. Med. Ass; N. Y. Acad. Med; Int. Ass. Med. Mus. Experimental medicine; nephritis.
- Baekeland, Dr. L(eo) H(endrik)**, Yonkers-on-Hudson, N. Y. **Chemistry*. Ghent, Belgium, Nov. 14, 03. Sc.D., Ghent, 84. Asst. prof. chem, Ghent, 85-88, assoc. prof, 88-89; prof. chem. and physics, Higher Nor. Sch, Bruges, 85-89; mfg. and consulting chemist, 89-99; *research chemist*, 99-; *hon. prof. chem. eng, Columbia*. Mem. Naval Consulting Board, 15; chairman, committee on patents, Nat. Research Council; mem. administrative board, Inst. Int. Educ. Chandler lecturer, Columbia, 14. Nichols medal, Chem. Soc, 09, Gibbs medal, 13, Perkins medal, 16; Scott medal, Franklin Inst, 10; Chandler medal, Columbia, 14; grand prize, Panama-Pacific Expos, 15. Order of the Crown, Belgium, 19. A.A.; Chem. Soc. (v. pres, 09, chairman, N. Y. sect, 08, councilor at large, 07-); Electrochem. Soc. (pres, 09); Chem. Eng. (pres, 12); Soc. Chem. Indust. (v. pres, 05); N. Y. Chemists Club (pres, 04). Int. Cong. Chem, London, 09, pres, sect. plastics, 12. Oxidation of hydrochloric acid under the influence of light; separation of copper and cadmium; dissociation of nitrate of lead; photographic chemistry; industrial electrolysis of alkali-chlorides; velox paper process; condensation products of phenols and formaldehyde; bakelite; plastics; electric insulation; impregnation of wood; varnishes.
- Baetjer, Prof. F(rederick) H(enry)**, 4 E. Madison St, Baltimore, Md. *Röntgenology*. Baltimore, Oct. 4, 74. A.B., Hopkins, 97, M.D., 01. *Röntgenologist, Hopkins Hosp, and assoc. prof. clin. röntgenol, Hopkins*. Consulting röntgenologist, various hospitals; Major, M.C.; Delegate, Int. Röntgen Ray Cong, Amsterdam, 08. Am. Röntgen Ray Soc. (pres, 11); Baltimore Med. Soc. (v. pres, 15); hon. mem. N. Y. Röntgen Ray Soc; hon. mem. Phila. Röntgen Ray Soc. Thoracic aneurysms; gastro-intestinal diseases; effects of Röntgen rays upon embryonic tissues.
- Bagg, Dr. Halsey J(oseph)**, Cornell University Medical College, New York, N. Y. *Heredity*. Utica, N. Y., Oct. 23, 89. B.S., Columbia, 14, A.M., 15, Ph.D., 18. Asst. biol, Rockefeller Inst, 10-11; instr, N. Y. Univ, 14-17; *research fellow, Huntington fund for cancer research, med. col, Cornell*, 17- Psychol. Ass; assoc. mem. N. Y. Acad. Heredity of animal behavior and growth; pathological effects of injection of radio-active solutions.
- Bagg, Dr. Rufus M(ather), Jr**, 7 Brokaw Place, Appleton, Wis. *Geology*. West Springfield, Mass, April 19, 69. A.B., Amherst, 91; Ph.D., Hopkins, 95. Principal, high sch, Lubec, Maine, 91-92; asst. geol, Hopkins, 95-97; asst, N. Y. State Museum, 97; prof. geol. and miner, Colo. Col, 98-99; instr. science, high sch, Colo. Springs, 99-00; sub-master, high sch, Broekton, 01-03; prof. miner. and petrog, N. Mex. Sch. Mines, 03-04; mining engineer and geologist, 04-08; instr. geol. Illinois, 08-11; *prof. geol. and miner, Lawrence*, 11- Instr. science, Worcester Summer Sch. for Boys, 91, 92; mem. Md. Geol. Surv, 96-98. Diploma and bronze medal, Paris Expos, 00. A.A.; Geol. Soc; Min. Eng; Paleont. Soc; Wash. Geol. Soc; Wis. Acad. Cretaceous and Tertiary Foraminifera; artesian water and oil supplies.
- Bagley, Prof. W(illiam) C(handler)**, Teachers College, Columbia University, New York, N. Y. *Education, Psychology*. Detroit, Mich, March 15, 74. B.S., Mich. Agr. Col, 95; M.S., Wisconsin, 98; Ph.D., Cornell, 00; Ed.D., R. I. Col, 19. Teacher, pub. schools, Mich, 95-97; asst. psychol, Cornell, 00-01; principal pub. schools, St. Louis, 01-02; v. pres. and director of training, Mont. State Nor. Col, 02-06; supt, training dept, Stato

- Nor. Sch. Oswego, N. Y. 06-08; prof. educ. Illinois, 08-17, director, sch. of educ. 09-17; *prof. educ. Teachers Col. Columbia*, 17- A.A.; Psychol. Ass; Soc. Sci. Educ. Apperception of the spoken sentence; correlation of mental and motor ability in school children; factors of the educative process; educational values; minimal essentials in elementary school systems.
- Bahney, Luther William**, Scovill Manufacturing Co, Waterbury, Conn. *Metallurgy*. Red Bluff, Calif, Dec. 25, 78. Met.E, Stanford, 11. Asst. prof. metal, Stanford, 07-11; Yale, 11-17; *metal. engineer, research dept, Scoville Mfg. Co*, 17- Min. Eng; Chem. Soc. Gold and silver; laboratory methods; casting shop metallurgy.
- Bailey, Prof. Benj (amin) F (ranklin)**, University of Michigan, Ann Arbor, Mich. *Electrical engineering*. Sheridan, Mich, Aug. 7, 75. B.S.(E.E), Michigan, 98, A.M., 00, Ph.D., 07. Instr. elec. eng, *Michigan*, 01-06; asst. prof, 06-09; junior prof, 09-13, *prof*, 13- Designing, constructing, and chief engineer, various companies. Elec. Eng. (sec'y, Detroit-Ann Arbor sect, 11); Soc. Auto. Eng. X-ray; Wehnelt interrupters; electrolytic rectifiers; induction coils; induction motors; dynamo electric machinery.
- Bailey, Dr. Charles Hervey**, 437 W. 59th St, New York, N. Y. *Pathology*. Dorchester, Mass, June 21, 81. A.B, Brown, 03; M.D, Harvard, 10. Res. pathologist, St. Luke's Hosp, N. Y. City, 10-12; assoc. cancer research, Crocker Research Fund, Columbia, 14; instr. path, Stanford, 14-15, asst. prof, 15-16; assoc. prof. histol, Tufts, 16-17; *assoc. path, Columbia*, 17- Visiting pathologist, various hospitals, N. Y. City. Soc. Exp. Biol. Experimental pathology; serology; arteriosclerosis; nephritis; amyloid disease.
- Bailey, Prof. C (lyde) H (arold)**, University Farm, St. Paul, Minn. *Biochemistry*. Minneapolis, Minn, April 15, 87. B.S, N. Dak. Col, 13; M.S, Minnesota, 16. Asst. grain standardization, U. S. Dept. Agr, 07-11; instr. and asst. prof. agr. chem, Minnesota, and cereal technologist, Exp. Sta, 11-16; chemist, Minn. Grain Inspection Dept, 16-17; assoc. prof. *agr. biochem, Minnesota*, 17-20, *prof*, 20-, *assoc. agr. biochemist, Exp. Sta*, 17- A.A.; Chem. Soc. Chemical technology of cereal industries; biochemistry of bread-making; respiration of cereals.
- Bailey, Prof. E (dgar) H (enry) S (ummerfield)**, 1101 Ohio St, Lawrence, Kans. **Chemistry*. Middlefield, Conn, Sept. 17, 48. Ph.B, Yale, 73; Strasbourg, 81; Ph.D, Ill. Wesleyan, 83; Leipzig, 95. Instr. chem, Yale, 73-74; Lehigh, 74-83; *prof, Kansas*, 83-, *director, chem. lab*, 00- Chemist, Kans. State Board of Health and State Board of Agr; lecturer, Kansas City Univ. Med. Col. A.A.; Chem. Soc. (councilor, 06-17, chairman, div. water and sewage, 17-); hon. mem. Am. Inst. Homeop; mem. Ass. State and Nat. Food and Dairy Departments; Kans. Acad. (past pres. and sec'y). Sanitary and applied chemistry; toxicology; delicacy of special senses; mineral waters; mineral resources of Kansas; applications of the ion theory; the action of preservatives; chemistry of foods.
- Bailey, Dr. E (dward) M (onroe)**, Box 1106, New Haven, Conn. *Chemistry*. New London, Conn,
- Aug. 27, 79. Ph.B, Yale, 02, M.S, 05, Ph.D, 10. Asst. chemist, *Conn. Exp. Sta*, 02-17, *chemist in charge, anal. lab*, 17- State chemist, Conn, 19- Chem. Soc; Agr. Chem. Agricultural chemistry; chemistry and bacteriology of the banana; foods and drugs.
- Bailey, Prof. Ernest W (infield)**, University of Illinois, Urbana, Ill. *Horticulture*. Worcester, Mass, March 28, 85. B.S, Mass. Col. and Boston, 08; M.S, Illinois, 09; California, 19-20. Asst. agron, Mass. Col, 08; asst. instr. and assoc. plant breeding, *Illinois*, 10-15; *asst. prof. pomol, col. agr. and plant breeding, Exp. Sta*, 16- A.A.; Soc. Hort. Sci; Pomol. Soc. Plant physiology and breeding; systematic pomology; periodicity; growth and reproduction.
- Bailey, F (loyd) D (ouglas)**, Oregon Agricultural College, Corvallis, Oregon. *Plant pathology*. Prescott, Wis, April 18, 87. Ripon, 06-09; A.B, Wisconsin, 10, M.S, 12. *Research asst, Oregon Col*, 11- Phytopath. Soc. Potato and truck crop diseases.
- Bailey, Prof. Frederick H (arold)**, Massachusetts Institute of Technology, Cambridge, Mass. *Mathematics*. Leominster, Mass, April 24, 65. A.B, Harvard, 87, A.M, 89. Asst. math, Harvard, 89-91; instr, *Mass. Inst. Tech*, 91-93, asst. prof, 93-04, assoc. prof, 04-07, *prof*, 07- Instr. math, Radcliffe, 90-91; Simmons, 02-03. Math. Soc. Analytic geometry; calculus.
- Bailey, Dr. Frederick R (andolph)**, Elizabeth, N. J. *Histology, Pathology*. Elizabeth, Oct. 26, 71. A.B, Princeton, 92, A.M, 95; M.D, Columbia, 95. Adj. prof. nor. histol, Columbia, 95-09. Pathologist and attending physician, Gen. Hosp, Elizabeth, N. J, 96- Ass. Path. and Bact; N. Y. Path. Soc; N. Y. Acad. Med. Normal histology; embryology.
- Bailey, Dr. George Corbin**, 112 29th St, Woodcliff-on-Hudson, N. J. *Chemistry*. Kans, Dec. 1, 85. A.B, Wisconsin, 09; A.M, Yale, 14, Ph.D, 16. *Chemist, Winchester Arms Co*, 16; *Barrett Co*, 17- Chem. Soc. Organic chemistry; catalysis; pyrimidins; amins; constituents of coal tar; resins; perfumes.
- Bailey, Herbert (Stevens)**, Southern Cotton Oil Co, Savannah, Ga. *Chemistry*. Bethlehem, Pa, Sept. 12, 80. A.B, Kansas, 02; B.S, Mass. Inst. Tech, 06. Chemist, Armour Packing Co, 03-04; asst. oils, Mass. Inst. Tech, 05-06; instr. chem, Mich. Agr. Col, 07-08; chief, oil, fat and wax lab, bur. chem, U. S. Dept. Agr, 09-18; chemist, E. I. duPont de Nemours and Co, 18-20; *director research, South. Cotton Oil Co*, 20- Chairman, interdepartmental committee on fats and oils, Food Ad, 17-18; chem. ed, 'Cotton Oil Press,' 19- Chem. Soc. (sec'y, Wash. sect, 09); Soc. Test. Mat; Oil Chem. Soc. Oils for artificial leather; paints; varnishes; animal and vegetable oils.
- Bailey, Prof. Irving W (idmer)**, Bussey Institution, Forest Hills, Boston, Mass. **Botany*. Tilton, N. H, Aug. 15, 84. A.B, Harvard, 07, M.F, 09. Asst. bot, *Harvard*, 08-09, instr. *forestry*, 09-12, asst. prof, 12-20; *assoc. prof*, 20- Mem. advisory board, U. S. Forest Products Lab, 14-16; in charge wood sect, materials eng. dept, Bur. Aircraft Production, 18. A.A; Soc. Nat;

- Bot. Soc. (mem. ed. board, 'Am. Jour. Bot.' 15-18); Ecol. Soc.; Soc. Foresters (mem. ed. board, 'Proc.' 14-16); Am. Acad. Comparative physiological and pathological plant anatomy.
- Bailey, Dr. J(ames) R(obinson)**, University of Texas, Austin, Tex. *Chemistry*. Houston, Tex. Dec. 11, 68. A.B. Texas, 91; Ph.D. Munich, 97; Leipzig, 00-01. Student asst. chem. Texas, 91, tutor, 91-94, instr. 96-00, adj. prof. and later *prof. org. chem.* 01- Tex. Acad.; Chem. Gesell. Semicarbazid acids; hydrazin acids; hydrazo-acids; hydantoin; action of mustard oils on hydrazo-compounds; use of cyanic and prussic acids in glacial acetic acids; the criss cross addition on conjugate systems.
- Bailey, Prof. J(ohn) Wendell**, Agricultural College, Miss. *Zoology*. Winona, Miss. Jan. 9, 95. B.S. Miss. Agr. Col. 15, M.S. 17; A.B. Cornell, 16. Field asst. bur. entom. U. S. Dept. Agr. 14; instr. zool. and entom. Miss. Agr. Col. 14-15, asst. prof. 16-17; scientific asst. bur. entom. U. S. Dept. Agr. 17-18; *alumni sec'y and prof. zool.* Miss. Agr. Col. 19- Cornell biol. exped. 16; in mosquito control, U.S.N. 18-19. A.A.; Entom. Soc.; Ass. Econ. Entom. Myriapoda; Arachnida; Heloderma.
- Bailey, Prof. L(iberty) H(yde)**, Ithaca, N. Y. **Botany*. South Haven, Mich. March 15, 58. B.S. Mich. Agr. Col. 82, M.S. 85; LL.D. Wisconsin, 07; Alfred, 08; Litt.D. Vermont, 19. Prof. hort. and landscape gardening, Mich. Agr. Col. 84-88; hort. Cornell, 88-03, director, col. of agr. 03-13. Chairman, Commission on Country Life, appointed by Pres. Roosevelt, 08. Veitchian medal, 98. Nat. Acad.; A.A. (v. pres. 15); Bot. Soc.; Soc. Hort. Sci. (pres. 07); Pomol. Soc.; Philos. Soc.; Am. Acad. Systematic botany; cultivated plants.
- Bailey, Prof. L(oring) W(oart)**, Fredericton, N. B. Can. *Biology, Geology*. West Point, N. Y. Sept. 28, 39. A.B. Harvard, 59, A.M. 61; Ph.D. New Brunswick, 73; LL.D. Dalhousie, 96. Prof. chem. and nat. science, *New Brunswick*, 61-01, *biol. and geol.* 01- Boston Soc. Nat. Hist. (patron); New Eng. Bot. Club; fel. Royal Soc. Can.; N. S. Inst.; Nat. Hist. Societies of St. John, Fredericton, Quebec and Montreal. Botany (Diatomaceae); geology of New Brunswick.
- Bailey, Prof. Pearce**, 118 E. 80th St. New York, N. Y. *Neurology*. New York, July 12, 65. A.B. Princeton, 86, A.M. 89; M.D. Columbia, 89. Adj. prof. neur. Columbia, 06-10. Consulting neurologist, various hospitals. Neur. Ass.; N. Y. Neur. Soc. (pres. 03-05); Harvey Soc. Pathological anatomy of the nervous system; medical psychology; nutritional diseases.
- Bailey, Prof. S(olon) I(rving)**, Harvard Observatory, Cambridge, Mass. **Astronomy*. Lisbon, N. H. Dec. 29, 54. A.B. Boston, 81; A.M. Harvard, 87. Asst. prof. astron. Harvard, 93-98, assoc. prof. 98-12, *Phillips prof.* 12-; in charge of Arequipa branch of *Harvard Col. Observatory*, 92-19, *acting director*, 19- A.A.; Astron. Soc.; Am. Acad.; Wash. Acad.; assoc. Royal Astron. Soc.; Lima (Peru) Geog. Soc.; Int. Astron. Union. Astronomy and meteorology; variable stars in clusters.
- Bailey, Vernon**, 1834 Kalorama Road, Washington, D. C. **Biology*. Manchester, Mich. June 21, 64. Michigan, 93; George Washington, 94, 95. *Chief field naturalist, biol. surv.* U. S. Dept. Agr. 87- A.A.; mem. Ornith. Union; Soc. Mammal; Forestry Ass.; Wash. Acad.; Wash. Biol. Soc.; Cooper Ornith. Club. Distribution of mammals, birds and plants; spermophiles and gophers of Mississippi Valley; revision of *Eutamias*; biological survey of Texas; mammals of Glacial National Park.
- Bailey, Mrs. Vernon (Florence Merriam)**, 1834 Kalorama Road, Washington, D. C. *Ornithology*. Locust Grove, N. Y. Aug. 8, 63. Smith, 82-86. Mem. Ornith. Union; Soc. Mammal; Cooper Ornith. Club; Wash. Acad.; Wash. Biol. Soc. Ornithology; birds of village and field; birds of the western United States; wild animals of Glacier National Park.
- Baily, William Lloyd**, Ardmore, Pa. *Ornithology*. Germantown, Pa. Dec. 26, 61. B.S. Haverford, 83. Prof. archit. Pennsylvania, 90. Fel. Ornith. Union; Inst. Archit.; State Ass. Archit. Pa. (sec'y, 09-); Del. Valley Ornith. Club (pres. 90); Phila. Acad. Bird photography; birds of Maine, New Jersey, North Dakota and Magdalen Islands.
- Bain, H(arry) Foster**, U. S. Bureau of Mines, Washington, D. C. **Geology, Mining*. Seymour, Ind. Nov. 2, 71. B.S. Moores Hill, 90; Hopkins, 91-93; Ph.D. Chicago, 97. Asst. state geologist, Iowa, 93-00; special asst. U. S. Geol. Surv. 00-01; manager, Consol. Franklin Mines Co. 01-02; geologist, U. S. Geol. Surv. 02-08; state geologist, Ill. 05-09; ed. 'Min. and Sci. Press,' 09-15; ed. 'Min. Mag,' London, 15-16; explorations, Far East, 16-18; asst. director, U. S. Bur. Mines, 18-19; with New York Orient Mines Co. 19-20; *director, U. S. Bur. Mines*, 20- Lecturer econ. geol. Iowa, 98; Chicago, 99, 02, 03. Geol. Soc.; Min. Eng.; Min. and Metal. Soc. Structural geology; ore deposits; mining methods; lead and zinc deposits.
- Bain, Prof. J. Watson**, University of Toronto, Toronto, Can. *Chemistry*. London, England, Nov. 15, 75. B.A.Sc. Toronto, 97, fellow, 97-99; Zürich, 01. Demonstrator chem. Toronto, 99-02, lecturer, 02-05, assoc. prof. applied chem. 05-16, *prof. chem. eng.* 16- Chem. Soc.; Soc. Chem. Indust.; fel. Can. Inst. Chem.; Chem. Gesell. Industrial chemistry and chemical engineering.
- Bainbridge, Dr. W(illiam) Seaman**, 34 Gramercy Park, New York, N. Y. *Surgery*. Providence, R. I. Feb. 17, 70. M.D. Columbia, 93; hon. A.M. Shurtleff, 99; hon. M.S. Washington and Jefferson, 02; hon. Sc.D. West. Univ. of Pa. 07; LL.D. Lincoln Mem. Univ.; *Coe. Prof. surg.* N. Y. *Polyclinic*, 06- Surgeon, N. Y. Skin and Cancer Hosp.; consulting surgeon, Manhattan Hosp.; commander, M.C. U.S.N.R.F. Am. Med. Ass. Cancer; internal secretions; goiter; abdominal surgery.
- Baitsell, Prof. George A(lfred)**, Yale University, New Haven, Conn. *Zoology*. Wright, Iowa, Oct. 2, 85. B.S. Central (Iowa), 08; A.M. Yale, 09, Ph.D. 14. Prof. biol. and chem. Central (Iowa), 09-10, acting dean and prof. biol. 12-13; Seessel fellow, *zool.* Yale, 13-14, instr. 14-18, *asst. prof.* 18- Instr. invert. zool. Woods Hole, 13-19; asst. physiologist, army-navy gas investi-

- gation; capt, C.W.S. A.A.; Soc. Nat.; Soc. Zool.; Soc. Exp. Biol.; Ass. Anat.; Physiol. Soc. Life history of Protozoa; tissue culture; wound healing; fibrin; connective-tissue formation.
- Baker, Prof. Alfred**, 81 Madison Ave, Toronto, Can. *Mathematics*. Toronto. B.A, Toronto, 69, M.A, 78. Principal, high schools, Vienna, Perth and Oshawa, 69-72; master math, Upper Canada, 72-75; lecturer, Toronto, 75-87, prof, 87-19. Math. Soc; fel. Royal Soc. Can; Soc. math de France. Mechanics; trigonometry; quaternions; geometry of position; the foundations of geometry; analytic and synthetic geometry.
- Baker, A(rthur) C(hallen)**, Bureau of Entomology, U. S. Department of Agriculture, Washington, D. C. *Entomology*. Belleville, Ont, Feb. 5, 85. Ont. Agr. Col. diploma, 09; B.S.A, Toronto, 11; Ph.D, George Washington, 18. *Expert and entomologist, deciduous fruit insect investigations, bur. entom, U. S. Dept. Agr. 11-A.A.*; Entom. Soc; Zool. Soc; Ecol. Soc; Ass. Econ. Entom; Wash. Entom. Soc. (ed, 'Proc,' 18-); Wash. Biol. Soc; Ont. Entom. Soc; Wash. Acad. Aphididae; Aleyrodidae.
- Baker, Dr. A(rthur) L(atham)**, Rye, N. Y. *Mathematics*. Cincinnati, Ohio, May 7, 53. C.E, Rensselaer, 73; Ph.D, Lafayette, 89. Adj. prof. civil eng, Lafayette, 73-80; principal, high sch, Scranton, Pa, 82; prof. math, Stevens High Sch, Hoboken, N. J, 89-91; Rochester, 91-01; head, math. dept, Manual Training High Sch, Brooklyn, N. Y, 01-16. Math. Soc; Rochester Acad. (sec'y, 92-00). Mathematical pedagogy; microscopy; xylology.
- Baker, Prof. C(harles) F(uller)**, College of Agriculture, Los Baños, P. I. *Botany, Zoology*. Lansing, Mich, March 22, 72. B.S, Mich. Agr. Col, 92; A.M, Stanford, 03. Asst. zoologist, Mich. Agr. Col, 91-92; asst. to zoologist and entomologist, Colo. Agr. Col, 92-97; zoologist, Ala. Polytech, and entomologist, Exp. Sta, 97-99; teacher biol, Cent. High Sch, St. Louis, 99-01; asst. prof. biol, Pomona, 03-04; chief, dept. bot, Cuban Exp. Sta, Santiago, 04-07; curator, herbarium and bot. garden, Museu Goeldi, Para, Brazil, 07-08; assoc. prof. biol, Pomona, 08-09, prof, 09-12; agron, *Univ. Philippines*, 12-20, dean, 18- Zoologist and assoc. botanist, Ala. Biol. Surv; in charge, Colo. forestry and zool. exhibit, Columbian Expos, 93; botanist, H. H. Smith exploring exped. in Santa Marta Mts, Colombia, 98-99; asst. director, Bot. Gardens, Singapore, 17-18; publisher, 'Invert. Pacifica'; ed, 'Pomona Jour. Entom'; 'Pomona Jour. Econ. Bot'; on editorial boards, 'Philippine Agr.', 'Philippine Jour. Science' and 'Philippine Agr. Rev.' A.A; Ass. Econ. Entom; Entom. Soc; S. Calif. Acad; Wash. Entom. Soc; Havana Acad. Comparative anatomy of special groups of plants and animals; Hemiptera and Hymenoptera; economic plants of the world.
- Baker, Prof. Charles Laurence**, 2320 Hilgard Ave, Berkeley, Calif. *Geology*. Cordova, Ill, Oct. 10, 87. Oberlin, 05-07; fellow, Chicago, 08-10, B.S, 08; California, 10, fellow, 11-12, A.M, 16. Asst. biol, Monmouth, 04-05; comp. anat. and vert. histol, Oberlin, 05-07; instr. geol, California, 11; asst. geologist, South Pacific R. R. Co, 12-13, 17-18; geologist, bur. econ. geol. and tech, Texas, 14-17. Field asst, U. S. Geol. Surv, 08, 10; in charge, three vert. fossil-hunting expeditions, Great Basin Desert, 11-12. A.A; Min. Metal. Eng; Ass. Petrol. Geol; fel. Am. Geog. Soc; Paleont. Soc; Pacific Coast Paleont. Soc. (sec'y, 11); fel. Royal Scottish Geog. Soc. Structural and geotectonic geology, especially of the Tertiary of western North America; geology of petroleum, coal and water.
- Baker, Charles Whiting**, 'Fern Hill,' Montclair, N. J. *Engineering, Economics*. Johnson, Vt, Jan. 17, 65. C.E, Vermont, 86. Assoc. ed, 'Eng. News,' 87-95, managing ed. and sec'y, Eng. News Pub. Co, 95-05, ed-in-chief and v. pres, 05-17; consulting engineer and consulting ed, 'Eng. News Record, 17-20; director, Eng. Business Exchange, 20- Aid, U. S. Coast and Geod. Surv, 84; draftsman, Baldwin Locomotive Works, 86-87; commissioner, Palisades Interstate Park, 11- Mech. Eng. (v. pres, 09-); Soc. Terminal Eng. (v. pres, 19-); Econ. Ass. Economics of transportation systems.
- Baker, Prof. E(dwin) M(yron)**, University of Michigan, Ann Arbor, Mich. *Chemical engineering*. Toledo, Ohio, Feb. 21, 93. B.S, Pa. State, 16. Chemist and later shift supt, Hooker Electrochem. Co, 16-18; instr. chem. eng, Michigan, 18-20, asst. prof, 20-; consulting engineer, Chem. Equipment Co, 19- Chem. Soc. Electrochem. Soc; jr. mem. Chem. Eng. Spray systems for washing and scrubbing gases.
- Baker, Ernest L**, 662 Fillmore Ave, Buffalo, N. Y. *Chemistry*. Portland, Maine, 80. B.S, Maine, 03. Asst. chemist, N. Y. Exp. Sta, 05-07, assoc. chemist, 07-14; chief chemist, Patent Cereals Co, 14-20; *Schreiber Products Corp*, 20- Chem. Soc. Cereal foods; cattle foods; dextrans; starches; sugars; vegetable oils; sugars from cereal starches.
- Baker, F(rank) C(ollins)**, Natural History Museum, Urbana, Ill. *Zoology*. Warren, R. I, Dec. 14, 67. Brown, 88-89; Jesup scholar, Acad. Nat. Sciences, Phila, 89-90; B.S, Chicago Sch. Sci. 95. In charge, invert. dept, Ward's Nat. Sci. Establishment, Rochester, 91-92; curator zool, Field Museum Nat. Hist, 94; curator, Chicago Acad. Sciences, 94-15; zool. investigator, Syracuse, 15-17; curator, museum nat. hist, Illinois, 18- Phila. Acad. exped. to Mexico, 90. A.A; Ecol. Soc; Mus. Ass. (councilor, 14-16); assoc. Ornith. Union; Ill. Acad. (sec'y, 11); Ill. Audubon Soc. (v. pres, 96-15); Chicago Acad. (sec'y, 94-96, 08); fel. Rochester Acad. (sec'y, 91). General Mollusca; fresh-water Mollusca; museum administration; molluscan protoconch; biometrics; Lymnaeidae; molluscan ecology; Pleistocene Mollusca.
- Baker, Herbert A**, 812 Lincoln Ave, Winnetka, Ill. *Chemistry*. Oshawa, Ont, Aug. 27, 87. B.A, Toronto. Chief chemist, *Am. Can Co*, 11-13, dist. sales manager, 18- Chem. Soc. Food canning and spoilage; salts of tin in canned foods.
- Baker, Dr. Horace Burrington**, University of Pennsylvania, Philadelphia, Pa. *Zoology*. Sioux City, Iowa, Jan. 25, 89. B.S, Michigan, 10, 10-13, Ph.D, 20. Instr. zool. Colo. Col, 13-17, asst. prof, 17; instr, Pennsylvania, 20- With Mich. Biol. Surv, summers, 08-09; Bryant Walker

- exped. to Mex, 10. Ecol. Soc. Ecology; Mol-lusca; Orthoptera.
- Baker, H(ugh) P(otter)**, Syracuse University, Syracuse, N. Y. *Forestry*. St. Croix Falls, Wis, Jan. 20, 78. B.S, Mich. Agr. Col, 01; M.F, Yale, 04; D.Occ, Munich, 10. *Forest asst*, U. S. *Forest Service*, 01-; assoc. prof. in charge forestry, Iowa State, and forester, Exp. Sta, 04-07; prof. forestry, Pa. State, and forester, Exp. Sta, 07-12; dean, N. Y. State Col. Forestry and prof. silviculture, Syracuse, 12-20; *sec'y*, *Am. Paper and Pulp Ass*, 20- Asst. Forest Surv, Nebr. and Wyo, 01; chief, Iowa Forest Surv, 05; in charge forestry short course, Colo. Agr. Col, 07. A.A; Soc. Foresters; Forestry Ass. (v. pres, Iowa, 05); Am. Civic Ass; N. Y. Acad; Wash. Acad; Royal Geog. Soc. Sand dunes along Columbia River; public lands of central Idaho; silviculture in New Mexico; forest surveys of Idaho and Iowa; adaptability of prairie states to growing of trees for commercial purposes; forest nursery practise; improvement of forest trees by breeding; collection and storage of tree seed.
- Baker, Prof. Ira O(sborn)**, 1208 W. California Ave, Urbana, Ill. *Civil engineering*. Linton, Ind, Sept. 23, 53. B.S, Illinois, 74, C.E, 77, hon. D.Eng, 03. *Prof. civil eng*, Illinois, 80- Civil Eng; Soc. Test. Mat; Eng. Educ; West. Soc. Eng. Masonry; roads and pavements; engineers' surveying instruments.
- Baker, Dr. J(ohn) C(lark)**, 97 Fifth St, Ridgfield Park, N. J. *Chemistry*. Ridgeway, Iowa, Aug. 11, 84. B.S, Upper Iowa, 10; A.M, Columbia, 15, Ph.D, 16. Asst. Upper Iowa, 10; head, dept. science, N. Mex. Nor. Univ, 10-13; asst. chem, Columbia, 14-16; assoc. chemist, N. Y. Exp. Sta, Geneva, 16-19; *chemist*, *Wallace and Tierman Co*, 19- Chem. Soc; Biochem. Ass. Dia-static enzymes; dairy problems; casein; milk control.
- Baker, John T(ownsend)**, Phillipsburg, N. J. *Chemistry*. Orange, N. J, June 30, 60. M.S, Lafayette. *Pres*, *J. T. Baker Chem. Co*. Manufacture of chemical reagents.
- Baker, M(oses) N(elson)**, 53 Oakwood Ave, Upper Montclair, N. J. *Engineering*. Enosburgh, Vt, Jan. 26, 64. Ph.B, Vermont, 86, C.E, 99. *Assoc. ed*, 'Eng. News,' 87-17; 'Eng. News Record,' 17- Mem. Board of Health, Montclair, 94-04, pres, 04-15; v. pres, N. J. State Dept. of Health, 15. Pub. Health Ass; Water Works Ass; Nat. Munic. League (chairman, exec. committee, 13-18); New Eng. Water Works Ass; N. J. Sanit. Ass. (pres, 03). Civil and sanitary engineering; public health; water and sewage treatment; garbage and refuse disposal; municipal administration.
- Baker, Oliver E(dwain)**, 1 Hesketh St, Chevy Chase, Md. *Agricultural geography*. Tiffin, Ohio, 83. B.S, Heidelberg (Ohio), 03, M.S, 04; Columbia, 05; Ph.D, Wisconsin, 20. *Agricultural economist*, U. S. *Dept. Agr*, 12- Wis. Soil Surv, summers, 10, 11. A.A; Ass. Geog; Ecol. Soc. Climate of Wisconsin in relation to agriculture; atlas of American agriculture.
- Baker, Prof. R(ichard) P(hilip)**, University of Iowa, Iowa City, Iowa. *Mathematics*. Conover, England, Feb. 3, 66. Oxford, 84-87; B.Sc, London, 87; Ph.D, Chicago, 10. *Instr. math*, Iowa, 05-10, asst. prof, 10-15, *assoc. prof*, 15- A.A; Math. Soc; Math. Ass. Algebraic equations; groups; geometry; thermodynamics.
- Baker, Dr. Robert H(orace)**, University of Missouri, Columbia, Mo. *Astronomy*. Northampton, Mass, March 29, 83. A.B, Amherst, 04, A.M, 05; Ph.D, Pittsburgh, 10. Asst. Amherst Col. Observatory, 04-06; Allegheny Observatory, 06-10; asst. prof. astron, Brown, 10-11; Michigan, 11; *prof. and director Lows Observatory*, Missouri, 11- A.A; Astron. Soc. Spectroscopy and photometry.
- Baker, Prof. Ross Allen**, 114 Trinity Place, Syracuse, N. Y. *Chemistry*. Greencastle, Ind, Nov. 13, 86. A.B, DePauw, 06, A.M, 07; Ph.D, Wisconsin, 14. *Instr. chem*, high sch, Danville, Ill, 07-08; prof, Baker, 08-10; instr, Wisconsin, 10-14; Minnesota, 14-16; asst. prof, 17-18; *prof. gen. and inorg. chem*, Syracuse, 19- Major, C.W.S, and commandant, U. S. Gas Sch, 18. A.A; Chem. Soc; Cent. Ass. Sci. and Math. Teachers. Inorganic chemistry; rare heavy metals.
- Baker, Dr. S(ara) Josephine**, 33 W. 96th St, New York, N. Y. *Child hygiene*. Poughkeepsie, N. Y, Nov. 15, 73. M.D, Woman's Med. Col, N. Y, 98; D.P.H, Bellevue Med. Col, 17. Med. inspector, dept. health, N. Y. City, 01-07, asst. commissioner, 07-08, *director*, bur. child hygiene, 08- Lecturer child hygiene, Teachers College, Columbia; Univ. and Bellevue Hosp. Med. Col; surgeon, U. S. Pub. Health Service; special agent, children's bur, U. S. Bur. Labor. Child Hygiene Ass. (pres, 18); Pub. Health Ass; Sch. Hygiene Ass; Am. Med. Ass; fel. N. Y. Acad. Med. Control and supervision of midwives; infant mortality; health supervision of children; health aspects of child labor.
- Baker, Dr. Smith**, Camden, N. Y. *Neurology, Psychology*. Marcy, N. Y, Sept. 25, 50. M.D, Michigan, 71; hon. A.M, Colgate, 84. Practising physician. Lecturer preservation of health, Colgate, 84, 92-93. A.A; fel. Neur. Ass. Normal and abnormal psychology; hysterics; the morbid imperative.
- Baker, Prof. Tho(mas) R(akestraw)**, Winter Park, Fla. *Physics, Chemistry*. Chester Co, Pa, Feb. 27, 37. B.S, First Pa. State Nor. Sch, 60, M.S, 61; Pa. State, 62-65; Ph.D, Göttingen, 71. *Prof. math*, Pa. State, 61-67; nat. science, First Pa. State Nor. Sch, 71-86; *Rollins*, 92-12, *director*, museum, 12- Conducted private lab, Orlando, Fla, 87-90. Electricity; acoustics; dynamics.
- Baker, Prof. Will(iam) C(oombs)**, 135 Centre St, Kingston, Ont, Can. *Physics*. Kingston, Dec. 16, 71. A.M, Queen's (Ont), 95; 1851 Exhibition scholar, Cambridge, 99-00. Demonstrator physics, sch. mining, Queen's (Can), 95-02, lecturer, 02-08, asst. prof, 08-12, assoc. prof, 12-20, *prof*, 20- Physical Soc. Hall effect in gold for small fields; ultra-violet light effect in starting discharge; absorption of hydrogen by metals.
- Baker, Dr. Wilmer**, Station 20, New Orleans, La. *Anatomy*. Rayne, La, July 3, 91. M.D, Tulane, 16. *Instr. anat*, Virginia, 16-18, adj. prof, 18-

- 19; *asst. prof., Tulane, 19-* Ass. Anat. Gross anatomy.
- Bakke, Dr. A(rthur) L(aurence)**, Ames, Iowa. *Plant physiology.* Fargo, N. Dak, June 26, 86. B.S., Iowa State, 09, M.S., 11; Ph.D., Chicago, 17. Asst. bot., Iowa State, 08-09; instr. science, Elgin Acad., 09-10; bot., Iowa State, 10-13, asst. prof. bot. and plant physiol., 13-17, *assoc. prof., 17-* Assoc. desert lab., Carnegie Institution, 13, 14. A.A.; Bot. Soc.; Phytopath. Soc.; Ecol. Soc.; Iowa Acad. Life history of *Helminthosporium teres*; effect of city smoke upon vegetation; transpiring power of plants.
- Balch, Dr. Alfred W(illiam)**, 1 Madison Ave, New York, N. Y. *Chemistry, Medicine.* East Saginaw, Mich, Aug. 27, 73. Ph.G., Mass. Col. Pharmacy, 94; M.D., Harvard, 98. Instr. org. and anal. chem., Mass. Col. Pharmacy, 94, asst. prof., 08; asst. pharmacol., Harvard Med. Sch., 98; asst. surgeon, U. S. N., 01-04, passed asst. surgeon, 04-09; asst. prof. med. chem. and toxicol., med. sch., Tufts, 09-17; with *Metropolitan Life Ins. Co.*, 17-18, *asst. med. director, 18-* A.A.; Ass. Path. and Bact.; Soc. Trop. Med.; Soc. Chem. Indust.; Pub. Health Ass.; Ass. Life Ins. Med. Directors; Ass. Mil. Surg.; Chem. Soc. Azoturia; pharmacological action of corn smut; action of drugs on the flow of bile.
- Balch, Edwin Swift**, 1412 Spruce St, Philadelphia, Pa. *Geography, Ethnology.* Philadelphia, 56. A.B., Harvard, 78. *Mem. Phila. Bar, 82-* A.A.; Philos. Soc.; Franklin Inst.; Am. Geog. Soc.; Phila. Geog. Soc. (pres, 95); Appalachian Mt. Club; cor. mem. Wyoming (Pa) Hist. and Geol. Ass.; hon. mem. Soc. Cient. Ant. Alz.; fel. Royal Geog. Soc. Mountains; caves; polar discoveries; comparative art.
- Balch, Francis N(oyes)**, 60 State St, Boston, Mass. *Biology.* Boston, Nov. 23, 73. A.B., Harvard, 96, A.M., 97, LL.B., 00; Woods Hole, 96; U. S. Fish Commission, 97; Cold Spring Harbor, 98, 99; Bermuda, 10. *Mem. Mass. Constitutional Convention, 17-19; Mass. Legislature, 19-* Boston Finance Commission. A.A.; Soc. Nat.; Soc. Zool.; Boston Soc. Nat. Hist.; Boston Malacol. Club (v. pres and past pres); London Malacol. Soc.; Conchol. Soc. of Gt. Britain and Ireland. Coloration of Mollusca; bird migration and coloration; chromatophores of cephalopods; the Nudibranchiata.
- Balcom, Dr. R. W(ilfred)**, U. S. Department of Agriculture, Washington, D. C. *Chemistry.* Morden, N. S., Nov. 18, 77. B.S., Mass. Inst. Tech., 00, Austin fellow, 02-04; Ph.D., Heidelberg, 05. Asst. anal. chem., Mass. Inst. Tech., 00-02; instr. gen. and physical chem., Michigan, 05-06, anal. chem., 06-07; asst. chemist, *bur. chem., U. S. Dept. Agr., 07-09*, acting chief, U. S. Food and Drug Inspection Lab, Nashville, Tenn., 09-11, chief, 11-14, *food investigation chemist, 14-* A. A.; Chem. Soc. Physical, analytical and food chemistry.
- Baldauf, Dr. Leon K(ahn)**, 205 W. Breckenridge St, Louisville, Ky. *Internal medicine.* Louisville, Ky, Dec. 17, 77. Ph.G., Phila. Col. Pharmacy, 96; A.B., Hopkins, 01, M.D., 05. Instr. path. and bacter., Albany Med. Col., 05-07; asst. city pathologist, St. Louis, Mo., 07-10; prof. path. and bacter., Louisville, 10-14; *practising physician, internal med., 15-* Ass. Path. and Bact. Arterio-sclerosis; experimental leucocytosis and leucopenia; fatty infiltration of the liver; cerebro-spinal syphilis.
- Balderston, Prof. Lloyd**, Hokkaido Imperial University, Sapporo, Japan. *Chemistry.* Colora., Md., July 3, 63. B.S., Pennsylvania, 02, Ph.D., 04. Teacher physics, chem. and math., various schools, 85-03; physics, State Nor. Sch., West Chester, Pa., 04-10; chemist, Elk Tanning Co., 10-17; *prof. leather chem. and technol., Hokkaido Imp. Univ., 17-* Assoc. ed., 'Leather and Glue,' 12-17. Inter. Ass. Leather Trade Chemists. A.A.; Leather Chem. Ass. (mem. council, 12-14, assoc. ed., 'Jour,' 12-17). Speed of sound in liquids; microbiology of tan liquors; chrome tanning liquors; Japanese tanning materials.
- Baldwin, Dr. Bird T(homas)**, University of Iowa, Iowa City, Iowa. **Psychology, Education.* Marshfield, Pa., May 31, 75. B.S., Swarthmore, 00, traveling fellow, 02-03; Pennsylvania, 01-02; A.M., Harvard, 03, Ph.D., 05; Leipzig, 06. Principal, Friends' Schools, Moorestown, N. J., 00-02; asst. psychol. and logic, Harvard, 03-04, educ. summer, 04; prof. pedag., West Chester State Nor. Sch., 05-06, psychol., 06-10; lecturer psychol. and educ., Swarthmore, 06-10; assoc. prof. educ. and head, sch. of art of teaching, Texas, 10-12; prof. psychol., Swarthmore, 12-17; *research prof., Iowa, and director, Child Welfare Research Sta., 17-* Lecturer educ. psychol., Chicago, 09-10; prof., Hopkins, summers, 15, 16, fall and winter, 16-17; major, Sanit. C., 18-19; chief psychologist and director reconstruction, Walter Reed Hosp. A.A. (sec'y, Q); Psychol. Ass. (chairman, committee on certification of psychologists). Educational psychology; physical growth and school progress.
- Baldwin, Dr. Edward R.**, Saranac Lake, N. Y. **Medicine.* Bethel, Conn., Sept. 8, 64. M.D., Yale, 90, hon. A.M., 14. Lab. asst., med. dept., Yale, 89-90; intern, Hartford Hosp., 90-92; asst., Saranac Lab., 94-15; *director, Trudeau Foundation, 15-* A.A.; Ass. Path. and Bact.; emer. mem. Am. Physicians; Soc. Clin. Invest.; Am. Med. Ass.; Ass. Tuber.; Climat. Ass. Tuberculosis; immunity and infection; tuberculin.
- Baldwin, Dr. Francis Marsh**, Iowa State College, Ames, Iowa. *Zoology.* West Upton, Mass., Jan. 16, 85. A.B., Clark, 06, A.M., 07; Ph.D., Illinois, 17. Instr. nature and science, Louisville Nor. Sch. (Ky.), 08-11; prof. biol., West. Md. Col., 11-15; asst. zool., Illinois, 15-17; asst. prof., *Iowa State, 17-19*, assoc. prof., 19-20, *prof. physiol., 20-* Bur. Fisheries, Woods Hole, 15; asst. zool., Illinois, summer, 16. Physiol. Soc.; Iowa Acad. Earthworm; Amblystoma; carotid, aorta and subclavian arteries of the rabbit; permeability of sea-urchin egg; consumption of oxygen in marine forms.
- Baldwin, Dr. Fred(eric)k A(mos)**, Metropolitan Building, St. Louis, Mo. *Pathology.* Kalamazoo, Mich., May 14, 77. M.D., Michigan, 98, A.B., 02, Sc.D., 04. Asst. histol., Michigan, 96-97, instr. path., 98-04; asst. city bacteriologist and pathologist, St. Louis, 04-07; prof. path., Baylor, 07. Ass. Path. and Bact. Yellow elastic and reticulum tissues in tumors of the skin; localizations of tuberculosis; carcinoma of the pan-

- creas; inflammations of mucous membranes; pituitary gland; multiple anemic infarcts of the liver; changes in bone marrow produced by splenectomy and hemolytic agents; chylothorax; pathology of thoracic duct.
- Baldwin, G(eorge) Clyde**, Federal Building, Idaho Falls, Idaho. *Civil engineering*. Kinsman, Ohio, April 14, 84. B.S., Kansas, 06. Surveyor, Alaska Boundary Surv., 06-09; junior engineer, asst. engineer and later *hydraulic engineer*, U. S. Geol. Surv., 10- Aid, U. S. Coast and Geod. Surv., 03-04, 05. Assoc. Civil Eng.; Ass. Eng. Hydrometry; stream measurements; water distribution.
- Baldwin, Prof. J(ames) Mark**, Harris Forbes and Co, 56 William St, New York, N. Y., and 118 Rue d'Assas, Paris, France. **Psychology, Philosophy, Biology*. Columbia, S. C., Jan. 12, 61. A.B., Princeton, 84, A.M., 87, Ph.D., 89; Leipzig and Berlin, 84-85; hon. Sc.D., Oxford, 99; LL.D., Glasgow, 00; South Carolina, 05; Sc.D., Geneva, 09. Instr. modern languages, Princeton, 86; prof. philos., Lake Forest, 87-90; Toronto, 90-93; psychol., Princeton, 93-03; philos. and psychol., Hopkins, 03-09; hon. prof., Mexico, 10-15; prof., *Ecole des Hautes Etudes Sociales, Paris*, 19- Spencer lecturer, Oxford, 16. Commander, Imp. Order St. Sava, Serbia, 19; Chevalier Légion d'honneur, 18. Mem. jury of awards, Columbian Expos, 93; co-editor, 'Johnson's Cyclopedia,' 93; 'Psychol. Rev.,' 94-10. Gold medal, Denmark Royal Acad, 97. Int. Cong. Psychol., London, 92 (v. pres); Int. Cong. Criminal Anthropol., Geneva, 96 (hon. pres); Int. Inst. Sociol., 98; v. pres, 10. A.A.; Soc. Nat; Psychol. Ass. (pres, 97); Philos. Ass; Philos. Soc; S. Soc. Philos. (pres, 04-08); London Aristot. Soc; London Sociol. Soc; for. cor. Inst. de France; Belgrade Royal Acad; Tokyo Royal Acad. Genetic logic; affective logic; esthetics; sociology.
- Baldwin, S(amuel) Prentiss**, Williamson Building, Cleveland, Ohio. *Geology, Ornithology*. Cleveland, Oct. 26, 68. A.B., Dartmouth, 92, A.M., 95; LL.B., Western Reserve, 95. Practising lawyer, 94-99. A.A.; mem. Ornith. Union; Geol. Soc; Am. Geog. Soc. Geology of Lake Champlain, Muir Glacier, Snake River and New Mexico; bird banding through systematic trapping.
- Baldwin, W(esley) M(anning)**, Union University Medical College, Albany, N. Y. *Anatomy*. Troy, N. Y., Aug. 18, 81. Med. Col., Cornell, 00-04, A.B., 07, A.M., 09, M.D., 11; Bonn and Würzburg, 11-13. Asst. anat., med. col., Cornell, 04-06, asst. demonstrator, 06-07, instr., 07-09, 09-14, asst. prof., 14-15; prof., *Union Med. Col.*, 15- A.A.; Ass. Anat.; Anat. Gesell. Human anatomy and histology; duodenal diverticula; accessory pancreatic duct; minor duodenal papilla; histology of muscle cells; tendon fibrillae; effect of ultra-violet and X-rays on tissues, particularly embryonic.
- Baldwin, William J(ames)**, World Building, 61 Park Row, New York, N. Y. *Civil and mechanical engineering*. Waterford, Ireland, June 14, 44. Pub. schools, Boston; private tutors in sciences. Engaged in shipbuilding and naval construction with Donald McKay, Civil War; asst. naval constructor, Paraguayan War, Brazil; consulting engineer, 62- Prof. thermal eng., Brooklyn Polytech; assoc. ed., 'Eng. Record.' Civil Eng; Mech. Eng; assoc. mem. Inst. Archit. Steam heating; hot water heating and fitting; ventilation.
- Balfour, Prof. Donald C(hurch)**, 427 S. Glencoe St, Rochester, Minn. *Surgery*. Toronto, Can., Aug. 22, 82. M.B., Toronto, 06, M.D., 14. Assoc. prof. surg., Minnesota, 15- Surgeon, St. Mary's Hosp., Rochester. Surg. Ass; Am. Med. Ass; Soc. Clin. Surg; Ry. Surg; Interurban Clin. Soc; West. Surg. Ass. Thyroid; gastric ulcer; spleen.
- Balke, Dr. Clarence W(illiam)**, 27 Linden Ave, Highland Park, Ill. *Chemistry*. Auburn, Ohio, March 29, 80. A.B., Oberlin, 02; Ph.D., Pennsylvania, 05. Instr. chem., Oberlin, summer session, 03; acting prof. physics and chem., Kenyon, 03-04; research fellow, Pennsylvania, 05-06, instr. chem., 06-07; assoc., Illinois, 07-10, asst. prof. and later prof. inorg. chem., 10-16; chem. director, *Fanstel Products Co.*, 16- A.A.; Chem. Soc. Atomic weights of columbium, tantalum and rare earths; metallic cerium, tungsten and molybdenum.
- Ball, Prof. Albert**, Cooper Union, New York, N. Y. *Physics*. Perrysburg, N. Y., July 14, 73. A.B., Cornell, 01. Instr. physics, Pratt Inst., 01-05; Cooper Union, 05-07, asst. prof., 07-12, prof. in charge, 12- A.A.; Physical Soc; Elec. Eng; Eng. Educ.
- Ball, Carleton R(oy)**, U. S. Department of Agriculture, Washington, D. C. *Agronomy*. Little Rock, Iowa, June 12, 73. B.S., Iowa State, 96, M.S., 99, Sc.D., 20. Asst. bot., Iowa State, 96-98, asst. botanist, Exp. Sta., 97-98; asst. agrostologist, U. S. Dept. Agr., 99-05, agronomist, bur. plant indust., 06-18, cerealist in charge, office cereal investigation, 18- A.A.; Soc. Agron. (sec'y, 10-14, pres, 16); Bot. Soc; Ecol. Soc; Iowa Acad; Wash. Bot. Soc. (v. pres, 19); Wash. Biol. Soc; Wash. Acad. Administration of research; wheat and grain sorghums; taxonomy of willows and grasses.
- Ball, Prof. E(lmer) D(arwin)**, Iowa State College, Ames, Iowa. *Entomology*. Athens, Vt., Sept. 21, 70. B.S., Iowa State, 95, M.S., 98; fellow, Ohio State, 00-01, Ph.D., 07. Asst. zool. and entom., Iowa State, 95-97; Colo. Agr. Col., 97-01, assoc. prof., 01-02; prof. Utah Col., 02-07, director, exp. sta. and dean, sch. of agr., 07-16, state entomologist, Wisconsin, 16-18; prof. zool. and entom., Iowa State, 18- A.A.; Entom. Soc; Ass. Econ. Entom; Ecol. Soc; Iowa Acad; Utah Acad. (pres, 10); Davenport Acad; Wash. Entom. Soc; Wash. Biol. Soc. Taxonomy and life-histories of Hemiptera-Homoptera; North-American Cercopidae, Fulgoridae and Jassidae; codling moth and beet leaf-hoppers; Jassidae of Mexico; insect carriers of plant diseases; inheritance of fecundity in fowls.
- Ball, F(rank) H**, Penberthy Injector Co, Detroit, Mich. *Steam engineering*. Oberlin, Ohio. High sch. V. pres. and gen. manager, Am. Engine Co; manager, *Penberthy Injector Co.* Mech. Eng. (v. pres). Steam engines; carburetion for gasoline engines; apparatus for metering the air and gasoline.

- Ball, Max W(aite)**, Box 930, Cheyenne, Wyo. *Geology*. Munson, Ill, Sept. 9, 85. E.M. Colo. Sch. Mines, 06. Field asst, U. S. Geol. Surv, 06-07, geol. aid, 07-08, junior geologist, 08-09, asst. geologist, 09-14, geologist, 15-16; mining engineer, U. S. Bur. Mines, 16-17; chief geologist, Rocky Mt. div, Roxana Petrol. Corp, 17-18, manager, 18-20; *gen. manager, Matador Petrol. Co*, 20- A.A.; Min. Eng; Ass. Petrol. Geol; Petrol. Inst; Wash. Geol. Soc. Economic geology; conservation; economics of petroleum industry; Little Snake River coalfield, Wyoming; placers of northern Routt County, Colorado; oil fields of the United States.
- Ball, Prof. Oscar M(elville)**, College Station, Tex. *Botany*. Miami, Mo, Aug. 25, 68. Oklahoma, 92-93; fellow, Virginia, 96-97, A.B, 97; Bonn, 00; Ph.D, Leipzig, 03. Instr. bot, Virginia, 95-96; *prof. chem. and biol*, Miller Sch, Va, 97-00; bot. and mycol, *Tex. Col*, 03-10, *biol*, 10- A.A.; Tex. Acad; Bot. Gesell. Plant physiology and pathology; paleobotany; soil bacteriology; nitrogen-fixing bacteria of legumes; economic botany.
- Ball, Dr. S(tanley) C(rittenden)**, 151 Sumner Ave, Springfield, Mass. *Zoology*. Shelburne Falls, Mass, Nov. 19, 85. Ph.B, Yale, 11, Ph.D, 15. Draftsman, marine biol. lab, Carnegie Institution, Tortugas, Fla, 13-14; asst. curator zool, Peabody Museum, Yale, 15-16; instr, Mass. Col, 16-18; *prof. biol*, *Int. Y. M. C. A. Col*, 18- Anatomy; histology; physiology; migration of insects.
- Ball, Dr. Sydney H(obart)**, 42 Broadway, New York, N. Y. *Geology*. Chicago, Ill, Dec. 11, 79. A.B, Wisconsin, 01, Ph.D, 10. Asst. geologist, Mo. Bur. of Mines and Geol, 01-02; asst. geol, Wisconsin, 03-04; geol. aid, U. S. Geol. Surv, 04-05, asst. geologist, 05-07; chief geologist, Soc. Int. Forestière et Minière du Congo, 07-09; *consulting mining geologist*, 09- Chevalier Belgian Royal Order of the Lion, 19. A.A.; Min. Eng; Min. and Metal. Soc; Geol. Soc; Wash. Geol. Soc; British Inst. Min. and Metal; Soc. Belge de Géol. Geology of Miller County, Missouri; reconnaissance in southwestern Nevada; areal geology of the Georgetown (Colo) quadrangle; geology of Belgian Congo; precious stones.
- Ball, Prof. T(heodore) R(olly)**, 6043 Kingsbury Boulevard, St. Louis, Mo. *Chemistry*. Marshalltown, Iowa, July 29, 83. B.S, Drake, 08; Harvard, 08-09; M.S, Illinois, 14, fellow, 15-16, Ph.D, 16. Instr. *chem*, Drake, 10-13; Illinois, 16-17; *asst. prof*, *Washington (St. Louis)*, 17- Chem. Soc. (sec'y, St. Louis sect, 19). Inorganic chemistry; physical chemistry; ionization in mixed electrolytes.
- Ballard, Prof. Charles W**, 115 W. 68th St, New York, N. Y. *Pharmacognosy*. New York, July 6, 87. Ph.Ch, Columbia, 07, Phar.D, 08, A.M, 11. Instr. *pharmacog*, Columbia, 07-18, *prof*, 18- Pharmacognosist, S. B. Penick Co, 14-17; microanalyst, Health Dept. N. Y. City, 17- Pharmaceut. Ass. Food and drug botany; microscopy of food and drug products.
- Ballard, H(arlan) H(oge)**, 247 South St, Pittsfield, Mass. *Natural history*. Athens, Ohio, May 26, 53. Olivet, 69-70; A.B, A.M, Williams, 75. Principal, high sch, Lenox, Mass, 74-80; Lenox Acad, 80-86; *librarian and curator, Berkshire Athenaeum and Museum, Pittsfield, Mass*, 88- Dept. ed, 'St. Nicholas,' 80-86; ed, 'Swiss Cross,' 86-88; 'Popular Science News,' 88-92. Medal, Columbian Expos, 93. A.A; Agassiz Ass. (founder, 75, pres, 75-05). Methods of interesting youth in natural science.
- Ballard, Prof. W(alter) R(aymond)**, College Park, Md. *Horticulture*. Towanda, Ill, May 8, 78. B.S, Kansas State, 05. Asst. horticulturist, Md. Exp. Sta, 06-11, pomologist, 12-18; garden specialist, States Relations Service, 18-19; asst. prof. pomol, *Maryland*, and in charge, small fruit investigations, Exp. Sta, 19-20, *specialist, veg. and landscape gardening, exten. service*, 20- Soc. Hort. Sci. Plant breeding; orchards; small fruits.
- Ballard, W(illiam) S(alisbury)**, U. S. Department of Agriculture, Washington, D. C. *Plant pathology*. Platteville, Wis, May 29, 81. A.B, Illinois, 04. Asst. bot, Illinois, 04-06; scientific asst, asst. pathologist and later *pathologist, fruit disease investigations, bur. plant indust, U. S. Dept. Agr*, 06- A.A; Phytopath. Soc; Chem. Soc. Parasitic and physiological diseases of fruits.
- Ballou, H(enry) A(rthur)**, Imperial Department of Agriculture, Barbados, B. W. I. *Zoology, Entomology*. West Swanzey, N. H, July 23, 72. B.S, Mass. Col, 95, M.S, 06. Employed by Gipsy Moth Committee, Mass, 95; instr. bot, forestry and entom, Conn. Col, 97-01; asst. bot. lab, Mass. Col, 01-02; *entomologist, Imp. Dept. Agr, B. W. I*, 03- A.A; for. mem. Ass. Econ. Entom. Agricultural zoology.
- Bancroft, Dr. Frank W(atts) R. D.** Box 81, Concord, Calif. *Physiology, Zoology*. San Francisco, Calif, Oct. 18, 71. B.S, California, 94, M.S, 96; A.M, Harvard, 96, Ph.D, 98; Berlin, 98-99; Naples Zool. Sta, 99. Instr. and later asst. prof. physiol, California, 00-11; assoc. exp. biol, Rockefeller Inst, 11-12, physiol, 12. A.A; Soc. Nat; Soc. Zool. Anatomy, embryology and physiology of the tunicates; general physiology; morphogenesis; action of saline cathartics.
- Bancroft, Geo(rge) J(arvis)**, Bancroft Block, Denver, Colo. *Mining engineering*. Denver, Sept. 10, 73. B.S, Stanford, 95; Colo. Sch. Mines, 96. Ed, 'Min. Science,' 08- Min. Eng; Colo. Sci. Soc. Origin of ore deposits.
- Bancroft, Prof. Geo(rge) R(ussell)**, Morgantown, W. Va. *Chemistry*. Weymouth, N. S. July 7, 78. B.A, Acadia, 06; A.B, Yale, 14, Silliman fellow, 15-17, Ph.D, 17. Principal, pub. schools, Freeport, N. S, 98-99, 00-03, 06-07; science master, Halifax Acad, 07-13; asst. instr. chem, Yale, 14-17; prof. chem. and physics, Transylvania, 17-18; asst. prof. org. chem, Kentucky, 18-20; *assoc. prof*, *West Virginia*, 20- Chem. Soc. (sec'y, Lexington sect, 18); Ky. Acad; N. S. Inst. Organic chemistry; esters derived from substituted aliphatic alcohols.
- Bancroft, Dr. J(oseph) Austen**, McGill University, 461 Grosvenor Ave, Montreal, Can. *Geology*. North Sydney, N. S, April 8, 82. B.A, Acadia, 03; Yale, 04, A.M, 06; Ph.D, McGill, 10. Demonstrator *geol*, *McGill*, 05-08, lecturer,

- 08-10, asst. prof, 10-11, assoc. prof, 11-13, *Dawson prof*, 13- Geol. Soc; Can. Min. Inst; fel. Royal. Soc. Canada; Montreal Nat. Hist. Soc. Petrography and economic geology; geology of coast and islands between the strait of Georgia and Queen Charlotte Sound, B. C; copper deposits.
- Bancroft, M(erle) F(owler)**, 50 Carling Ave, Ottawa, Can. *Geology*. North Sydney, N. S., Nov. 2, 90. B.A., Acadia, 11; A.B., Yale, 13, fellow, 13-15. Engineer, Price Bros. and Co, 11-12; asst. geologist, *Can. Geol. Surv.* Field asst, Can. Geol. Surv, summers, 10-16. Geology of the Kootenay Lake, the Slocan and Lardeau districts.
- Bancroft, Prof. Wilder D(wight)**, 7 East Ave, Ithaca, N. Y. **Physical chemistry*. Middletown, R. I, Oct. 1, 67. A.B., Harvard, 88; Ph.D., Leipzig, 92; hon. Sc.D., Lafayette, 19. Asst. chem, Harvard, 88-89, 93-94, instr, 94-95; asst. prof. *physical chem*, Cornell, 95-03, *prof*, 03-Ed, 'Jour. of Physical Chem,' 96-; chairman, div. chem, Nat. Research Council, 19-; lieut. col, C. W. S. Nat. Acad; Philos. Soc; Chem. Soc. (pres, 10); Physical Soc; Electrochem. Soc. (pres, 05, 19); Am. Acad; hon. mem. London Chem. Soc. Phase rule; mass law; electrochemistry; alloys; irreversible reactions; chemistry of light; colloid chemistry.
- Bangham, Prof. R(alph) V(andervoort)**, 4417 Gaston Ave, Dallas, Tex. *Biology*. Wilmington, Ohio, Feb. 26, 94. A.B., Wilmington, 15; B.S., Haverford, 16, A.M., 17. Asst, Haverford, 16-17, instr. biol, 17-18; prof, Tex. Col, 18-19; asst. *prof. anat*, Baylor, 19- A.A. Trematode parasite, *Azyga*; mutations in *Drosophila virilis*; degeneration of vagus nerve.
- Bangs, Outram**, Museum of Comparative Zoology, Cambridge, Mass. **Zoology*. Watertown, Mass, Jan. 12, 63. Lawrence Sci. Sch, Harvard, 84. Asst. in charge of mammals and birds, *museum comp. zool*, Harvard, 00- A.A; fel. Ornith. Union; Soc. Mammal; Boston Soc. Nat. Hist; Nuttall Ornith. Club. Mammals; birds.
- Banker, Prof. Howard J(ames)**, Eugenics Record Office, Cold Spring Harbor, N. Y. *Mycology*. Schaghticoke, N. Y., April 19, 66. A.B., Syracuse, 92; A.M., Columbia, 00, Ph.D., 06. Instr. biol, Southwestern Nor. Sch, California, Pa, 01-04; prof, DePauw, 04-10; *researcher eugenics*, *eugenics record office*, *Carnegie Institution*, 10- A.A; Bot. Soc; Torrey Bot. Club; Eugenics Research Ass. Hydnaceae.
- Banks, H(enry) W(ard)**, 3d, Noroton, Conn. *Chemistry*. Englewood, N. J, Oct. 28, 90. A.B., Williams, 13; Columbia, 13-14, fellow, 16-17. *Chemist*, Harriman Research Lab, Roosevelt Hosp, N. Y. City, 14-16; Marvin Davis Laboratories, 19-20; *Banks and Craig*, 20- In mil. service, 16, 17-19. A.A; Chem. Soc. Industrial and food chemistry; nephelometry; chemical detection of blood.
- Banks, Dr. John H(enry)**, 26 John St, New York, N. Y. *Mining engineering*. New York, Nov. 28, 61. E.M., Columbia, 83, fellow, 85-90, Ph.D., 95. Anal. worker, Ledoux and Ricketts, 83-85; asst. to Prof. P. de P. Ricketts, Columbia, 85-90; mem. firm Ricketts and Banks, 90-15; *consulting engineer and metallurgist*, 15- Min. Eng; Soc. Chem. Indust. Metallurgy.
- Banks, Nathan**, Lexington, Mass. **Entomology*. Roslyn, N. Y., April 13, 68. B.S., Cornell, 89, M.S., 90. Agent, div. entom, U. S. Dept. Agr, 90-92, asst. entomologist, 96-16; *curator insects*, *museum comp. zool*, Harvard, 16- Entom. Soc. (pres, 18); Cambridge Entom. Club; N. Y. Entom. Soc; Wash. Entom. Soc; Phila. Entom. Soc; assoc. Phila. Acad. Systematic American arachnology; neuropterology; geographical distribution and habits of insects; catalogues of Neuroptera of the world and of American Arachnida and Heteroptera and fossorial Hymenoptera; mimicry and protective resemblance in insects.
- Banta, Dr. A(rthur) M(angun)**, Cold Spring Harbor, L. I., N. Y. **Zoology*. Greenwood, Ind, Dec. 31, 77. A.B., Indiana, 03, A.M., 04; Ph.D., Harvard, 07. Instr. pub. schools, 95-97; principal, high school, 99-01; asst. zool, Indiana, 03-05; Harvard, 05-07; prof. biol, Marietta, 07-09; *res. investigator, sta. for exp. evolution*, *Carnegie Institution*, 09- A.A; Soc. Nat; Soc. Zool; Soc. Exp. Biol; Soc. Ichthyol. and Herp; Ecol. Soc; Ind. Acad; Ohio Acad. Speleology; animal behavior; inhibition of development of melanin pigment in animals; effects of selection; comparative physiology and effects of changed environment on cavernicolous and non-cavernicolous animal species; sex determination.
- Barach, Dr. Joseph H(ayem)**, 5745 Beacon St, Pittsburgh, Pa. *Medicine*. Kalvary, Poland, March 12, 82. M.D., Pittsburgh, 03. Res. physician, West. Pa. Hosp, 03-04, *res. pathologist*, 05; pathologist, Eye and Ear Hosp, 04-09, South Side Hosp, 10; visiting physician, Prest. Hosp, 10-16; *consulting physician, dept. health*, *Carnegie Inst. Tech*, 20- Capt, M.C., 18-19. Cong. Sch. Hygiene, Buffalo, 11; Int. Cong. Hygiene and Demog, Washington, 10. A.A; Am. Med. Ass; fel. Col. Physicians. Morphology of the blood; physics of physical diagnosis; cardiovascular system in health and disease.
- Barbeau, C(harles) Marius**, Geological Survey, Ottawa, Can. *Anthropology*. Beauce, Que, March 5, 83. B.A. Laval, 03, LL.L., 07; B.Sc., Oxford, 10; Sorbonne, 09. Asst. anthropologist, *Can. Geol. Surv*, 11, *assoc. anthropologist*, 19- Assoc. ed, 'Jour. Am. Folk-lore,' 16- Folk-lore Soc; Royal Soc. Can. (hon. treas, 20-); cor. mem. Paris Soc. des Américanistes. Folk-lore; Wyandot, Huron, Iroquoian and Tsimshian ethnography; French and English folk-lore of Canada.
- Barber, E(rnest) R.**, Audubon Park, New Orleans, La. *Entomology*. Liverpool, England, Oct. 12, 84. Ont. Agr. Col, 03. *With bur. entom*, U. S. Dept. Agr, 11- A.A; Ass. Econ. Entom. Control of insect pests.
- Barber, Herbert S(pencer)**, U. S. National Museum, Washington, D. C. *Entomology*. Yankton, S. Dak, April 12, 82. Pub. schools. Asst. preparator, U. S. Nat. Museum, 97-02; U. S. Dept. Agr, 02-04; U. S. Nat. Museum, 04-; asst, U. S. Dept. Agr, 03- A.A; Entom. Soc; Ass. Econ. Entom; Wash. Acad; Wash. Entom. Soc. Coleoptera.

- Barber, Prof. M(arshall) A(lbert)**, University of Tennessee, Memphis, Tenn. *Bacteriology*. Crown Point, Ind. Nov. 22, 68. A.B. Kansas, 91; A.B. Harvard, 92, A.M. 94, Ph.D. 07. Asst. bot. Harvard, 92-93; asst. and assoc. prof. bot. and bacter. Kansas, 94-06, prof. bacter. and path. med. sch. 06-11; with Bur. Science, P. I. 12-15; Int. Health Board, 16-17; major, Sanit. C. 18; with Rockefeller Inst. 18-19; *special expert, malaria research, U. S. Pub. Health Service*, 21-
- Barber, T(homas) C(aldwell)**, Box 639, Brownsville, Tex. *Entomology*. Liverpool, England. July 27, 81. B.A.Sc. Toronto, 04. Hort. inspector, Ill. 06-07; asst. entomologist, La. 07-10; in charge sugar cane insect investigations, bur. entom. U. S. Dept. Agr. 11-12; *entomologist*, Sugar Exp. Sta. Tucumán, Argentina, 12-14; Delta Lab, Tallula, La. 14-16; *Fed. Hort. Board*, 17-18, in charge, sugar cane investigations, Brownsville, Tex. 18- A.A.; Ass. Econ. Entom.; Entom. Soc.
- Barber, Prof. W(illiam) Harley**, 416 Woodside Ave, Ripon, Wis. *Physics*. Black Earth, Wis. Aug. 28, 78. B.S. Wisconsin, 01, A.M. 09; Chicago, summers, 11-13, 14. Asst. principal, high school, Ripon, Wis. 01-04, principal, 04-05; asst. Bur. Standards, 05-06; *prof. physics, Ripon*, 06-, registrar, 10-15, *dean*, 15-, acting pres. 17-18. Asst. physics, Chicago, summer, 13. Physical Soc.; Ass. Prof.; Wis. Acad. Oil-drop falling in hydrogen gas.
- Barber, Dr. William Howard**, 616 Madison Ave, New York, N. Y. *Surgery*. New York, 86. A.B. Columbia, 09, M.D. 11. Instr. surg. N. Y. Polyclinic, 14-16; instr. surg. *Univ. and Bellevue Hosp. Med. Col.*, 15-19, *lecturer and director, lab. exp. surg.*, 19-, *asst. attending surgeon, Bellevue Hosp.*, 18- A.A.; Soc. Exp. Biol.; Am. Med. Ass.; Col. Surg.; N. Y. Acad. Med. Surgery of the stomach and intestine.
- Barbour, Prof. Erwin H(incekley)**, University of Nebraska, Lincoln, Nebr. *Geology*. Springfield, Ind. A.B. Yale, 82, Ph.D. 87. Asst. paleontologist, U. S. Geol. Surv. under Prof. O. C. Marsh at Yale, 82-89; *prof. geol.*, Grinnell, 89-91; *head prof., Nebraska, state geologist and curator, State Museum*, 91- With U. S. Geol. and Hydrog. Surv. A.A.; Geol. Soc.; Paleont. Soc.; Soc. Vert. Paleont.; Ass. Mus.; mem. Ornith. Union; Nebr. Acad.; Nebr. Ornith. Union. Vertebrate paleontology.
- Barbour, Dr. Henry Gray**, Yale University, New Haven, Conn. *Pharmacology*. Hartford, Conn. March 28, 86. A.B. Trinity, 06; M.D. Hopkins, 10, fellow, 10-11; Freiburg, 11; Vienna, 12; London, 13. *Asst. prof. pharmacol., Yale*, 12- A.A.; Physiol. Soc.; Soc. Pharmacol.; Soc. Exp. Biol. Regulation of body temperature; fever; periodic respiration; drug effects on mammalian arteries; pyretic and antipyretic drugs; amines; anesthetics.
- Barbour, Thomas**, Museum of Comparative Zoology, Cambridge, Mass. *Zoology*. Marthas Vineyard, Mass. Aug. 19, 84. A.B. Harvard, 06, A.M. 08, Ph.D. 11. *Curator Oceanica, Harvard Library*, 08-, *assoc. curator, reptiles and amphibians, museum comp. zool., Harvard*, 10-, *instr. sch. trop. med.*, 14-, *mem. faculty, Peabody Museum*, 13- Gold medal, Harvard Travellers Club, 07. Delegate, Pan-Am. Scientific Cong, Santiago, Chile, 08-09. A.A.; mem. Ornith. Union; Soc. Mammal; Am. Acad.; Explorers Club; fel. N. Y. Zool. Soc.; Phila. Acad.; Boston Soc. Nat. Hist.; Wash. Biol. Soc.; Nuttall Ornith. Club; hon. fel. Acad. Nat. Phys. Med. Sci., Cuba; fel. Royal Geog. Soc.; Royal Asiatic Soc. Herpetology; geographical distribution; fishes and reptiles.
- Barbour, William C(lay)**, Central High School, Newark, N. J. *Botany*. Newark Valley, N. Y. Nov. 15, 77. B.Sc. N. Y. Univ. 13; N. Y. Bot. Garden. *Teacher, high sch.*, Sayre, Pa.; *Succasunna*, N. J.; N. Y. City. A.A.; Micros. Soc.; Fern Soc.; Torrey Bot. Club; Bot. Soc. Copenhagen. Lichenology; ecology of mosses; spermatophytes.
- Bardeen, Dr. C(harles) R(ussell)**, University of Wisconsin, Madison, Wis. *Anatomy*. Kalamazoo, Mich. 71. A.B. Harvard, 93; M.D. Hopkins, 97. *Asst. anat., Hopkins*, 97-99, *assoc.*, 99-01, *assoc. prof.*, 01-04; *prof., Wisconsin*, 04-, *dean, med. sch.*, 07- A.A.; Soc. Nat.; Ass. Anat.; Soc. Zool.; Soc. Exp. Biol. Experimental morphology; growth of skeleton, muscles and nerves in vertebrates; variation in distribution of nerves in man; regeneration in planarians; action of X-rays on development; size of human heart; proportions of human body during post-natal development.
- Bardwell, Prof. Fred L(eslie)**, University of Minnesota, Minneapolis, Minn. *Chemistry*. Excelsior, Minn. Sept. 2, 58. B.S. Minnesota, 81; B.S. Mass. Inst. Tech. 84. Asst. chem. Mass. Inst. Tech. 84-86, instr. 86-94, *asst. prof.*, 94-11, *Case*, 11-15. Lecturer chem. Minnesota, 17-19. Work for various india-rubber mfg. and culture companies. A.A.; Chem. Soc. India-rubber.
- Bareis, Prof. Grace M(arie)**, 201 W. 11th Ave, Columbus, Ohio. *Mathematics*. Canal Winchester, Ohio. A.B. Heidelberg (Ohio), 97; Bryn Mawr, 97-99, 02-06; fellow, Ohio State, 06-08, Ph.D. 09. *Teacher*, Miss Roney's Sch. Bala, Pa., 00-06; *asst. prof. math., Ohio State*, 08- Math. Soc.; Math. Ass. Groups.
- Barkan, Prof. A(dolf)**, 2209 Laguna St, San Francisco, Calif. *Medicine*. Eperies, Hungary, Jan. 45. M.D. Vienna, 66; Zürich; LL.D. Glasgow, 02. Asst. physiol. Graz, Austria, 67; junior asst. eye dept, Vienna Hosp, 68; *prof. ophthalm. and otol., Cooper Med. Col.*, 72-; *Stanford*, 09- Eye and ear surgeon, Lane's Hosp; German Hosp; Hebrew Orphan Asylum. A.A.; Am. Med. Ass.; San Francisco Soc. Eye, Ear and Throat Surg. (pres. 09); Otol. Gesell; Heidelberg Ophthalm. Gesell; hon. mem. Budapest Soc. Physicians and Surg. Embryology of the eye; surgery of the eye and ear.
- Barker, Prof. A(ugustus) L(awrence)**, 524 Lincoln St, Ripon, Wis. *Chemistry*. Cedar Bluff, Ala. Feb. 10, 88. B.S. Alabama, 10, fellow, 10-11, M.S. 11; fellow, Chicago, 14-15. Instr. biol. Alabama, 11-13; asst. prof. chem. Mississippi, 15-16; instr. physiol. Emory, 16-17; *prof. chem., Ripon*, 17- Chem. Soc.; Wis. Acad. Organic chemistry; biochemistry.
- Barker, Dr. E(imer) Eugene**, Insular Experiment Station, Rio Piedras, P. R. *Genetics*.

- Crown Point, N. Y., Dec. 31, 86. A.B., Cornell, 10, Ph.D., 14. Scientific aid, sta. for exp. evolution, Carnegie Institution, 11; asst. prof. plant breeding, Cornell, 14-19; *plant breeder, Insular Exp. Sta.*, 19-20; *chief agronomist*, 20- A.A. Breeding of native Porto Rican plants; physiography; the brook stickleback.
- Barker, Prof. Ernest F(ranklin)**, 720 Haven Ave., Ann Arbor, Mich. *Physics*. Listowel, Ont., March 16, 86. B.S., Rochester, 08; fellow, Michigan, 13-14, A.M., 13, Ph.D., 15. Instr. math., Rochester, 10-12; asst. physics, Michigan, 14-15; prof., Western, 15-19; *nat. research fellow, Michigan*, 19- A.A. Infrad-red spectra.
- Barker, Prof. Franklin D(avis)**, Station A, Lincoln, Nebr. *Zoology*. Ottawa, Kans., Sept. 16, 77. A.B., Ottawa (Kans.), 98, A.M., 00; Ph.D., Nebraska, 10; fellow, Harvard, 15. Prof. biol., Ottawa (Kans.), 98-03; instr. *zool. Nebraska*, 04-05, adj. prof., 06, asst. prof., 06-08, assoc. prof., 09-13, *prof.*, 13- Asst. *zool.* Chicago, summers, 99, 00. A.A.; Soc. Zool.; Micros. Soc.; Nebr. Acad. (sec'y). Trematode genus *Opisthorchis*, Blanchard; new trihedral *Taenia*; situs inversus in the Trematoda; variations in trematodes; avian parasites; the parasitic fauna of fresh water turtles; parasites of muskrats; parasitic worms of the Bermudas.
- Barker, Dr. Harold C(harles)**, University of Pennsylvania, Philadelphia, Pa. *Physics*. Philadelphia, Dec. 3, 75. B.S., Pennsylvania, 03, A.M., 05, Ph.D., 07. Asst. chem., Drexel Inst., 96-98; *physics, Pennsylvania*, 03-04, instr., 04-10, asst. prof., 10-19, *prof.*, 19- Physical Soc. Peltier electromotive force.
- Barker, Dr. Lewellys F(ranklin)**, Johns Hopkins Hospital, Baltimore, Md. **Medicine*. Norwich, Ont., Sept. 16, 67. M.B., Toronto, 90, hon. M.D., 05; fellow, Hopkins, 92-94; Leipzig, 95; Munich and Berlin, 04; LL.D., Queen's (Can.), 07; McGill, 11. Assoc. anat., Hopkins, 94-97, assoc. prof., 97-99, path., 99-00; *prof. anat.* Chicago, and head, dept. anat., Rush. Med. Col., 00-05; med., *Hopkins*, 05-14, *clin. med.*, 14-, physician-in-chief, *Hopkins Hosp.*, 05-14, *visiting physician*, 14- Asst. res. pathologist, Hopkins Hosp., 94-99, Hopkins med. commissioner to Philippine Islands, 99; special federal commissioner from U. S. Treas. Dept. for investigation of plague in San Francisco, 01; assoc. ed., 'Am. Jour. Anat.', 02-; trustee, Mem. Inst. for Infectious Diseases, Chicago. A.A.; Soc. Nat.; Ass. Anat.; Ass. Path. and Bact.; Am. Physicians (v. pres, 11); Soc. Biol. Chem.; Soc. Clin. Invest.; Neur. Ass.; cor. mem. Edinburgh Medico-Chirurg. Soc.; cor. mem. Vienna Imp. Med. Soc.; cor. mem. Budapest Royal Soc. Physicians; for. mem. Swedish Med. Soc. Structure, physiology and pathology of the nervous system; infectious diseases; morbid anatomy of hereditary ataxia; amino-acids in urine; pathological physiology of the heart; clinical diagnosis of internal diseases.
- Barlow, Prof. William E(dward)**, Virginia Polytechnic Institute, Blacksburg, Va. *Chemistry, Metallurgy*. Bury, England, May 11, 70. B.A., Cambridge, 95, M.A., 99; Ph.D., Göttingen, 03. Demonstrator and asst. prof. chem., Iowa, 92-01, asst. prof. chem. and metal, 03-04; assoc. prof. indust. chem. and metal, *Va. Polytech.*, 04-06, *prof. metal. and metallog.*, 06-, *dean, grad. dept.*, 08- A.A.; Chem. Soc.; Soc. Test. Mat.; Steel Treat. Soc.; Int. Ass. Test. Mat. Metallography; correlation of physical properties of alloys with constitution, heat treatment and mechanical treatment.
- Barnard, Prof. E(dward) E(merson)**, Yerkes Observatory, Williams Bay, Wis. **Astronomy*. Nashville, Tenn., Dec. 16, 57. Vanderbilt, 87; A.M., Pacific, 89; hon. Sc.D., Vanderbilt, 93; LL.D., Queen's (Can.), 09. In charge, Vanderbilt Univ. Observatory, 83-87; astronomer, Lick Observatory, 87-95; *prof. practical astron., Chicago, and astronomer, Yerkes Observatory*, 95- Mem. U. S. Naval Observatory total eclipse exped. to Sumatra, 01; assoc. ed., 'Astron. Jour.' Lalande gold medal, Paris Acad., 92, Arago gold medal, 93, Janssen gold medal, 00; gold medal, Royal Astron. Soc., 97; Janssen prize, Soc. astron. de France, 06; Bruce gold medal, Pacific Astron. Soc., 17. Nat. Acad.; A.A. (v. pres, 98); Astron. Soc.; Pacific Astron. Soc.; Am. Acad.; Philos. Soc.; hon. mem. Royal Astron. Soc. Can.; for. assoc. and fel. Royal Astron. Soc.; Soc. astron. de France. Visual and photographic astronomy; star clusters; parallax; variable stars in clusters; comets; dark nebula; aurorae; milky way; gegenschein; satellites and planets.
- Barnard, H(arry) E(verett)**, American Institute of Baking, Minneapolis, Minn. *Chemistry*. Dunbarton, N. H., Nov. 14, 74. B.S., New Hampshire, 99. Asst. chemist, N. H. Exp. Sta., 00; U. S. Naval Smokeless Powder Factory, Indian Head, Md., 01; chemist, State Board of Health, N. H., 01-05; Ind., 05-19, state food and drug commissioner, 07-19; *director, Am. Inst. Baking*, 19- Food and drug inspection chemist, U. S. Dept. Agr.; mem. standards committee, U. S. Govt.; Lake Mich. Water Commission, 08-09. Chem. Soc. (pres, Ind. sect, 06, director, 17-); Agr. Chem. (referee, food adulteration); Ind. Sanit. and Water Supply Ass. (pres). Food adulteration; sanitation; water supplies; water supplies of Indiana; purity of Lake Michigan water; preservation of fruit syrups and crushed fruits; beer analysis; determination of benzoate of soda in foods.
- Barnard, Prof. William N(ichols)**, Cornell University, Ithaca, N. Y. *Mechanical engineering*. Canton, Ill., April 24, 75. M.E., Cornell, 97. Instr. machine design, Cornell, 97-00; chief draftsman, The Russell Engine Co., Massillon, Ohio, 01-03; asst. prof. machine design, *Cornell*, 03-05, *power eng.*, 05-07, *prof.*, 07- A.A.; Mech. Eng.; Eng. Educ. Machine design; steam machinery; heat-power engineering.
- Barnebey, Prof. Oscar L(eonard)**, 5543 Clarendon Ave., Detroit, Mich. *Chemical engineering*. * Hughesville, Mo., Feb. 23, 86. B.S., Nebraska, 08, A.M., 09; Ph.D., Wisconsin, 12. Instr. chem., Nebraska, 08-10; Wisconsin, 10-16; asst. prof., Rutgers, 16-17; chief research chemist, air reduction service, 17-18; capt., C.W.S., 18-19; *manager, Nizer Lab. Co., Detroit*, 19-; pres, *Barnebey-Cheney Eng. Co., Columbus, Ohio*, 19- Chem. Soc. Inorganic and analytical chemistry; determination of titanium, iodine; cyanid; differential iodimetry; manganese; rare earths; non-aqueous solutions.

Barnes, Prof. Fred Asa, Cornell University, Ithaca, N. Y. *Railroad engineering*. Stockbridge, Mass, June 17, 76. C.E., Cornell, 97, M.C.E., 98. Draftsman, U. S. Navy, 99; asst. res. engineer, Santiago de Cuba, 99-02; *instr. ry. eng.*, Cornell, 02-05, asst. prof., 05-15, *prof.*, 15- A.A.; R. R. Eng.; Eng. Educ.; Civil Eng. Railroad surveying and construction.

Barnes, Dr. Harry Lee, Wallum Lake, R. 1. *Medicine*. Adams, Mass, Aug. 10, 77. M.D., Vermont, 98. *Med. supt.*, Stonywood Sanatorium, 03-04; *R. I. State Sanatorium*, 05- Am. Med. Ass.; Climat. Ass. Pulmonary tuberculosis.

Barnes, Prof. H(oward) T(urner), McGill University, Montreal, Can. *Physics*. Woburn, Mass, July 21, 73. B.A.S., McGill, 93, M.A.S., 96, Sc.D, 00. Demonstrator physics, McGill, 95-98, lecturer, 00-01, asst. prof., 01-06, *assoc. prof.*, 06-07, Macdonald prof., 07-19, director, Macdonald Physics Building, 09-19. Assoc. ed, 'Jour. Physical Chem'; Joule studentship, London Royal Soc; Int. Electrotech. Commission; British Science Guild (sec'y, Can. committee). Int. Elec. Cong, St. Louis, 04 (sec'y, sect. A). A.A.; Physical Soc; fel. Royal Soc. Can. (pres, math. and physics sec, 09); fel. Royal Soc; fel. Royal Meteor. Soc; Soc. de Physique. Standards of electro-motive force; continuous electric calorimetry; specific heats of water and mercury; density of ice; variation of the specific heat of liquids with temperature; critical velocity of liquids; thermal and electrical measurements; heating effect of radium; mountain temperature; ice formation.

Barnes, Dr. James, Bryn Mawr, Pa. **Physics*. Halifax, N. S, Dec. 11, 78. A.B., Dalhousie, 99, A.M., 00, 1851 Exhibition scholar, 00-03; fellow, Hopkins, 03-04, Ph.D., 04. *Instr. physics*, Hopkins, 04-06; *assoc. Bryn Mawr*, 06-10, *assoc. prof.*, 10-17, *prof.*, 17- A.A.; Physical Soc. Electrical conductivity and freezing-points of mixtures of electrolytes; spectrum analysis with interferometers; effect of external conditions on spectra.

Barnes, Dean Jasper C(onverse), Maryville College, Maryville, Tenn. *Psychology*. Meigsville, Ohio, Aug. 28, 61. A.B., Marietta, 90, A.M., 93; Ph.D, Chicago, 11. Supt. schools, Belpre, Ohio, 90-92; *prof. educ.* and principal, prep. dept, *Maryville*, 92-01, acting *prof. psychol.* and *polit. science*, 01-03, *prof. psychol.*, 03-, *dean*, 14- Prof. psychol, Summer Sch. of South; mem. faculty, Ohio State, summer 20; mem. Rhodes Scholarship Committee for Tenn, 13-19. A.A.; Psychol. Ass; S. Soc. Philos. and Psychol. (councilor, pres, 15). Voluntary control; personality in the Afro-American.

Barnes, William, Decatur, Ill. *Entomology*. Decatur, Sept. 3, 60. B.S., Harvard, 93, M.D, 96, A.A.; Am. Med. Ass. Lepidoptera of North America.

Barnes, William Hutt, 2436 Channing Way, Berkeley, Calif. *Bacteriology*. Grotiot Co, Mich, Sept. 7, 77. A.B., Stanford, 16; A.M., California, 17. Teacher science, high sch, Manila, P. I., 12-13; bacteriologist, Cutter Laboratories, 15-17; *instr. bacter.*, California, 17- Soc. Bact. Immunology.

Barnett, Prof. R(obert) J(ohn), Manhattan, Kans. *Pomology*. Denison, Kans, Jan. 16, 74. B.S., Kansas State, 95, M.S., 11. *Prof. pomol.*, Wash. State, 14-20; *Kansas State*, 20- A.A.; Soc. Hort. Sci. Agricultural teaching; apples.

Barnett, Prof. S(amuel) J(ackson), Department of Terrestrial Magnetism, Carnegie Institution, Washington, D. C. **Physics*. Woodson Co, Kans, Dec. 14, 73. Emporia, 89-91; Chicago, 92-93; A.B., Denver, 94; Virginia, 95-96; fellow, Cornell, 97-98, Ph.D, 98. *Instr. physics* and *biol.*, Denver, 94-95; asst, astron. observatory, Virginia, 95-96, *instr. astron.*, 96; *instr.* and later *prof. physics*, Colo. Col, 98-00; asst. prof., Stanford, 00-05; *prof.*, Tulane, 05-11; asst. prof., Ohio State, 11-12, *prof.*, 12-18; *chief, div. exp. work, dept. terrestrial magnetism, Carnegie Institution*, 18- Magnetic observer, U. S. Coast and Geod. Surv, 02-04; Comstock prize, Nat. Acad, 18. A.A.; Physical Soc; Wash. Acad; Wash. Philos. Soc. Experimental and theoretical electricity and magnetism.

van Barneveld, Prof. Cha(rls) E(dwinn), Tucson, Ariz. *Mining and metallurgical engineering*. Doetinchem, Netherlands, Nov. 26, 74. Collège Commercial, Boulogne; Kings Col, Can; B.S., McGill, 93. Mining engineer, 93-96; asst. prof. miner. and practical metal, Ariz. Sch. Mines, 96-97; *prof. mining eng.*, Minnesota, and consulting mining engineer, 98-13; *chief, dept. mines and metal*, Panama-Pacific Expos, San Francisco, 14-15; *prof. mining*, California, 16; *supt, southwest sta, U. S. Bur. Mines*, 17- Min. Eng. Metal mining; copper leaching and concentration.

Barney, Dr. I(da), 7 Paradise Road, Northampton, Mass. *Mathematics*. New Haven, Conn, Nov. 6, 86. A.B., Smith, 08; Ph.D, Yale, 11. *Prof. math.*, Rollins, 11-12; asst, Smith, 12-13, *instr.*, 13-17; asst. prof., Lake Erie, 17-19; *prof.*, Meredith, 19-20; *asst. prof.*, Smith, 20- A.A.; Math. Soc. Analysis.

Barney, R(aymond) L(ivingston), Fairport, Iowa. *Ichthyology*. Providence, R. I., Oct. 21, 91. B.S., R. I. Col, 15; M.S., Brown, 16. *Instr. biol.*, Brown, 15-16; temporary asst, *U. S. Bur. Fisheries*, 16, scientific asst, 16-18, *director*, Beaufort Lab, 18-20, *Fairport Lab.*, 20- Fisheries Soc. Green-gilled oysters; life history of Elasmoma; Gambusia.

Barnhart, Dr. John Hendley, New York Botanical Garden, Bronx Park, New York, N. Y. *Botany*. Brooklyn, N. Y., Oct. 4, 71. A.B., Wesleyan, 92, A.M., 93; M.D., Columbia, 96. Ed. asst, *N. Y. Bot. Garden*, 03-12, librarian, 06-12, *bibliographer*, 13- Delegate of N. Y. Bot. Garden, Int. Bot. Cong, Vienna, 05; Brussels, 10. A.A.; Soc. Nat; Bot. Soc; Torrey Bot. Club (ed-in-chief, 03-07, v. pres, 08-); fel. N. Y. Acad; Wash. Biol. Soc. Botanical bibliography and nomenclature; taxonomy of flowering plants; American Lentibulariaceae; local floras of North America.

Barnhart, P(ercy) S(pencer), Scripps Institution for Biological Research, La Jolla, Calif. *Biology*. Berkley Heights, N. J, Sept. 17, 81. A.B., Southern California, 11, A.M., 14. Asst. biol., Southern California, 07-11, *instr. zool.*, 11-13; asst. prof. marine biol, Venice Marine Biol. Sta, 13-14; *scientific asst, Bur. Fisheries*, 14-; *cura-*

- tor, *Scripps Inst, California*, 14— A.A. Marine biology.
- Barnum, Dr. Charlotte C(ynthia)**, 417 W. 114th St, New York, N. Y. *Mathematics*. Phillipston, Mass, May 17, 60. A.B. Vassar, 81; Hopkins, 90-92; Ph.D. Yale, 95. Teacher, Betts Acad, Stamford, Conn, 81-82; Hillhouse High Sch, New Haven, 83, 85-86; computer, Yale Observatory and 'Dana's Mineralogy,' 83-87; teacher astron, Smith, 89-90; math, Carleton, 95-96; computer, Mass. Mutual Life Ins. Co, 98; Fidelity Mutual Life Ins. Co, Phila, 00-01; U. S. Naval Observatory, 01; tidal div, U. S. Coast and Geod. Surv, 01-08; ed, biol. surv, U. S. Dept. Agr, 08-13; ed. and proof-reader, *scientific works*, 14— Asst. ed, 'Webster's Int. Diet,' 86-90, 97. A.A.; Math. Soc. Functions having lines or surfaces of discontinuity; tides and currents; annuities.
- Barott, Herbert G(eorge)**, 1329 Emerson St, N. W., Washington, D. C. *Physics*. Burton, Ohio, July 13, 81. E.E. Syracuse, 09. Asst. physicist, Bur. Standards, 10-17; in charge respiration calorimeter lab, U. S. Dept. Agr, 17— Energy elimination and respiratory exchange in men and plants.
- Barr, Prof. John H(enry)**, 36 Gramercy Park, New York, N. Y. *Machine design*. Terre Haute, Ind, June 19, 61. B.M.E. Minnesota, 83, M.S., 88; M.M.E. Cornell, 89. Draftsman, Calumet and Hecla Mining Co, 83-84; mech. engineer, Lake Superior Iron Works, 84-85; instr, later asst. prof. and prof. mech. eng, Minnesota, 85-91; asst. prof, Cornell, 91-95; assoc. prof. and prof. machine design, 95-03; manager, Smith Premier Works, 03-09; chief engineer, *Remington Typewriter Co*, 09— Mem. N. Y. State Commission on Voting Machines, 03-15; trustee, Cornell, 05-15; major, ordnance dept, 17-19. A.A.; Mech. Eng; Franklin Inst; Army Ordnance Ass. Proportions of steam-engines; engine valve friction; compression in steam-engines; kinematics of machinery; elements of machine design.
- Barre, Prof. H(enry) W(alter)**, Clemson College, S. C. *Botany*. Lexington, S. C, May 5, 81. B.S. Clemson, 05; Nebraska, 07, A.M., 10. Field agent plant path, Nebraska Insect Pest and Plant Disease Bur, 07; botanist, *Clemson Exp. Sta*, 07-08, director, 17—; botanist and plant pathologist, S. C. Exp. Sta, 07—; prof. bot. and bacter, *Clemson*, 11—, director of research, 17— A.A.; Bot. Soc; Soc. Agron; Phytopath. Soc. Plant diseases of South Carolina; cotton anthracnose; rot in sweet potatoes.
- Barrett, Dr. Albert M(ore)**, 630 Oxford Road, Ann Arbor, Mich. *Psychiatry*. Austin, Ill, July 15, 71. A.B. Iowa, 93, M.D., 95; Heidelberg, 01-02. Pathologist and asst. physician, Danvers Hosp. for Insane, Danvers, Mass, 02-06; director, State Psychopathic Hosp, Mich, 06-20, prof. psychiat, *Michigan*, 20— Asst. neural path, Harvard Med. Sch, 05-06. Neur. Ass; Psychopath. Ass; Medico-Psychol. Ass; Am. Med. Ass. Neuro-pathology; psychiatry.
- Barrett, Prof. J(ames) T(heophilus)**, Citrus Experiment Station, Riverside, Calif. *Plant pathology*. Butler, Ill, Nov. 14, 76. A.B. Illinois, 03, A.M., 07; fellow, Cornell, 08-10, Ph.D., 10. Asst. bot. Ill. Exp. Sta, 03-08; Cornell, 08-10; assoc. Illinois, and asst. Exp. Sta, 10-13; prof. plant path, sch. trop. agr, *California*, and plant pathologist, Citrus Exp. Sta, 13-19, acting dean, grad. sch. trop. agr, and acting director, *Citrus Exp. Sta*, 19— A.A.; Bot. Soc; Phytopath. Soc; West. Soc. Nat. Mycology; bacterial, fungous and physiological diseases of plants.
- Barrett, O(tis) W(arren)**, 202 W. 103d St, New York, N. Y. *Agriculture*. North Clarendon, Vt, April 18, 72. B.S. Vermont, 96. Botanist and entomologist, P. R. Exp. Sta, 01-05; plant introducer, U. S. Dept. Agr, 05-08; director agr, Mozambique, 08-10; chief, div. hort. bur. agr, Manila, P. I, 10-14; horticulturist, C. Z, 14-17; with C. W. S. and U. S. Dept. Agr, 17-19. Mex. agente viagero, Paris Expos, 00. A.A.; Wash. Entom. Soc; Philippine Acad. Tropical agriculture; zootehny; coconut, cacao and coffee culture.
- Barrett, Prof. S(ampson) K(irby)**, New York University, University Heights, New York, N. Y. *Physics*, *Electrical engineering*. Saratoga Springs, N. Y, Sept. 7, 86. E.E. Brooklyn Polytech, 10; N. Y. Univ, 13-16. Instr. physics and elec. eng, Brooklyn Polytech, 10-15, asst. prof, 15-17; asst. prof. elec. eng, N. Y. Univ, 19— Lieut, N.R.F., 19; consulting engineer, 15— A.A.; Elec. Eng; Naval Inst. Brownian movements; commutation phenomena; illumination; induction motors; shading coils; single-phase and polyphase relays; ozonators; electrical dryers; magnetos for aeroplanes; insulating paints and varnishes; oscillograph; naval fire control apparatus; gunnery.
- Barrett, Dr. S(amuel) A(lfred)**, Public Museum, Milwaukee, Wis. *Anthropology*. Little Rock, Ark, Nov. 12, 79. California, 00-04, B.S., 05. LeConte fellow, 05-06, M.S., 06, Ph.D., 08. Asst. anthrop, California, 06-08; ethnologist, George G. Heye exped. to S. Am, 08-09; curator anthrop, *Pub. Museum, Milwaukee, Wis*, 09— A.A.; Anthropol. Ass; Ethnol. Soc; Folk-lore Soc; Wis. Archeol. Soc; Wis. Nat. Hist. Soc; Calif. Acad. Indians of Ecuador, California and Wisconsin; Wisconsin archeology.
- Barrett, Storrs B(arrows)**, Yerkes Observatory, Williams Bay, Wis. *Astronomy*. Kingsville, Ohio, Aug. 12, 64. A.B. Rochester, 89; fellow, Chicago, 93-95. Principal, Middlebury Acad, 89-91; science teacher, high sch, Palmyra, N. Y, 91-92; sec'y, *Yerkes Observatory*, 00—, asst. prof. astrophys, *Chicago*, 14— A.A.; Astron. Soc. Stellar radial velocities; spectroscopic binary stars.
- Barringer, Daniel Moreau**, Real Estate Trust Building, Philadelphia, Pa. *Geology*. Raleigh, N. C, May 25, 60. A.B. A.M. Princeton, 79; LL.B. Pennsylvania, 82; Harvard, 89-90; Virginia, 91. Practising lawyer, Phila, 82-89; consulting geologist and mining engineer, 91— Trustee, Jefferson Med. Col, Phila. A.A.; Min. Eng; Am. Iron and Steel Inst; Min. and Metal. Soc; Am. Geog. Soc; Phila. Acad; Harvard Eng. Soc; Princeton Eng. Soc; Phila. Zool. Soc; Franklin Inst. Mines and mining in the United States; minerals of commercial value; origin of Meteor Crater, Arizona.
- Barringer, L(awrence) E(ugene)**, 108 Lenox Road, Schenectady, N. Y. *Ceramics*. Washing-

- ton, D. C, March 1, 76. E.M., Ohio State. Chemist, Columbus Brick and Terra Cotta Co, 00-02; *Gen. Elec. Co.*, 02-09, *engineer of insulations*, 09- Silver medal, Panama-Pacific Expos, 15. Ceramic Soc. (pres, 16); Chem. Soc. Electrical insulating wares; brick; kilns.
- Barron, Leonard**, Garden City, L. I., N. Y. *Horticulture*. Chiswick, England, Sept. 29, 68. Birkbeck Inst, London; gardens, Royal Hort. Soc, England. Asst. ed, 'Gardeners' Chronicle,' London, 85-94; ed, 'Am. Gardening,' 94-04; 'Garden Magazine,' N. Y., 05- Sec'y, Int. Conf. on Plant Breeding, New York, 02; Int. Conf. Plant Hardiness, New York, 07. A.A.; Soc. Hort. Sci.; Am. Inst.; N. Y. Hort. Soc. (sec'y, 98-09). Adaptation of plants to ornamental gardening; methods of horticulture.
- Barron, Prof. Moses**, 503 Seventh St, S. E., Minneapolis, Minn. *Pathology*. Kovno, Russia, Nov. 8, 83. B.S., Minnesota, 10, M.D., 11. Demonstrator path. and bacter, *Minnesota*, 12-13, instr. path, 13-16, *asst. prof.*, 16- Director, path. lab., City Hosp, Minneapolis, 13-14; City and Co. Hosp, St. Paul, 14-17; lieut. capt. and major, M.C., 17-19. A.A.; Am. Med. Ass.; Ass. Path. and Bact; Minn. Path. Soc. Bacteriology; tumors.
- Barrows, Dr. Albert L(oyd)**, National Research Council, Washington, D. C. *Zoology*. Nordhoff, Calif, May 28, 83. B.S., Pomona, 06; Cornell, 06-07; fellow, California, 11-12, M.S., 12, Ph.D., 17. Teacher science, Cavite High Sch, Cavite, P. I., 07-10; asst. zool., California, 12-14, instr., 14-19; *sec'y, div. states and educ. relations, Nat. Research Council*, 19- Mem. scientific staff, 'Albatross,' 08-09. A.A. (sec'y, Pacific div, 14-17); Paleont. Soc.; Calif. Acad. Marine protozoa; marine rock and wood-boring mollusks.
- Barrows, Prof. Harlan H.**, University of Chicago, Chicago, Ill. *Geography*. Armada, Mich, 77. B.S., Chicago, 03; hon. Pd.M., Mich. Nor. Col, 12. Asst. geol, *Chicago*, 03-07, instr. geol. and geog, 07-08, *asst. prof.*, 08-10, *assoc. prof. geog.*, 10-14, *prof.*, 14-19, *head of dept.*, 19- Ass. Geog. (v. pres, 20). Historical geography; geography of middle Illinois valley.
- Barrows, Prof. H(arold) K(ilbrith)**, 6 Beacon St, Boston, Mass. *Hydraulic engineering*. Melrose, Mass, Nov. 9, 73. B.S., Mass. Inst. Tech, 95. Asst. and *assoc. prof. civil eng.*, Vermont, 01-04; district engineer, U. S. Geol. Surv, 04-09; *consulting engineer*, 07-; *assoc. prof. hydraulic eng.*, *Mass. Inst. Tech.*, 09- Civil Eng; Eng. Educ; Am. Water Works Ass; New Eng. Water Works Ass; Boston Soc. Civil Eng. Water power.
- Barrows, Prof. Walter B(radford)**, Agricultural College, East Lansing, Mich. *Zoology*. Wellesley Hills, Mass, Jan. 10, 55. B.S., Mass. Inst. Tech, 76. Instr. chem. and physics, Col. Nacional, Argentina, 79-81; science, State Nor. Sch, Westfield, Mass, 81-82; biol, Wesleyan, 82-86; first asst. ornithologist, U. S. Dept. Agr, 86-94; *prof. zool. and physiol.*, *Mich. Agr. Col.*, 94- Entomologist, Mich. Exp. Sta, 97-98. A.A.; fel. Ornith. Union; Soc. Mammal; Ass. Econ. Entom; Mich. Acad. (sec'y, 96-01, pres, 05). Migration and economic relations of birds; interrelations of birds and insects; local (Mich.) bird population and the causes of fluctuation.
- Barrows, Prof. W(illiam) E(dward), Jr.**, 36 Myrtle St, Orono, Maine. *Electrical engineering*. Ludlow, Vt, Feb. 20, 78. B.S., Maine, 02, E.E., 08. Student engineer, Gen. Elec. Co, 02-04; *instr. elec. eng.*, Pennsylvania, 04-06; *asst. prof.*, Armour, 06-12; *prof.*, Maine, 12- Elec. Eng; Illum. Eng. Soc; Eng. Educ; Nat. Elec. Light Ass. Light; photometry; illumination.
- Barrows, Prof. William Morton**, State University, Columbus, Ohio. *Zoology*. Rochester, N. Y., April 7, 83. B.S., Mich. Agr. Col, 03; Harvard, 05, M.S., 06, Sc.D., 20. Teacher science, N. Manchester, Ind, 06-07; *instr. zool.*, N. H. Col, 07-09; *asst. prof.*, *Ohio State*, 09- A.A.; Soc. Zool; Ecol. Soc. Reactions of Drosophila to odorous substances; reactions of spiders to vibrations of web; color in cocker-spaniels; spiders of Ohio.
- Barrus, Prof. M(ortier) F(ranklin)**, Forest Home Drive, Ithaca, N. Y. *Plant pathology*. Forestville, N. Y., March 17, 79. A.B., Wabash, 08; Ph.D., Cornell, 11. Asst. bot, Wabash, 07-08; *plant path.*, Cornell, 08-10, instr., 10-11, *asst. prof.*, 11-14, *prof.*, 14- A.A.; Phytopath. Soc. Bean diseases; varietal resistance of beans to anthracnose; potato diseases.
- Barry, Prof. Frederick**, 880 181st St, New York, N. Y. *Chemistry*. Lynn, Mass, Feb. 13, 76. A.B., Harvard, 97, A.M., 09, Ph.D., 11. Research, *asst. chem.*, Carnegie Institution, 11-12; instr, Columbia, 12-18; *asst. prof.*, N. Y. Univ, 18- Lecturer hist. of science, Columbia, 18-19. A.A.; Chem. Soc. Chemical energetics; calorimetry; thermochemistry.
- Barss, Prof. A(lden) F(orrest)**, University of British Columbia, Vancouver, B. C., Can. *Horticulture*. Hoosick, N. Y., March 29, 88. A.B., Rochester, 10; B.S.A., Cornell, 12; M.S., Oregon Col, 14. Research asst. hort, Oregon Col, 14-17, *asst. prof. pomol.*, 17-18; *assoc. prof. hort.*, *British Columbia*, 18- A.A.; Soc. Hort. Sci.
- Barss, Prof. H(oward) P(hillips)**, Oregon Agricultural College, Corvallis, Oregon. *Plant pathology*. Victoria, B. C., April 20, 85. A.B., Rochester, 07; M.S., Harvard, 09. Austin teaching fellow, Harvard, 09-10; instr. bot. and asst. plant path., Wash. State, 10-12; *asst. plant pathologist*, Oregon Exp. Sta, 12-14, *assoc. pathologist*, 14-15, *prof. and head, bot. and plant path. dept.*, *Oregon Col.*, 15- A.A.; Bot. Soc; Phytopath. Soc. (mem. board of editors, 18); Ass. Prof; New Eng. Bot. Club; West. Soc. Nat. Bacterial diseases of stone fruits.
- Barss, Dr. William Raymond**, Massachusetts Institute of Technology, Cambridge, Mass. *Physics*. New Germany, N. S., Feb. 15, 85. B.S., Acadia, 07; A.B., Yale, 09, Sloane fellow, 10-12, Ph.D., 12. Asst. physics, Yale, 09-12; *instr.*, *Mass. Inst. Tech.*, 12- Physical Soc. Measurements of radioactivity by means of alpha rays; ionization by collision in gases and vapors.
- Bartell, Prof. F(loyd) E(arl)**, University of Michigan, Ann Arbor, Mich. *Chemistry*. Concord, Mich, June 16, 83. A.B., Albion, 05; A.M., Michigan, 08, Ph.D., 10. Assoc. prof. chem, Simpson, 05-07; instr. gen. and physical chem, *Michigan*, 10-16, *asst. prof. physical chem.*, 16-

- 18, *assoc. prof.*, 18— Research chemist, nitrate div., O. D., 17–18. Chem. Soc.; Electrochem. Soc. Permeability of membranes and osmotic pressure; electrochemistry; methods of analysis; colloids; surface tension.
- Bartelmez, Dr. George W(illiam)**, University of Chicago, Chicago, Ill. *Anatomy*. New York, N. Y., March 23, 85. B.S., N. Y. Univ., 06; fellow, Chicago, 07–10, Ph.D., 10. Asst. biol., N. Y. Univ., 06–07; instr. *anat.*, Chicago, 10–19, *assoc. prof.*, 19— Ass. Anat.; Soc. Zool. Early avian development; morphology of ichthyopsidan brain.
- Barth, Carl G(eorge) L(ange)**, 10 S. 18th St., Philadelphia, Pa. *Mechanical engineering*. Christiania, Norway, Feb. 28, 60. Grad. Horten's Tech. Sch., Norway, 77. Draftsman and later chief designer, Wm. Sellers and Co., Phila., 81–95; chief draftsman and engineer, Rankin and Fritz Foundry and Machine Co., St. Louis, 95–97; prof. applied mech., Int. Correspondence Schools, 97–99; shop engineer, Bethlehem Steel Co., 99–02; *consulting mechanical engineer*, 02–A.A.; Mech. Eng.; Franklin Inst.; Phila. Eng. Club; Buffalo Eng. Club. Theoretical and applied mechanics; strength of columns; transmission of power by leather belting; art of cutting metals; mathematical approximations; mathematics of graded income tax.
- Bartholomew, Prof. C(yrus) E(dgar)**, 1608 Ave. G., Miami, Fla. *Entomology*. Wellsville, Ohio, Dec. 24, 77. B.S., Iowa State, 04, M.S., 06. Instr. entom., Iowa State, 04–09, asst. prof., 09–11, *assoc. prof.*, 11–16; specialist, apiculture, Tennessee, 16–17; Colorado, Utah, Wyoming, 18; *asst. to plant commissioner*, Fla., 19— A.A.; Entom. Soc.; *assoc. Ass. Econ. Entom.*
- Bartholomew, Prof. E(lbert) T(homas)**, School of Tropical Agriculture, Riverside, Calif. *Botany*. Stockton, Kans., Oct. 18, 78. A.B., Kans. State Nor. Sch., 09; fellow, Wisconsin, 10–11, Ph.D., 14. Asst. prof. *bot.*, Kans. State Nor. Sch., 09–10; instr., Wisconsin, 11–15, asst. prof., 15–20; *research prof. plant path.*, sch. *trop. agr.*, California, 20— Acting instr. bot., Stanford, 18. A.A.; Bot. Soc.; Phytopath. Soc.; Wis. Acad. Apple and cedar rusts; diastase in certain red algae; black heart in potatoes; cytology of certain rusts.
- Bartholomew, Mrs. L(ucille) K(eene)**, Citrus Experiment Station, Riverside, Calif. *Plant pathology*. St. Louis, Mo., July 23, 88. B.S., Missouri, 09, A.B., 10, A.M., 12, Ph.D., 16; fellow, Wisconsin, 13–14. Asst. bot. Missouri, 10–13, instr., 14–16; *asst. pathologist cereal disease investigations*, bur. *plant indust.*, U. S. Dept. Agr. Cytology of fungi; cereal diseases; smuts.
- Bartlett, Prof. C(harles) J(oseph)**, 183 Bishop St., New Haven, Conn. *Internal medicine*. Sutton, Vt., Dec. 18, 64. A.B., Yale, 92, A.M., 94, M.D., 95. Asst. and instr. path., Yale, 95–97, asst. prof., 97–00, prof., 00–17; *director, laboratories*, Conn. Dept. Health, 17— Pathologist, New Haven Hosp., 00–17. A.A.; Ass. Immunol.; Ass. Path. and Bact.; Soc. Bact.; Am. Med. Ass.; N. Y. Path. Soc.; Conn. Acad.
- Bartlett, Prof. Dana P(rescott)**, Massachusetts Institute of Technology, Cambridge, Mass. *Mathematics*. Boston, Mass., Oct. 4, 63. B.S., Mass. Inst. Tech., 86; Munich, 03–04. Instr. *math.*, Mass. Inst. Tech., 86–92, asst. prof., 92–98, *assoc. prof.*, 98–05, *prof.*, 05— Asst., Harvard Col. Observatory, 87. Math. Soc.; Math. Verein. Method of least squares.
- Bartlett, Prof. Edward P(ayson)**, Pomona College, Claremont, Calif. *Physical chemistry*. Belchertown, Mass., Oct. 17, 84. A.B., Dartmouth, 08; A.M., Harvard, 13, Ph.D., 15. Teacher science, Bleses Mil. Acad., 08–09; instr. *chem.*, Pomona, 09–11; Austin teaching fellow, Harvard, 11–13; asst. prof., Pomona, 14–19, *assoc. prof.*, 19—, acting dean, 16–18. Capt., U.S.A., 18–19. Chem. Soc. Piezo-chemistry.
- Bartlett, Prof. Edwin Julius**, Hanover, N. H. *Chemistry*. Hudson, Ohio, Feb. 16, 51. A.B., Dartmouth, 72, A.M., Sc.D., 18; M.D., Rush Med. Col., 79. Instr. sciences, Monson Acad., Mass., 72–73; high sch., Glencoe, Ill., 74–75; Lake Forest Acad., 76–78; *assoc. prof. chem.*, Dartmouth, 78–83, prof., 83–20; retired, 20. A.A.; Chem. Soc.; N. H. Acad. Toxicology.
- Bartlett, G(eorge) M(iller)**, 2533 College Ave., Indianapolis, Ind. *Mechanical engineering*. Chicago, Ill., Aug. 5, 73. B.S., Amherst, 01, A.M., 04. Instr. physics and math, Case, 01–03; mechanism and descrip. geom., Michigan, 03–10; *chief engineer*, Diamond Chain and Mfg. Co., Indianapolis, Ind., 10— A.A.; Mech. Eng.; Heat Treaters Soc. Descriptive geometry; the kinematics of machines; universal shaft couplings; the skew bevel gear; the four-bar linkage.
- Bartlett, Prof. Harley Harris**, University of Michigan, Ann Arbor, Mich. **Botany*. Anaconda, Mont., March 9, 86. A.B., Harvard, 08. Asst., Gray Herbarium, Harvard, 05–08; chem. biologist, bur. plant indust., U. S. Dept. Agr., 09–15; asst. prof. bot., Michigan, 15–17; botanist, Hollandsch-Amerikaansche Plantage Maatschappij, Sumatra, 18; *assoc. prof. bot.*, and *director, dept. bot. gardens and arboretum*, Michigan, 19— Mem. Nat. Research Council. A.A.; Soc. Nat.; Bot. Soc. (sec'y, 15–17. v. pres, 19); Chem. Soc.; Soc. Agron.; New Eng. Bot. Club; Wash. Acad.; Wash. Bot. Soc. (treas, 13); Wash. Biol. Soc. Oenothera; plant pigments; plant nutrition.
- Bartley, Dr. E(lias) H(udson)**, 65 S. Portland Ave., Brooklyn, N. Y. *Pediatrics, Chemistry*. Bartley, N. J., Dec. 6, 49. B.S., Cornell, 73; M.D., Long Isl. Col. Hosp., 79; hon. Ph.G., Brooklyn Col. Pharmacy, 96. Instr. chem., Cornell, 74–75; prof., Swarthmore, 75–78; chief chemist, Health Dept., Brooklyn, 82–88; *prof. chem. and toxicol.*, L. I. Col. Hosp., 86—, *pediatrics*, 01—; dean and prof. org. chem., Brooklyn Col. Pharmacy, 92–02. Mem. Kings Co. Board of Pharmacy, 91–98; mem. committee of revision, U. S. Pharmacopoeia, 10— A.A.; Col. Physicians (v. pres); Chem. Soc.; Pub. Health Ass.; Pharmaceut. Ass.; Am. Med. Ass.; fel. N. Y. Acad. Med.; Brooklyn Pediat. Soc.; Brooklyn Path. Soc. Food chemistry; clinical chemistry; infant feeding.
- Barton, G(eorge) E(stes)**, 227 Pine St., Millville, N. J. *Chemistry*. Worthington, Mass., May 9, 71. B.S., Worcester, 91; M.S., George Washington, 95. Asst. chemist, Naval Torpedo Sta., Newport, R. I., 91–92; chemist, Aetna Powder Co., Chicago, 92–94; *chief chemist*, Whitall

- Tatum Co.*, 96- Formerly assoc. ed., 'Jour. Indust. and Eng. Chem'; asst. ed. 'Chem. Abstracts.' A.A.; Chem. Soc.; Chem. Eng.; Soc. Chem. Indust.; Ceramic Soc.; Soc. de Chim. indust. Explosives; glycerine; glass; graduated chemical glassware; glass manufacture.
- Barton, Prof. Geo(rge) H(unt)**, 89 Trowbridge St, Cambridge, Mass. *Geology*. Sudbury, Mass, July 8, 52. B.S., Mass. Inst. Tech, 80. Asst. drawing, Mass. Inst. Tech, 80-81; asst. Hawaiian Govt. Geol. Surv, 81-83; asst. geol. Mass. Inst. Tech, 83; asst. geologist, U. S. Geol. Surv, 89-94; asst. prof. geol. Mass. Inst. Tech, 96-04; *director, Teachers Sch. of Science*, 02- Lecturer geol, Boston, 96-04, 16-17; past pres, Children's Museum, Boston. A.A.; Geol. Soc.; Am. Acad.; Forestry Ass; Appalachian Mt. Club (past pres); Arctic Club; Am. Alpine Club; Boston Sci. Soc. (past pres); Harvard Travelers Club; Boston Soc. Nat. Hist. Glacial geology; dynamic and structural geology; lithology; distribution and origin of drumlins in Massachusetts.
- Barton, Dr. James M(oore)**, Atlantic City, N. J. *Surgery*. Philadelphia, Pa, Oct. 16, 46. A.M., Jefferson Med. Col, 65, M.D, 68. Res. physician, Episcopal Hosp, 68-69; asst. to Prof. S. D. Gross, and surgeon, Charity Hosp, 69-79; surgeon and prof. clin. surg, Jefferson Med. Col, 79-00. Lecturer operative surg, Phila. Sch. Anat, 77-82; surgeon, German Hosp, 79-86; Phila. Hosp, 90-00. Surg. Ass.
- Barton, Ralph M(artin)**, 67 Boston Ave, S. E, Minneapolis, Minn. *Mathematics*. Newport, N. H, July 21, 75. A.B., Dartmouth, 04; Harvard, 07-08; Chicago, 10-12. Instr. math, Dartmouth, 03-08; asst. prof, 08-13; prof, New Mexico, 13-14; Lombard, 14-16, dean and acting pres, 15-16; instr. math, Minnesota, 16-19, asst. prof, 19- A.A.; Math. Soc.; Math. Ass; Circolo Mat. di Palermo.
- Barton, Prof. Samuel G(oodwin)**, 26 N. Millick St, Philadelphia, Pa. *Astronomy*. Ivyland, Pa, Jan. 1, 82. A.B., Temple, 03; fellow, Pennsylvania, 05-06, Ph.D, 06, research fellow, 06-07. Prof. math, Clarkson Mem. Col. Tech, 07-11; asst. prof. math, Swarthmore, 11-13; instr. astron, Pennsylvania, 13-14, asst. prof, 14- Asst. U. S. Naval Observatory, summers, 07, 08, 11; director, U. S. Shipping Board Navig. Sch, 17-19. A.A.; Astron. Soc. Secular perturbations; orbits of asteroids; star positions.
- Barton, Dr Sam(ue)l M(arx)**, Sewanee, Tenn. *Mathematics*. Near Winchester, Va, May 9, 59. A.B., Virginia, 83, Ph.D, 85; fellow by courtesy, Hopkins, 93-94. Prof. math, Emory and Henry, 85-93; math. and civil eng. Va. Col, 94-95; prof. math. and acting prof. civil eng, Univ. of the South, 95-09, prof. pure math, 08- A.A.; Math. Soc; Tenn. Acad. (v. pres, 16). Theory of equations; plane surveying.
- Barton, Prof. Wilfred M(ason)**, 1730 Connecticut Ave, Washington, D. C. *Medicine*. Washington, July 16, 71. M.D., Georgetown, 92. Prof. therapist. and pharmacol, Georgetown, 06-14, assoc. prof. med, 14- Attending physician, Georgetown Univ. and Washington Asylum Hospitals. D. C. Med. Soc. (pres, 11); Wash. Acad. Internal medicine; pharmacology; medical terminology.
- Bartow, Prof. Edward**, University of Iowa, Iowa City, Iowa. *Chemistry*. Glenham, N. Y, Jan. 12, 70. A.B., Williams, 92; Ph.D, Göttingen, 95. Asst. chem, Williams, 92-94, instr, 95-97; Kansas, 97-99, assoc. prof, 99-05; prof, Kansas City Med. Col, 02-05; assoc. prof, Illinois, 05-06, prof, 06-20; Iowa, and head of dept, 20- Director, Ill. State Water Surv, 05-17, chief, 17-20; acting assoc. prof. chem, Kansas, 97; mem. Commission on Coal Mine Explosions in Kansas; Lake Mich. Water Commission. Major, Sanit. C, 18, lieut. col, 19. A.A.; Chem. Soc.; Chem. Eng; Pub. Health Ass; Am. Water Works Ass; Ill. Soc. Eng. and Surv; New Eng. Water Works Ass. (v. pres, 20); Ill. Acad; Ill. Water Supply Ass. (sec'y-treas); Kans. Acad. (v. pres, 02, pres, 04); Soc. de Chim. indust. Crystals of white arsenic; formation of amides in anhydrous ammonia; derivatives of m-isocymene; synthetic preparation of quinolin derivatives; Kansas petroleum; water supplies of southeastern Kansas; derivatives of m-ethyltoluene; water analysis and treatment; activated sludge method of sewage treatment.
- Bartsch, Prof. Paul**, Smithsonian Institution, Washington, D. C. *Biology*. Tuntshendorf, Germany, Aug. 14, 71. B.S., Iowa, 96, M.S., 99, Ph.D, 05. Aid, div. mollusks, U. S. Nat. Museum, 96-05, asst. curator, 05-14, curator, div. marine invertebrates, 05-; prof. zool, George Washington, 99-; director, histol. and physiol. laboratories, med. dept, Howard, 01- Assoc. ed, 'The Osprey,' 00-; Smithsonian representative, 'Albatross' exped. to the Philippines, 07-10; mem. Bur. Fisheries exped. to Lower Calif, 11; mem. Smithsonian Inst. expeditions to Cuba, Haiti, the Bahamas and Fla; assoc. breeding of terrestrial mollusks, Carnegie Institution; delegate, Pan-Am. Scientific Cong, Washington, D. C, 16; delegate, first Pan-Pacific Cong, 20. A.A.; mem. Ornith. Union; Geol. Soc; Ecol. Soc; Paleont. Soc; Ass. Geog; Ass. Anat; Humane Educ. Soc. (pres); Malacol. Ass; Agassiz Ass; Soc. Helminthol; Wild Flower Preservation Soc. (pres); Wash. Acad; Wash. Biol. Soc; Wash. Geol. Soc; Wash. Bot. Soc; Conchol. Soc. Gt. Britain and Ireland; Malacozool. Gesell. Mollusks; birds.
- Baruch, Dr. Simon**, 51 W. 70th St, New York, N. Y. *Medicine*. Schwarsenz, Poland, July 29, 40. Royal Gymnasium, Posen, Poland; M.D., Med. Col. of Va, 62. Surgeon, Confed. States Army, 62-65; attending and consulting physician, J. Hood Wright Hosp, 81-20; prof. hydrotherapy, Columbia, 07-13; attending and consulting physician, Sea View and Bellevue Hospitals, 10- Medal, Paris Expos, 00; La. Purchase Expos, 04. Chairman, S. C. State Board Health, 80. Ass. Prom. Hygiene and Pub. Baths (pres, 12-15); S. C. Med. Ass. (pres, 74); hon. mem. Verein Volksbaeder. Physical therapeutics; hydrotherapy; perforating appendicitis.
- Barus, Prof. Carl**, 30 Elmgrove Ave, Providence, R. I. *Physics*. Cincinnati, Ohio, Feb. 19, 56. Sch. of mines, Columbia, 74-76; Würzburg, 76-80, Ph.D, 79; LL.D., Brown, 07; Clark, 09. Physicist, U. S. Geol. Surv, 80-92; prof, U. S.

- Weather Bur, 92-93; physicist, Smithsonian Inst, 93-95; *Hazard prof. physics*, Brown, 95-, dean, grad. dept, 03- Asst. to Prof. Kohlrausch, Würzburg, 79-80; mem. council, Carnegie Institution, 02. Rumford medal, 00. Int. Cong. Radiol, 05, 10 (mem. comité d'honneur). Nat. Acad; A.A. (v. pres, 97); Physical Soc. (pres, 05, 06); Philos. Soc; Ass. Prof. (mem. council, 18-); Am. Acad; cor. mem. British Ass; hon. mem. Royal Inst. Magnetism; iron carburets; high temperatures; high pressures; thermodynamics; physical geology; atmospheric condensation; ionization; ionization and nucleation of gases and the atmosphere; interferometry; measurement of 'g.'
- Bascom, Dr. F(lorencia)**, Bryn Mawr, Pa. **Geology*. Williamstown, Mass. A.B, B.L, Wisconsin, 82, B.S, 84, A.M, 87; Ph.D, Hopkins, 93. Instr. geol. and petrog, Ohio State, 93-95; lecturer and assoc. prof. *geol*, Bryn Mawr, 95-06, *prof*, 06- Assoc. ed, 'Am. Geologist,' 96-; geol. asst, U. S. Geol. Surv, 96-01, asst. geologist, 01-09, geologist, 09- A.A; Geol. Soc; Min. and Metal. Soc; Seismol. Soc; Min. Eng; Am. Geog. Soc; Wash. Acad; Phila. Geog. Soc; Phila. Acad. Ancient lavas and the crystalline schists; geology of eastern Pennsylvania; petrography of the Neponset area, Boston basin; Philadelphia and Trenton geologic folios; geologic folios of the Pennsylvania Piedmont province.
- Base, Dr. Daniel**, 3905 Alto Ave, Baltimore, Md. *Chemistry*. Baltimore, Sept. 6, 69. Grad, Baltimore City Col, 88; A.B, Hopkins, 91, Ph.D, 95. Prof. chem. and plant histol, Md. Col. Pharm, 95-20; assoc. prof. chem, Col. Physicians and Surg, Baltimore, 00-04; prof. anal. chem, Maryland, 04-10; *chemist*, Hynson, Westcott and Dunning. A.A; Chem. Soc; Pharmaceut. Ass.
- Baskerville, Prof. Charles**, College of the City of New York, New York, N. Y. **Chemistry*. Deer Brook, Miss, June 18, 70. Mississippi, 86-87; Virginia, 88-90; Vanderbilt, 91; B.S, North Carolina, 92, Ph.D, 94; Berlin, 93. Asst. chem, North Carolina, 92, instr, 94, asst. prof, 95-98, assoc. prof, 98-00, *prof. and director*, chem. lab, 00-04; *Col. City of N. Y*, 04- Asst. to state geologist, N. C, 92-94; asst. chemist, N. C. Geol. Surv, 94-00, chemist, 00-04. Longstreth prize, Franklin Inst, 12. U. S. delegate, Int. Cong. Applied Chem, London, 09 (chairman, sect. anal. chem). A.A. (sec'y, C, 98, gen. sec'y, 00, v. pres, 03); Chem. Soc. (chairman, N. C. and N. Y. sections); Electrochem. Soc. (chairman, N. Y. sect); Soc. Chem. Indust; Chem. Eng; Wash. Acad; N. C. Acad. (pres); N. Y. Acad. (v. pres, 13); N. Y. Chemists Club (sec'y); fel. London Chem. Soc. Rare earths, especially zirconium, thorium and praeceodymium; reaction of metals with concentrated sulphuric acid; universal distribution of certain elements, as titanium; analysis of titaniferous iron ores; existence of cerolinium; new salts of rare earth; atomic weight of thorium and praeceodymium; lanthanates, neodimates, praeceodymates and lanthanals; thorates; variability of preparations; injury to vegetation caused by noxious gases; oil shales of Canada; ethyl ether; chemistry of anesthetics; wood alcohol; oil-ether colonic anesthesia; refining vegetable and animal oils; recovering paper; solvents for phosgene; oil-ethyl chlorid mixture; chlorin as preventive for influenza; occupational diseases in chemical industries.
- Basquin, Dr. Olin H(anson)**, 225 Kedzie St, Evanston, Ill. **Physics*. Dows, Iowa, Jan. 30, 69. A.B, Ohio Wesleyan, 92; A.B, Harvard, 94; A.M, Northwestern, 95, Ph.D, 01. Chief engineer, Luxfer Prism Companies, 97-00; assoc. prof. physics, Northwestern, 01-09, *prof. applied mechanics*, 09- Eng. Educ; Soc. Automotive Eng; West. Soc. Eng. Distribution of daylight; arc spectrum of hydrogen; steam meter; direction of stress in beams; endurance tests; shearing tests; columns under eccentric loads.
- Bass, Prof. C(harles) C(assedy)**, 1216 Broadway, New Orleans, La. **Medicine*. Carley, Miss, Jan. 29, 75. M.D, Tulane, 99. Instr. med, Tulane, 05-07, lab. clin. med, 07-09, director, 09-14, *prof. exp. med*, 12-, *director, lab. clin. and trop. med*, 14- Head, Tulane exped. for study of malaria, 12-; chairman, commission for study of malaria, S. Med. Ass, 13. A.A; Am. Med. Ass. (mem. committee on scientific researches, 13); Am. Physicians; Soc. Baet; Soc. Trop. Med; Soc. Clin. Invest; Micros. Soc; New Orleans Acad. Hookworm; pellagra; typhoid fever; malaria; pyorrhea alveolaris; laboratory methods.
- Bass, Col. Edgar W(ales)**, U. S. A. (retired), Bar Harbor, Maine. *Mathematics, Astronomy*. Prairie du Chien, Wis, Oct. 30, 43. Grad, U. S. Mil. Acad, 68. Officer, corps of engineers, U.S.A, 68-78; prof. math, U. S. Mil. Acad, 78-98; col, retired, 98. U. S. Vol. Army, 62-64; instr. philos, U. S. Mil. Acad, 69-74, 76-78; asst. astronomer, U. S. transit of Venus exped. to New Zealand, 74-75; solar eclipse exped. to Colo, 78. A.A; Math. Soc; Archeol. Inst; Mil. Order Loyal Legion. Trigonometry; differential calculus.
- Bass, Prof. Frederic (Herbert)**, University of Minnesota, Minneapolis, Minn. *Engineering*. Hyde Park, Mass, June 19, 75. B.S, Mass. Inst. Tech, 01. Eng. asst, Metropolitan Water Works of Mass, 96-99, 01; engineer and director, eng. div, Minn. State Board of Health, 06-15; *prof. munic. and sanit. eng*, Minnesota, 11- Consulting engineer, League of Minn. Municipalities. Civil Eng; Pub. Health Ass; Water Works Ass.
- Basset, Dr. G(ardner) C(heney)**, Reed College, Portland, Oregon. *Psychology*. Boston, Mass. June 17, 73. A.B, Clark, 11; fellow, Hopkins. 12-13, Ph.D, 13. Res. investigator, psychol. and neur. sta. for exp. evolution, Carnegie Institution, 13-14; *prof. psychol*, Pittsburgh, 14-19; asst. prof, Stanford, 19-20; *prof*, Reed, 20- A.A; Psychol. Ass; Soc. Zool; Eugenics Research Ass. Neurology; eugenics.
- Bassett, Dr. V(ictor) H(ugo)**, 402 Henry St, East Savannah, Ga. *Pathology*. Alledo, Ill, May 7, 71. A.B, Knox, 96; M.D, Hopkins, 03, fellow, 04-05. Asst. chem, Wisconsin, 96-98, asst. bacteriologist, Exp. Sta, 98-99; instr. bacter. Northwestern, 03-04; prof. path, Wisconsin Col. Physicians and Surg, 05-06; asst. prof, Marquette, 07-08; *city bacteriologist*, Savannah, Ga.

- 08- Am. Med. Ass; Chicago Path. Soc. Dysentery; the milk supply of Baltimore; sewage; intestinal obstruction; splenic anemia; duodenal diverticula; accessory pancreas.
- Bassett, W(illiam) H(astings)**, Cheshire, Conn. *Metallurgy*. New Bedford, Mass, March 7, 68. B.S., Mass. Inst. Tech. Chemist and later supt, Pope's Isl. Mfg. Corp, 91-95; teacher chem, Swain Free Sch, 95-00; chemist, N. J. Zinc Co, 00-02; Coe Brass Mfg. Co, 02-03; *tech. supt, Am. Brass Co, 12-* A.A.; Min. Eng; Chem. Eng; Inst. Metals (v. pres, 12-15); Soc. Test. Mat. (chairman, committee on metallography); Chem. Soc; Int. Ass. Test. Mat. (mem. copper committee); British Inst. Metals; London Soc. Chem. Indust. Alloys; relation between properties and treatment of metals and alloys.
- Bassler, Prof. R(ay) S(mith)**, U. S. National Museum, Washington, D. C. **Geology*. Philadelphia, Pa, July 22, 78. A.B., Cincinnati, 02; M.S., George Washington, 03, Ph.D., 05. Asst. curator stratig. paleont, U. S. Nat. Museum, 03-07, *curator, 07-*; asst. prof. and later *prof. geol, George Washington, 04-* A.A.; Geol. Soc; Paleont. Soc. (see'y, 10-); Wash. Acad; Wash. Geol. Soc. Ordovician and Silurian stratigraphy and paleontology; fossil Bryozoa and Ostracoda.
- Bassoe, Dr. Peter**, 1031 Michigan Ave, Evanston, Ill. *Neurology*. Drammen, Norway, May 18, 74. B.S., Christiania, Norway, 92; M.D., Col. Physicians and Surg, Chicago, 97. *Assoc. prof. nervous and mental diseases, Rush Med. Col. Neurologist, Presby. Hosp, Chicago, 07-* A.A.; Neur. Ass; Chicago Med, Path. and Neur. Societies. Gigantism; leontiasis ossea; blastomycosis; poliomyelitis; caisson disease; encephalitis.
- Bastin, Dr. Edson S(underland)**, University of Chicago, Chicago, Ill. **Geology*. Chicago, Ill, Dec. 10, 78. A.B., Michigan, 02; M.S., Chicago, 03, Ph.D., 09. Geologist, U. S. Geol. Surv, 05-20; *prof. econ. geol, Chicago, 19-* Geol. Soc; Wash. Geol. Soc. (see'y, 10); Inst. Min. and Metal. Peat deposits of Maine; chemical composition as a criterion in identifying metamorphosed sediments; geology of Rockland and Eastport quadrangles, Maine; origin of graphite deposits; genesis of the ores of Tonopah, Nevada; silver ores of Cobalt, Ontario; metallic minerals as precipitants of gold and silver; economic geology of Giffin County, Colo; geology of Braden Copper Mine, Chili.
- Batchelder, Charles Foster**, 7 Kirkland St, Cambridge, Mass. *Ornithology*. Cambridge, July 20, 56. A.B., Harvard, 78, C.E., 82. A.A.; fel. Ornith. Union (past pres); Soc. Mammal.
- Batchelder, Dr. P(aul) M(ason)**, University of Texas, Austin, Tex. *Mathematics*. Portsmouth, N. H., Jan. 10, 86. A.B., Dartmouth, 08; A.M., Princeton, 10; Ph.D., Harvard, 16. *Instr. math, Northwestern, 13-15; Texas, 16-* Difference equations.
- Batcheller, Prof. J(ames) H(ervey)**, 963 Adams St, Corvallis, Oregon. *Mining engineering*. Boston, Mass, Dec. 10, 78. B.S., Mass. Inst. Tech, 00. Mining engineer and metallurgist; *assoc. prof. min. eng, Oregon Sch. Mines. Min. and Metal. Eng.*
- Batchelor, Dr. L(eon) D(exter)**, Citrus Experiment Station, Riverside, Calif. *Agriculture*. Upton, Mass, May 8, 84. B.S., N. H. Col, 07; Ph.D., Cornell, 11. Instr. hort, Cornell, 07-10; horticulturist, Utah Col, 10-15; *prof. plant breeding, California, 15-19, orchard management, 19-* Mem. Utah Agr. Commission, 10-15. Soc. Hort. Sci. Orchard management; variation and yield of fruit trees; field trials; irrigation.
- Bateman, Prof. Alan M(ara)**, Yale University, New Haven, Conn. *Geology*. Toronto, Ont. B.A., B.S., Queen's (Can), 10; Ph.D., Yale, 13. Mining and field geologist, 05-10; asst. geologist, Can. Geol. Surv, 11-12, geologist, secondary enrichment investigation, 13-15; instr. *geol, Yale, 15-16, asst. prof, 16-* Consulting geologist, Kennecott Copper Corp; ed, 'Jour. Econ. Geol.' A.A.; Geol. Soc; Min. Eng; Can. Min. Inst. Economic geology; ore deposits; ore formation.
- Bateman, Prof. H(arry)**, California Institute of Technology, Pasadena, Calif. **Mathematics*. Manchester, England, May 29, 82. Trinity Col, Cambridge, 00-05, fellow, 05-11; Göttingen and Paris, 05-06; Ph.D., Hopkins, 13, Johnston scholar, 12-15. Lecturer, Liverpool, 06-07; reader math. physics, Manchester, 07-10; lecturer *math, Bryn Mawr, 10-12; Hopkins, 15-17; prof. aeronaut. research and math. physics, Calif. Inst. Tech, 17-* Smith's prize, Cambridge, England, 05. Physical Soc; Math. Soc; British Ass; London Math. Soc. Geometry; mathematical physics; definite integrals; partial differential and integral equations; functions of Legendre and Bessel; electromagnetism; theory of relativity; dynamical meteorology; probability; seismology; sound.
- Bateman, Prof. W(illiam) G(eorge)**, University of Montana, Missoula, Mont. *Chemistry*. Salt Lake City, Utah, April 1, 83. A.B., Stanford, 07, A.M., 09; Ph.D., Yale, 16. Asst. and instr. *chem, Stanford, 05-10; prof, Pei Yang Univ, Tientsin, 10-12; prof, Montana, 12-* A.A.; Chem. Soc; Physical Soc. Toxicity of thallium salts; copper in plants and soils of smelter regions; salts of the halogen acids; development of speech in children.
- Bates, C(arlos) G(lazier)**, U. S. Forest Service, Colorado Springs, Colo. *Forestry*. Topeka, Kans, Oct. 14, 85. B.S., Nebraska, 07. Forest asst. forest examiner and later *silviculturist, U. S. Forest Service, 07-* A.A.; Soc. Foresters (chairman, Denver sect, 17, 19); Ecol. Soc. Forest ecology.
- Bates, Prof. C(linton) O(wen)**, Coe College, Cedar Rapids, Iowa. *Chemistry*. Cane Hill, Ark, June 4, 58. A.B., Arkansas, 83; Michigan, 85-86; hon. Ph.D., Coe, 94. Principal, prep. dept, Cherokee Nat. Male Sem, Tahlequah, Okla, 83-85; high sch, Owosso, Mich, 86-89; *prof. chem, Coe, 89-* A.A.; Chem. Soc; Iowa Acad. (pres, 06). Clay for paving brick; water for engines; physiological effects of sulphur dioxide on the human system; market milk; city water supply.

- Bates, Frederick (John)**, Bureau of Standards, Washington, D. C. *Physical chemistry*. Marysville, Kans, Jan. 2, 77. B.S., Kansas, 00; A.M., Nebraska, 02. Lab. asst. and later *physicist*, *Bur. Standards*, 03- Supervisor, government sugar laboratories, customs serv, Treas. Dept; mem. Int. Sugar Commission. Physical Soc; Chem. Soc. (sec'y, sugar sect); Wash. Philos. Soc. Natural and magnetic rotary polarization, especially anomalous rotary dispersion; effect of clarifying reagents on rotary dispersion curves of sugar solutions; sensibility of sensitive strip spectral polarizing system; quartz compensating polariscope with adjustable sensibility; sugar; cadmium vapor arc lamp; new Baume scale.
- Bates, Prof. Geo(rge) A(ndrew)**, Tufts College Medical School, Boston, Mass. *Histology, Embryology*. Boston, Aug. 5, 47. M.S., D.M.D., Tufts. *Prof. histol. and embryol*, Tufts. A.A.; Ass. Anat; hon. mem. Am. Acad. Dental Sci; hon. mem. Mass. Dental Soc; Boston Soc. Nat; Boston Soc. Nat. Hist.
- Bates, Rev. J(ohn) M(allery)**, Red Cloud, Nebr. *Botany, Ornithology*. Wallingford, Conn, Jan. 3, 46. A.B., Trinity, 72, A.M., 75; grad, Berkeley Divinity Sch, Middletown, Conn, 76. V. principal, high sch, Middletown, 73-74; *Epis. clergyman*, 76- Chaplain and head master, Bethany (Kans), 83-86. A.A.; assoc. Ornith. Union; Nebr. Ornith. Union (pres, 02). The economic value of the fodder plants of Nebraska; plant rusts, their life history; the ranges of known rusts; sedges of Nebraska.
- Bates, P(haon) H(ilborn)**, Bureau of Standards, Washington, D. C. *Chemistry*. Sipesville, Pa, Aug. 1, 79. A.B., Cent. High Sch, Phila, 98; B.S., Pennsylvania, 02. Asst. chemist, Pa. R. R., 02-06; structural materials chemist, U. S. Geol. Surv., 06-10; *chemist*, *Bur. Standards*, 10- A.A.; Chem. Soc; Ceramic Soc; Concrete Inst; Soc. Test. Mat. Hydraulic properties of silica-lime-alumina compounds; Portland cement; concrete.
- Bates, Prof. Stuart J(effery)**, California Institute of Technology, Pasadena, Calif. *Physical chemistry*. Toronto, Can, May 9, 87. B.A., McMaster, 07, M.A., 09; fellow, Illinois, 10-12, Ph.D., 12. Research asst, McMaster, 09-10; research assoc. physical chem, Illinois, 12-13, instr. anal. chem, 13-14; *prof. physical chem*, *Calif. Inst. Tech*, 14- Research asst, Bur. Standards, 13. Chem. Soc. Value of the Faraday; iodine coulometer; theory of solutions.
- Bates, Prof. W(illiam) H(unt)**, 116 N. Grant St, West Lafayette, Ind. *Mathematics*. Winchester, Tenn, Jan. 4, 70. A.B., Vanderbilt, 94; A.M., Chicago, 02, Ph.D., 10. Asst. math, Battle Ground Acad, Franklin, Tenn, 94-97; principal, Smyrna Fitting Sch, Smyrna, Tenn, 97-00; instr. math, *Purdue*, 03-10, asst. prof., 10-11, *assoc. prof.*, 11- A.A.; Math. Soc; Ind. Acad; Math. Verein. Differential geometry.
- Batho, Prof. Cyril**, McGill University, Montreal, Can. *Applied mathematics*. Liverpool, England, June 21, 85. B.S., B.Eng., Liverpool, 04, B.S.(Math), 05, M.S., 06, fellow, 06-07; Berlin and Charlottenburg, 11; Sc.D., McGill, 17. Lecturer civil eng, *McGill*, 07-11, asst. prof. applied mech. and applied math, 11-19, *assoc. prof. civil eng. and applied math*, 19- Designer, Quebec bridge, St. Lawrence Bridge Co, 12-13; research officer, Can. machine gun corps, 18; Royal Aircraft Establishment, England, 18-19. Can. Soc. Civil Eng; Can. Inst. Eng. Distribution of stress in steel structures; theory of structures; aeronautics; steam turbines.
- Batson, Prof. William H(oward)**, University of South Dakota, Vermilion, S. Dak. *Psychology*. Martinsville, Ohio, Sept. 18, 81. A.B., Antioch, 07; Ph.D., Michigan, 15. Supt. sch, Osborn, Ohio, 07-11; prof. educ, Texas Christian, 13-17; prof. educ. and director, training sch, Southwest. State Nor. Sch, Okla., 17-18; *prof. educ*, *South Dakota*, 19- Psychol. Ass. Acquisition of skill.
- Battle, Dr. H(erbert) B(emerton)**, 103 S. Court St, Montgomery, Ala. *Chemistry*. Chapel Hill, N. C., May 29, 62. B.S., North Carolina, 81, Ph.D., 87. Asst. chemist, N. C. Expt. Sta, 81-87, *director*, and state chemist, 87-97; chemist, N. C. State Board of Health, 87-97; pres, South. Chem. Co, 97-01; tech. worker, South. Cotton Oil Co, 02-03, dist. supt., 03-06; *pres*, *Battle Lab. Corp*, 06- A.A.; Chem. Soc; Electrochem. Soc; Oil Chem. Soc; Ala. Tech. Ass; Ala. Anthropol. Soc. Manufacture of cotton seed and peanut products.
- Bauder, Prof. Arthur Russell**, University of Alabama, University, Ala. *Physics, Electrical engineering*. Cleveland, Ohio. B.S., Case, 89, E.E., 18; A.M., Columbia, 96. Instr, Lafayette; Pennsylvania; *prof. physics and elec. eng*, Stetson; *Alabama*, 18- Elec. engineer, N. Y., N. H. and H. R. R; consulting elec. engineer, 97- Electrolysis; resistance; temperature coefficient of resistance; polarization; inductance; capacity.
- Bauer, Prof. Geo(rge) N(eander)**, University of Minnesota, Minneapolis, Minn. *Mathematics*. Jordan, Minn, Jan. 8, 72. B.S., Minnesota, 94; M.S., Iowa, 98; Ph.D., Columbia, 00. Teacher, high sch, Montevideo, Minn, 94-95; instr. math, Iowa, 95-98; *Minnesota*, 00-02, asst. prof., 02-07, *prof.*, 07- Math. Soc; Circolo Mat. di Palermo. The parallax of μ Cass, and the positions of 56 neighboring stars; simpler elements of analytic geometry; trigonometry.
- Bauer, Dr. L(ouis) A(gricola)**, The Ontario, Washington, D. C. *Terrestrial magnetism*. Cincinnati, Ohio, Jan. 26, 65. C.E., Cincinnati, 88, M.S., 94, Sc.D., 13; Ph.D., Berlin, 95; Sc.D., Brown, 14. Civil engineer, 86-87; computer, U. S. Coast and Geod. Surv., 87-92; docent. math. physics, Chicago, 95; instr. geophysics, 96; asst. prof. math. and math. physics, Cincinnati, 97-99; chief, div. terrestrial magnetism, and inspector magnetic work, U. S. Coast and Geod. Surv., 99-06; *director*, *dept. terrestrial magnetism*, *Carnegie Institution*, 04- Chief, div. terrestrial magnetism, Md. Geol. Surv., 96-99; astronomer and magnetician, West. Boundary Surv. of Md, 97; lecturer terrestrial magnetism, Hopkins, 99-; mem. commission on terrestrial magnetism, Int. Ass. Academies, 04-; ed, 'Terrestrial Magnetism and Atmospheric Elec,' 96- Lagrange prize, Royal Belgian Acad, 05; Neumayer gold medal, Berlin Gesell. für Erdkunde, 13. Int. Meteor. Conf, 98 (mem. permanent committee on terrestrial magnetism); sec'y, sect. terrestrial magnetism and elec, Int. Geophys. Union,

- 19-20, v. pres. and chairman, sect. terrestrial magnetism and elec. Am. Geophys. Union, 20-; mem. Nat. Research Council, 17- A.A. (v. pres, 09); Physical Soc; Astron. Soc; Ass. Geog. (v. pres, 09); Philos. Soc; Am. Acad; Wash. Acad; Wash. Philos. Soc. (pres, 08); hon. mem. Cornwall Polytech. Soc; Soc. Cient. Ant. Alz; Meteor. Gesell; cor. mem. Göttingen Royal Acad; Lisbon Acad; Batavia Acad.
- Bauer, Dr. W(illiam) C(harles)**, Northwestern University, Evanston, Ill. *Electrical engineering*. Cincinnati, Ohio, Dec. 26, 73. B.S.(E.E), Cincinnati, 96, 96-97; Chicago, 05; Sc.D, Baker, 08. Instr. civil eng, Cincinnati, 96-97; draftsman, Bullock Elec. Co, 97; *prof. physics and chem*, Baker, 97-08; *physics and elec. eng*, Denver, 08-09; *elec. eng, Northwestern*, 09-, acting director, col. eng, 12, 17-18. Magnetic observer and director, Baldwin Magnetic Observatory, U. S. Coast and Geod. Surv, 00-02; consulting elec. and mech. engineer, 03-; magnetic observer in Canada of eclipse for U. S. Coast and Geod. Surv, 05; supt, Baldwin Light and Power Plant, 06-08; director, S.A.T.C. Radio Sch, Northwestern, 18. Chem. Soc; Elec. Eng; Electrochem. Soc; Eng. Educ. Primary electric battery for closed circuit service; alternating current rectifiers; vapor lamps; storage batteries; ignition systems for gas engines; electrolytic reactions.
- Baum, Prof. F(rank) G(eorge)**, Hobart Building, San Francisco, Calif. *Electrical engineering*. Ste. Genevieve, Mo, July 18, 70. A.B, Stanford, 98, E.E, 99. Asst. elec. eng, Stanford, 98-99; practical work, 99-00; instr. *elec. eng, Stanford*, 00-02, *asst. prof, 02-*; *consulting engineer, 07-* Chief engineer, Calif. Gas and Elec. Corp, 04-Elec. Eng. (v. pres, 06-08). Alternating current work; compounding alternating current generators; the limiting distance to which power can be transmitted; water power development.
- Bauman, Dr. Louis**, 265 Central Park West, New York, N. Y. *Biochemistry*. New York, Sept. 10, 80. M.D, Columbia, 02; Berlin, 05, 07-08; Breslau, 07. Intern, Mt. Sinai Hosp, New York, 02-05; lecturer biol. chem, McGill, 09-11; asst. prof. med. and director of research lab, Iowa State, 11-19; *assoc. med, Columbia*, 19- Visiting physician, Presb. Hosp, N. Y. City, 19-A.A; Chem. Soc; Soc. Biol. Chem; Soc. Exp. Biol; Am. Med. Ass. Musclic extractives; scurvy; amino acids; hyperthyroidism; epilepsy.
- Baumann, Dr. Emil J(acob)**, Montefiore Home and Hospital, New York, N. Y. *Physiological chemistry*. New York, Feb. 5, 91. B.S, Col. City of N. Y, 12; Ph.D, Yale, 15. Asst. physiol. chem, Yale, 14-16; lecturer, Toronto, 16-17; *physiol. chemist, Montefiore Home and Hosp*, N. Y. City, 19- A.A; Chem. Soc. Metabolism.
- Baumberger, Dr. J(ames) Percy**, Stanford University, Calif. *Physiology*. San Leandro, Calif, Sept. 17, 92. B.S, California, 14; M.S, Harvard, 16, Sc.D, 18. Asst. physiol. and entom, Radcliffe, 17-18; zool, Harvard, 14-19, Austin teaching fellow, 17-18, asst. bot, 18; *instr. nat. science*, Lowthorpe Hort. Sch, 16-18; *physiol, Stanford*, 19- Sergt, M.C, Cent. Med. Dept. Lab, Dijon, 18-19. A.A; Entom. Soc; Pacific Coast Entom. Soc; Cambridge Entom. Soc. Insect physiology; relationship of insects to microorganisms; hibernation; longevity.
- Baumgartner, Dr. E(dwin) A(be)**, Halstead Hospital, Halstead, Kans. *Anatomy*. Halstead, Feb. 14, 88. A.B, Kansas, 10, fellow, 11, A.M, 11; Ph.D, Minnesota, 15. Instr. anat, Wisconsin, 11-12; Minnesota, 12-14; Washington (St. Louis), 14-19; *assoc. anat, Halstead Hosp, Halstead, Kans*, 19- A.A; Ass. Anat. Embryology; pathology; development of glands and ducts.
- Baumgartner, Prof. W(illiam) J(acob)**, University of Kansas, Lawrence, Kans. *Zoology*. Excelsior, Mo, May 14, 71. A.B, Kansas, 00, A.M, 01; fellow, Chicago, 02-04. Instr. zool, Kansas, 04-05, asst. prof. *histol. and zool*, 05-13, *assoc. prof, 13-* Asst, Univ. of Kans. paleont. exped. to Oregon, 05, entom. exped. to Ariz, 07, zool. exped. to Tex, 08, and zool. exped. to Wash, 09; on staff, Puget Sound Marine Sta, 10-17; managing ed, 'Kans. Univ. Science Bul.', 10-14, 19- A.A; Soc. Zool. Chromosome individuality in Gryllus; the biology of the crickets; spermatogenesis in the Gryllidae.
- Bausch, Edward**, Bausch and Lomb Optical Co, Rochester, N. Y. **Optics*. Rochester, Sept. 26, 54. Cornell, 75. V. pres, Bausch and Lomb Optical Co. A.A; Optical Soc; Micros. Soc. Manipulation of the microscope.
- Bawden, H(enry) Heath**, San Ysidro, Calif. *Philosophy, Psychology*. Elyria, Ohio, Sept. 28, 71. Illinois, 88-90; A.B, Denison, 93, fellow, 93-94, A.M, 94; Rochester Theol. Sem, 94-96, 97-98; fellow, Chicago, 98-00, Ph.D, 00. Instr, gymnasium, Denison, 91-94, biol, 97-98; philos, Iowa, 00-01; prof, Vassar, 01-07; Cincinnati, 07-08. A.A; Philos. Ass; Psychol. Ass; West. Philos. Ass. Pragmatism; behaviorism; methodology; esthetics.
- Baxter, Prof. Gregory P(aul)**, Coolidge Memorial Laboratory, Cambridge, Mass. **Chemistry*. Somerville, Mass, March 3, 76. A.B, Harvard, 96, A.M, 97, Ph.D, 99. Asst. chem, Harvard, 95-97, instr, 97-99; Haverford, 99-00; asst. prof, Swarthmore, 00-02; instr. anal. chem, Harvard, 02-05, asst. prof. *chem*, 05-15, *prof, 15-* Instr, summer sch, Harvard, 97, 02-; Radcliffe, 02- Nat. Acad; A.A; Chem. Soc; Am. Acad. Analytical and inorganic chemistry; atomic weights and other physico-chemical constants.
- Bayley, Dr. W(illiam) S(hirley)**, University of Illinois, Urbana, Ill. **Mineralogy, Geology*. Baltimore, Md, Nov. 10, 61. A.B, Hopkins, 83, Ph.D, 86. Prof. geol, Colby, 88-04; instr, Lehigh, 04-06; asst. prof, Illinois, 06-09, *assoc. prof. miner. and econ. geol*, 09-13, *prof. geol*, 13- Asst. geologist, U. S. Geol. Surv, 89-08, geologist, 09-; *assoc. ed, 'Am. Naturalist'*, 86-02; reviewer, 'Neues Jahrbuch', 90-08; business ed, 'Econ. Geol.', 05- A.A; Geol. Soc. (councilor, 19); Wash. Geol. Soc; Chem. Gesell. Descriptive mineralogy; geology of iron districts of Lake Superior region; metamorphism; igneous rocks; iron ores of New Jersey and North Carolina; kaolins of North and South Carolina; geology of New Jersey Highlands; geology of crystalline rocks in Llano district, Texas.
- Bayne-Jones, Dr. S(tanhope)**, Johns Hopkins University Medical School, Baltimore, Md.

- Bacteriology*. New Orleans, La, Nov. 6, 88. A.B, Yale, 10; M.D, Hopkins, 14, A.M, 17. Intern med, Hopkins Hosp, 15-16; instr. path, Hopkins, 16, *assoc. prof. path. and bacter*, 20-A.A; Soc. Bact; Ass. Immunol; Am. Med. Ass. Pathology; immunology.
- Bazzoni, Prof. C(harles) B(lizard)**, University of Pennsylvania, Philadelphia, Pa. *Physics*. Newburg, N. Y, Jan. 28, 86. B.S, Pennsylvania, 11, A.M, 13, Ph.D, 14. Instr. physics, Pennsylvania, 11-17; Harrison research fellow, London, 15-16. Asst. research, King's Col, London, 16-17; *asst. prof. physics, Pennsylvania*, 19-Capt, corps engineers, A.E.F, 17-19. Physical Soc; Radio Eng. Photoelectric and thermionic emissions; ionization potentials.
- Beach, Prof. Frederick Elijah**, Yale University, New Haven, Conn. *Physics*. New Haven, June 12, 63. Ph.B, Yale, 83, Ph.D, 93. Machinist and draftsman, 83-90; *asst. physics, Yale*, 91-94, instr, 94-95, *asst. prof*, 95- Physical Soc.
- Beach, Prof. S(pencer) A(mbrose)**, Station A, Ames, Iowa. *Horticulture*. Summer Hill, N. Y, Sept. 15, 60. B.S.A, Iowa State, 87, M.S, 92. Assoc. prof. hort. and bot, Tex. Col, 90-91; horticulturist, N. Y. Exp. Sta, Geneva, 91-05; *prof. hort, Iowa State, and horticulturist, Exp. Sta*, 05-, *v. dean agr*, 06- A.A; Pomol. Soc; Soc. Hort. Sci; Iowa Hort. Soc. (pres); Iowa Acad; fel. Royal Hort. Soc. Pomology; plant breeding; self-fertility and pollination of the American grape and the apple; treatment of fungous diseases in garden and orchard; handling of apples in storage; soil management for apple orchards; unit characters in the apple; apple stocks with reference to their adaptability for top working in orchards.
- Beach, Prof. W(alter) S(purgeon)**, Bustleton Station, Philadelphia, Pa. *Plant pathology*. Brown-ton, Minn, Jan. 24, 90. B.S, Minnesota, 14; fellow, Mich. Agr. Col, 14-15, M.S, 15; fellow, Illinois, 17-18, Ph.D, 18. Asst. bot, Illinois, 15-17; instr. *plant path, Pa. State*, 18-19, *asst. prof*, 19- A.A; Phytopath. Soc; Bot. Soc; Phila. Acad. Fusarium wilt of China aster; biological specialization in Septoria; diseases of vegetables.
- Beadle, C(hauncey) D(elos)**, Biltmore, N. C. **Botany*. St. Catharines, Ont, Aug. 5, 66. Ont. Agr. Col, 84; Cornell, 89. Director, Biltmore Herbarium, 90-16. Botany of the southern states; Crataegus; Philadelphus; Rudbeckia; Marshallia.
- Beal, Prof. A(lvin) C(asey)**, Cornell University, Ithaca, N. Y. *Horticulture*. Mt. Vernon, Ill, Nov. 30, 72. B.S, Illinois, 97; M.S.A, Cornell, 03, Ph.D, 11. Foreman, hort. dept, Ill. Exp. Sta, 98-99, supt, agr. greenhouses, 00-01, *asst. hort*, 01-02, *floriculture*, 02-03, instr, 03-09; *asst, Cornell*, 09-10, *asst. prof*, 11-13, *prof*, 13-A.A; Bot. Soc; Soc. Hort. Sci. (chairman, committee on flor. courses, 13, 14). Floriculture; forcing vegetables under glass; greenhouse thrips; greenhouse construction and management.
- Beal, Dr. A(rthur) F(loyd)**, Bureau of Standards, Washington, D. C. *Physics*. Arlington, Colo, Sept. 25, 88. A.B, Kansas, 11, A.M, 12; fellow, Pittsburgh, 14-16, Ph.D, 17. Magnetic observer, U. S. Coast and Geod. Surv, 12-14; instr. physics, Albion, 16-17; *asst. physicist, Bur. Standards*, 17-20, *assoc. physicist*, 20- Astron. Soc; Wash. Philos. Soc. Weights and measures; variation of latitude.
- Beal, Carl H(ugh)**, Wells Fargo Building, San Francisco, Calif. *Geology*. A.B, Stanford, 12, A.M, 15, E.M, 20. Asst. geologist, K. T. and Co, 13; consulting geologist, 13-14; instr. dept. geol. and mining, Stanford, 14-15; oil and gas inspector, U. S. Bur. Mines, 15-16, *asst. to chief petrol. technologist*, 16-18; special agent, bur. internal revenue, Treas. Dept, 18-19; *consulting geologist and engineer*, 19- Petroleum geology.
- Beal, Dr. Fred(erick) W(ahn)**, University of Pennsylvania, Philadelphia, Pa. *Mathematics*. Hamilton, N. Y, July 18, 79. Ph.B, Colgate, 02, A.M, 05; fellow, Princeton, 09-10, Ph.D, 11. Instr. *math*, Pa. State, 05-08; Brown, 10-11; Pennsylvania, 11-18; acting prof, Tennessee, 18-19; *asst. prof, Pennsylvania*, 19- Math. Soc. Normal congruences determined by centers of geodesic curvature; a congruence of circles.
- Beal, Prof. Geo(rge) D(enton)**, 712 W. Nevada St, Urbana, Ill. *Chemistry*. Scio, Ohio, Aug. 12, 87. Pharm. D, Scio, 07, Ph.B, 08; A.M, Columbia, 10, Ph.D, 11. Asst. *chem*, Scio, 06-08; instr, *Illinois*, 11-14, *assoc*, 14-18, *asst. prof*, 18-20, *assoc. prof*, 20- Ebert prize, Pharmaceut. Ass, 20. A.A. (sec'y, C, 17); Chem. Soc. (sec'y, div. pharmacut. chem, 15-19); Pharmaceut. Ass. (mem. research commission, 18, 19); hon. mem. Ill. Pharmaceut. Ass. Quantitative organic analysis; alkaloids and fatty acids; anthraquinone drugs.
- Beal, Dr. J(ames) H(artley)**, 801 W. Nevada St, Urbana, Ill. *Pharmacy*. New Philadelphia, Ohio, Sept. 23, 61. B.S, Scio, 84, A.B, 88; LL.B, Cincinnati Law Sch, 86; Ph.G, Ohio Med. Col, 94; Sc.D, Mt. Union, 95; hon. Pharm.D, Pittsburgh, 02; hon. Ph.M, Phila. Col. Pharmacy, 13. Prof. chem. and dean, dept. pharmacy, Scio, 87-07; prof. applied pharmacy, Pittsburgh, 02-11; gen. sec'y and ed, 'Jour. Am. Pharmaceut. Ass.' 11-14; *director, pharmacy research, Illinois*, 14- Chairman, board of trustees, U. S. Pharmacopoeia, 10-; mem. W. I. B, 18; Nat. Drug Trade Conf. (pres, 18). First Remington medalist, 19. A.A; Pharmaceut. Ass. (pres, 04); Am. Conf. Pharmaceut. Faculties (pres, 07); Chem. Soc; Ohio Pharmaceut. Ass. (pres, 98). Pharmacy food and drug laws; poison and habit-forming drug legislation.
- Beal, W(alter) H(enry)**, U. S. Department of Agriculture, Washington, D. C. *Agriculture*. Hanover Co, Va, Dec. 9, 67. A.B, M.E, Va. Polytech, 86. Asst. chemist, Mass. Exp. Sta, 87-91; *employee, U. S. Dept. Agr*, 91- U. S. Dept. Agr. delegate, Int. Cong. Agr, Liege, 05. A.A; Ass. Agr. Col. (rec. sec'y, sta. sect); Acad. Polit. and Social Sci. Methods and results of agricultural experiment station work.
- Beal, Dr. W(illiam) J(ames)**, 40 Sunset Ave, Amherst, Mass. **Botany*. Adrian, Mich, March 11, 33. A.B, Michigan, 59, A.M, 63, Ph.D, 80; B.S, Harvard, 65; M.S, Chicago, 75; hon. Sc.D. Mich. Agr. Col, 05; D.Agr, Syracuse, 16. Teacher

- nat. science, Friends Acad. and Howland Inst. Union Springs, N. Y., 59-68; prof. bot, Chicago, 68-70; lecturer, *Mich. Agr. Col.*, 70-71, prof. bot. and hort, 71-81, bot. and forestry and curator, museum, 82-03, bot, 03-10, *emer. prof.*, 10- Director, State Forestry Commission, Mich, 88-92. Wilder silver medal, Pomol. Soc. A.A. (v. pres, 83); Bot. Soc; Soc. Prom. Agr. Sci. (pres, 82); Pomol. Soc; Bot. Cent. States; Mich. Acad. (pres, 92). Grasses; seed dispersal; pollination of plants; trees; weeds; how plants protect themselves.
- Beal, W(illiam) O(tis)**, University of Minnesota, Minneapolis, Minn. *Astronomy*. Rollin, Mich, Feb, 18, 74. B.S., Earlham, 96; Earlham fellow, Haverford, 96-97, A.M., 97; fellow, Chicago, 01-02, 12-13, M.S., 02. Instr. math, Mich. Agr. Col, 97-00; Chicago Manual Training High Sch, 02-03; Ill. Col, 03-04; asst. prof, 04-05, prof, 05-12; *asst. astronomer*, Minnesota, 13- A.A.; Astron. Soc; Math. Soc; Cent. Ass. Sci. and Math. Teachers. Periodic orbits; proper motion of stars; comet positions.
- Bean, Barton A(ppler)**, U. S. National Museum, Washington, D. C. *Ichthyology*. Bainbridge, Pa, May 21, 60. Academy; private study. Clerk, aid, asst. curator and later *acting curator*, U. S. Nat. Museum, 81- Mem. Baltimore Geog. Soc. exped. to the Bahamas, 03; various minor expeditions to Wash, Oregon and Fla. for U. S. Fish Commission and U. S. Nat. Museum. Medal, Columbian Expos, 93; Atlanta, Nashville, Omaha, Pan-Am, Charleston and La. Purchase; silver medal and diploma, Paris Expos, 00. Fisheries Soc; Wash. Biol. Soc. Fishes of the Atlantic coast, especially of Florida, the Bahamas and deep water; the poisonous toad fishes (Thalassophryne); genus *Lepomis*; deep-water skates off south Atlantic coast; reports on fishes of the earlier explorations by United States Government; Rhinodon on the Atlantic coast of America; fishes of Vancouver Island, B. C.
- Bean, Prof. C(harles) Homer**, 622 Boyd Ave, Baton Rouge, La. *Psychology*. Petersburg, Ohio, Feb. 28, 70. A.B., Nebraska, 99; Chicago; Ph.D., Columbia, 12. Asst. prof. psychol, Ind. State Nor. Sch, 04-14; *prof. psychol. and educ.*, Louisiana, 15- A.A.; Psychol. Ass. Educational psychology; reviews; standard tests; forgetting; temporary blindness.
- Bean, E(rnest) F**, Science Hall, Madison, Wis. *Geology*. Zearing, Iowa, Jan. 30, 82. A.B., Wisconsin, 09, A.M., 11. Instr. geol, Wisconsin, 11-15, asst. prof, 15-17; asst. Nat. Geog. Soc. exped. to Alaska, 09-10; geologist, *Wis. Geol. Surv.*, 11, chief of parties, 13-15, *asst. state geologist*, 16- A.A. Economic geology of the Pre-Cambrian; areal and glacial geology.
- Bean, Prof. R(obert) Bennett**, University, Va. *Anatomy, Anthropology*. Gala Water, Va, March 24, 74. B.S., Virginia Polytech, 00; M.D., Hopkins, 04. Asst. *anat.*, Hopkins, 04-05; instr, Michigan, 05-07; asst. prof, Univ. Philippines, 07-08, assoc. prof, 08-10; Tulane, 10-16; *prof.*, Virginia, 16- Lecturer heredity, Teachers' Assembly, Baguio, 08; govt. investigator Benguet Igorots, 08. A.A.; Ass. Anat; Anthropol. Ass. (councilor, 19). Human types and their geographical distribution; Filipinos; American negroes; growth; weight of organs; weight of parts of the leg in living men; sitting height; relation of ear form to susceptibility and immunity to disease and to race and type.
- Beans, Prof. Hal T(rueman)**, Columbia University, New York, N. Y. *Chemistry*. Pleasanton, Kans, Aug. 20, 76. B.S., Nebraska, 99, A.M., 00; Ph.D., Columbia, 04. Instr. *chem.*, Columbia, 03-11, asst. prof. and later *assoc. prof.*, 11- Chem. Soc. Inorganic, physical and analytical chemistry; colloids.
- Bear, Prof. Firman E(dward)**, Ohio State University, Columbus, Ohio. *Agriculture*. Germantown, Ohio, May 21, 84. B.S., Ohio State, 08, M.S., 10; Ph.D., Wisconsin, 17. Instr. agr. chem. and soils, Ohio State, 08-10, asst. prof, 10-13; prof. soils in charge soil investigations, West Virginia, 14-16; *prof. agr. chem. and soils*, Ohio State, 16- A.A.; Chem. Soc; Soc. Agron. Agricultural chemistry; lime and bacteria in soils; nitrogen fixation and loss.
- Beard, J(ames) T(hom)**, 58 Washington Ave, Danbury, Conn. *Civil and mining engineering*. Brooklyn, N. Y., Oct. 19, 55. C.E., E.M., Columbia, 77. Asst. engineer, N. Y. and Brooklyn Bridge, 77-80; asst. and div. eng, C. B. and Q. R. R., 80-83; U. S. Dept. Min. Surv, 83-85; mining engineer, Colo. Fuel and Iron Co, 85-96; principal, sch. mines, Int. Cor. Schools, and assoc. ed, 'Mines and Minerals,' 96-11; *senior assoc. ed.*, 'Coal Age,' 11- A.A.; Min. Eng; Min. and Metal. Soc; Mine Inspectors' Inst; N. of England Inst. Min. and Mech. Eng. Mine ventilation, gases and explosions; safety lamps; design of centrifugal ventilators; detection of mine gases.
- Beard, Dr. J(oseph) H(oward)**, University of Illinois, Urbana, Ill. *Physiology*. Linden Hill, Md, Jan. 12, 83. A.B., St. John's (Md), 02, A.M., 12; M.D., Hopkins. Instr. *physiol.*, Illinois, 12-18, *prof. hygiene and univ. health officer*, 18- Am. Med. Ass; Pub. Health Ass. Internal medicine; urinalysis during pregnancy; the relations of certain industries to disease; nervousness; health education.
- Beard, Dr. R(ichard) O(lding)**, University of Minnesota, Minneapolis, Minn. *Physiology*. Middlesex, England, Dec. 20, 56. M.D., Northwestern, 82. *Prof. physiol. and director*, dept. *physiol. and pharmacol.*, Minnesota, 87- Assoc. Am. Med. Ass; Pub. Health Ass; Minn. Acad. Med. (past pres). Nervous system; dietetics; physiological chemistry; food adulteration.
- Beardslee, H(enry) C(urteis)**, Perry, Ohio. *Botany*. Painesville, Ohio, Sept. 28, 65. A.B., Western Reserve, 89, A.M., 92. Teacher science, Univ. Sch, Cleveland, 90-01; senior master, Asheville Sch, 01-20. A.A.; Phytopath. Soc; Ohio Acad. (trustee, 97-00); N. C. Acad. Fleshy fungi; fungous flora of North Carolina.
- Beardsley, J(ames) W(allace)**, 134 Rider Ave, Syracuse, N. Y. *Civil engineering*. Coventry, N. Y., Sept. 11, 60. C.E., Cornell, 91. Asst. engineer, sanit. dist, Chicago, 92-98; Deep Waterway Commission, 98-00; with canal and harbor works, corps engineers, U.S.A., 00-02; consulting engineer, Philippine Commission, and director, pub. works, P. I., 02-08; investigator of

- irrig, Java, Burma, India and Egypt, 08-09; chief engineer, P. R. Irrig. Service, 10-16; consulting engineer, ordnance dept, U.S.A., 18; asst. chief, eng. surveys, Grand Canal, China, 18-19; *engineer mem. highway commission, Panama, 20-* Civil Eng; West. Soc. Eng. Irrigation and highways.
- Beates, Dr. H(enry)**, 260 S. 16th St, Philadelphia, Pa. *Medicine*. Philadelphia, Dec. 20, 57. M.D., Pennsylvania, 79; hon. M.S., Washington and Jefferson, 09, Sc.D., 10. *Practising physician*. Pres, Pa. State Board Med. Examiners, 01-11; Nat. Confed. State Med. Examining and Licensing Boards, 07-08. A.A.; Am. Med. Ass; Therapeut. Soc; Archeol. Inst; Phila. Col. Physicians; Phila. Acad. Therapeutics; circulatory and cardiac diseases; anaesthesia; medical legislation.
- Beattie, Dr. James Alexander**, Massachusetts Institute of Technology, Cambridge, Mass. *Chemistry*. Louisville, Ky, July 24, 95. B.S., Mass. Inst. Tech, 17, M.S., 18, fellow, 19-20, Ph.D., 20. Research chemist, Am. Writing Paper Co, 16; asst. chem, *Mass. Inst. Tech*, 17-18, *research assoc*, 20- Physical chemistry; ionic theory; thermodynamics; equations of state.
- Beattie, Prof. R(olla) Kent**, U. S. Department of Agriculture, Washington, D. C. *Botany*. Ashland, Ohio, Jan. 14, 75. A.B., Cotner, 95; B.S., Nebraska, 96, A.M., 98. Instr. science, high sch, Leadville, Colo, 96-97; Cheyenne, Wyo, 98-99; bot, Wash. State, 99-03, prof. and head of dept, and botanist, Exp. Sta, 03-12; forest pathologist, U. S. Dept. Agr, 12-14, path. inspector, fed. hort. board, 14-19, *pathologist in charge foreign plant quarantines*, 19- Instr. physics and chem, Cotner, summer, 93; chem, Nebr. State Nor. Sch, summer, 98. A.A.; Bot. Soc; Phytopath. Soc; Wash. Bot. Soc. Plant pathology; flora of Palouse region, Washington and Oregon; food plants of sheep.
- Beattie, W(illiam) R(enwick)**, U. S. Department of Agriculture, Washington, D. C. *Agriculture*. Zanesville, Ohio, Dec. 17, 70. B.S., M.S., Ohio State. Asst. bot, Ohio State, 96-98; asst. horticulturist, U. S. Dept. Agr, 99-12; agr. and indust. commissioner, St. Louis and Southwest. R. R., 12-18; *horticulturist, U. S. Dept. Agr*, 18- Soc. Hort. Sci; Am. Peat Soc; Wash. Biol. Soc; Wash. Biol. Field Club. Plant growth under glass; peanuts.
- Beatty, Dr. Hugh Gibson**, Ohio State University, Columbus, Ohio. *Speech defects*. Washington C. H., Ohio, Sept. 12, 80. Ph.C., M.D., Ohio State; Vienna. Asst. prof, dept. oto-rhino-laryngol, Ohio State. A.A.; Am. Med. Ass; Col. Surg; Columbus Acad. Med. Otolology; rhinology; laryngology.
- Beauchamp, Rev. W(illiam) M(artin)**, 121 Mark Ave, Syracuse, N. Y. *History, Archeology*. Coldenham, N. Y., March 25, 30. Delaney Divinity Sch; S.T.D., Hobart, 86; LL.D., Syracuse, 20. Rector, Grace Church, Baldwinsville, N. Y., 65-00; *examining chaplain of diocese of Central N. Y.* 84- Archeologist, N. Y. State Museum, 96-06. Adoption by Onondagas, 04; Cornplanter medal for Iroquois research, 05. A.A. (sec'y, H, 89-92); Onondaga Acad. (pres, 01); Onondaga Hist. Ass. (hon. pres, 20). American history; archeology; natural sciences; folk-lore, language and history of the Iroquois; New York Indian life; local colonial history.
- Beaumont, Prof. A(rthur) B(ishop)**, 103 Butterfield Terrace, Amherst, Mass. *Agronomy*. Waco, Tex, Jan. 21, 87. B.S., Kentucky, 08; Ph.D., Cornell, 18. Teacher science, high sch, North Bend, Oregon, 09-11; science and agr. and head of dept, Oregon Nor. Sch, 11-13; asst. soil technol, Cornell, 13-17; assoc. prof. *agron.* and acting head of dept, *Mass. Col*, 17-19, *prof. and head of dept*, 19- Soc. Agron. The reversibility of the colloid condition of soils.
- Becht, Prof. Frank Christian**, 2421 S. Dearborn St, Chicago, Ill. *Physiology, Pharmacology*. Lexington, Ill, Nov. 28, 79. B.S., Chicago, 06, fellow, 06, Ph.D., 09; M.D., Northwestern, 15. Asst. physiologist, Chicago, 07-09, assoc, 09-10; asst. prof, Illinois, 10-12; *pharmacol*, Northwestern, 12-14; Chicago, 14-17; *prof*, Northwestern, 17- Lecturer physiologist, McGill, 15. Soc. Pharmacol; Physiologist. Heat paralysis; antibodies in the serum and lymph; influence of the hypophysis on sugar metabolism; catalases of the blood; cerebrospinal fluid.
- Bechtel, A(ibert) R(eiff)**, Wabash College, Crawfordsville, Ind. *Botany*. Royersford, Pa, March 21, 82. B.S., A.M., Pennsylvania, 12; Ph.D., Cornell, 20. Teacher, pub. schools, Montgomery Co, Pa, 03-04; principal, high sch, Cochranville, 06; science teacher, high sch, Downingtown, 07-08; asst. instr. bot, Pa. State, 13, instr, 14; N. Y. State Col. Agr, Cornell, 14-20; *prof*, Wabash, 20- A.A.; Bot. Soc. Weeds; taxonomy of seed plants.
- Beck, Dr. Joseph C(lar)**, University of Illinois College of Medicine, Chicago, Ill. *Medicine*. Czechoslovakia, Sept. 26, 70. M.D., Illinois, 95. *Assoc. prof. oto-laryngol, med. dept, Illinois*, 04- Attending surgeon, Cook Co. Hosp, 05-; head of ear, nose and throat dept, North Chicago Hosp, 04- Lieut-col, U.S.M.R.C., 19; Czechoslovak Army, 18-19. Col. Surg; Am. Med. Ass. (pres, sect. oto-laryngol, 19); Acad. Ophthal. and Oto-Laryngol. (pres, 14); Laryngol. Rhinol. and Otol. Soc; Chicago Oto-Laryngol Soc. (pres, 09). Surgery; surgery of the head and neck.
- Beck, Rollo Howard**, R. A. 288, San Jose, Calif. *Ornithology*. Calif, 70. Field collector, Calif. Acad, 03-09; Am. Museum Nat. Hist, 10-17. Mem. Ornith. Union; Cooper Ornith. Club. Water birds; Tubinares.
- Becker, Prof. A(ibert) J(ohn)**, Ohio Valley Roofing Co, Evansville, Ind. *Applied mechanics*. Evansville, Ind, Oct. 6, 77. B.S., Michigan, 03, M.E., 07; Ph.D., Illinois, 15. Instr. mech. eng, North Dakota, 04-06, asst. prof, 06-07, prof. applied math, 07-19; *sec'y-treas. Ohio Valley Roofing Co*, 20- Mech. Eng; Eng. Educ. Strength of materials; bi-axial loading of mild steel; effect of temperature on the strength of concrete.
- Beckett, C(harles) H(arrison)**, State Life Insurance Co, Indianapolis, Ind. *Mathematics*. Aurora, Ind, May 24, 76. A.B., Cornell, 00, 00-02. Assoc. prof. math, Purdue, 05-12; *actuary, State Life Ins. Co*, 12- Consulting actuary. Math. Soc; Am. Inst. Actuaries (pres, 17-19); Statist. Ass. Actuarial science.

- Beckett, Prof. Samuel Hume**, University Farm, Davis, Calif. *Civil engineering*. Calif., Sept. 19, 83. B.S., California, 09. Scientific asst., U. S. Dept. Agr., 09-12, irrig. engineer, 12-15; instr. and asst. prof. *irrig. practise*, California, 15-18, *assoc. prof.*, 18- Development and economic use of irrigation water.
- Becknell, Dr. G(u)y G(aillaird)**, University of Pittsburgh, Pittsburgh, Pa. *Physics*. Milford, Ind., April 16, 78. B.S., Northwestern, 04, fellow, 05, M.S., 05; hon. fellow, Clark, 08-09, senior fellow, 09-11, Ph.D., 11. Instr. *physics*, Purdue, 05-08; research asst., Clark, 08-09; prof., Mt. Allison, 11-12; instr., Syracuse, 12-14; Northwestern, 14-15; *Pittsburgh*, 16-17, asst. prof., 17-20, *prof.*, 20- A.A.; assoc. mem. Physical Soc. Residual E.M.F. in carbon arc; demagnetization of iron and steel.
- Beckstrand, Prof. E(lias) H(yrum)**, University of Utah, Salt Lake City, Utah. *Engineering*. Meadow, Utah. B.S. (E.E.), Michigan, 00; M.M.E., Cornell, 01. *Prof. mech. eng.*, Utah, 02- Engineer, Yampa tramway, Bingham, Utah. Mech. Eng.; Elec. Eng.; Soc. Test. Mat. Testing of brick and macadam rock; testing and value of lubricating oils; effect of alkalis on concrete.
- Beckwith, Angie M(aria)**, Bureau of Plant Industry, Washington, D. C. *Plant pathology*. Grand Rapids, Mich., Jan. 27, 81. A.B., Michigan, 04; Chicago, 04-05. Asst. biol. lab., Vassar, 06-08; expert xylotomist, U. S. Forest Service, 08-10; *scientific asst. bur. plant industry*, U. S. Dept. Agr., 10- A.A.; Phytopath. Soc.
- Beckwith, Prof. Cora J(ipson)**, Vassar College, Poughkeepsie, N. Y. *Zoology*. Grand Rapids, Mich., March 24, 75. B.S., Michigan, 00; A.M., Columbia, 08, Ph.D., 14. Asst. biol., Vassar, 00-02, instr. *zool.*, 02-13, asst. prof., 14-15, *assoc. prof.*, 15- A.A.; Soc. Nat.; Soc. Zool. Lateral line organ in *Amia calva*; cytology of hydroid germ cells.
- Beckwith, Prof. T(heodore) D(ay)**, University of California, Berkeley, Calif. *Bacteriology*. Utica, N. Y., Dec. 8, 79. B.S., Hamilton, 04, Root fellow, 04, M.S., 07; Ph.D., California, 20. Scientific asst., U. S. Dept. Agr., 04-07; asst. prof. bacter. and plant path., N. Dak. Col. and asst. botanist, Exp. Sta., 07-11; head, dept. bacter., Oregon Col. and bacteriologist, Exp. Sta., 11-20; *asst. exp. path.*, California, 20- Capt., Sanit. C., 18. A.A.; Soc. Bact.; Pub. Health Ass. Water supplies; soils; cold storage; experimental pathology.
- Bedell, Prof. Frederick**, Cornell University, Ithaca, N. Y. **Physics, Electrical Engineering*. Brooklyn, N. Y., April 12, 68. A.B., Yale, 90; M.S., Cornell, 91, fellow, 91-92, Ph.D., 92. Instr. *physics*, Cornell, 92-93, asst. prof., 93-04, *prof.*, 04- Assoc. ed., 'Physical Rev.', 93-12, managing ed., 13. A.A. (sec'y, B, 97, gen. sec'y, 99); Physical Soc.; Elec. Eng.; Aeronaut. Soc. Alternating currents of electricity; direct and alternating current testing; aerodynamics.
- Beebe, Prof. Murray C(harles)**, Wadsworth Watch Case Co., Dayton, Ky. *Electrical engineering*. Racine, Wis., Feb. 25, 76. B.S., Wisconsin, 97. Instr. elec. eng., Wisconsin, 97-00; research dept., Nernst Lamp Co., 00-04; assoc. prof., elec. eng., Wisconsin, 05-07, prof., 07-18; with West. Elec. Co., 19; *chief engineer*, Wadsworth Watch Case Co., 20- Elec. Eng.; Nat. Elec. Light Ass. Electric lighting; chemistry of rare earths.
- Beebe, Prof. S(ilas) P(almer)**, 417 Park Ave., New York, N. Y. *Physiological chemistry*. St. Johns, Mich., April 22, 76. B.S., Valparaiso, 96; B.S., Harvard, 00; M.S., Yale, 02, Ph.D., 04; M.D., Cornell, 09. Instr. chem., high sch., New Haven, 00-03; *physiol. chemist*, Huntington Fund for Cancer Research, Loomis Lab., 03-09; prof. exp. therapeut., med. col., Cornell, 09-15. Lecturer, summer sch., Harvard, 02-04. A.A.; Physiol. Soc.; Ass. Path. and Bact.; Soc. Exp. Biol.; Soc. Cancer Research; Soc. Biol. Chem. Effect of alcohol and alcoholic fluids on excretion of uric acid in man; tumor tissue; fat from proteid; immunity; serum therapy; physiology of thyroid and parathyroid.
- Beebe, William**, New York Zoological Park, New York, N. Y. **Ornithology*. Brooklyn, N. Y., July 29, 77. Columbia, 96-99. Curator *ornith.*, N. Y. Zool. Park, 99-; *hon. curator and director*, tropical sta., N. Y. Zool. Soc., 19- Elliot medal. A.A.; fel. Ornith. Union; Soc. Mammal; Ecol. Soc.; N. Y. Linnean Soc.; fel. N. Y. Zool. Soc.; fel. N. Y. Acad.; N. Y. Audubon Soc.; cor. mem. London Zool. Soc. Evolution of color in birds; ecology of the birds and other vertebrates of neotropical regions.
- Beede, Dr. J(oshua) W(illiam)**, 711 San Antonio St., Austin, Tex. *Geology, Paleontology*. Raymond, N. H., Sept. 14, 71. B.S., Washburn, 96, A.M., 97; Ph.D., Kansas, 99. Instr. paleont., Kansas, 97-99; teacher science, Atchison Co. High Sch., Kans., 99-01; instr. geol., Indiana, 01-06, asst. prof., 06-09, *assoc. prof.*, 09-17; *geologist, bur. econ. geol.*, Texas, 17- Asst., Kans. Geol. Surv., 96, 98, 03-09; U. S. Geol. Surv., 01, 02. A.A. (mem. exec. committee, 16); Geol. Soc.; Paleont. Soc.; Am. Geog. Soc.; Ass. Petrol. Geol.; Ind. Acad.; Kans. Acad. Stratigraphic geology and paleontology of Kansas coal measures; invertebrate paleontology of the Permian Red Beds of Oklahoma and Texas; faunal divisions of Kansas coal measures; cycle of subterranean drainage; Permian of Kansas, Oklahoma and Texas.
- Beegle, Dr. Frank Moore**, Glidden Co., Cleveland, Ohio. *Chemistry*. Williamsburg, Pa., June 19, 89. B.S., Pa. State, 12; fellow, Columbia, 16-18, A.M., 17, Ph.D., 18. Research chemist, Ohio Exp. Sta., 11-16; Bur. Aircraft Production, 18-19; chief chemist, Am. Chem. and Mfg. Co., 19-20; *research chemist*, Glidden Co., 20- Chem. Soc. Organic and biological chemistry; aeroplane dopes, varnishes and enamels; vegetable oils; synthetic gums.
- Beer, Dr. Edwin**, 88 Central Park West, New York, N. Y. *Medicine*. New York, March 28, 76. A.B., Columbia, 96, M.D., 99. *Visiting surgeon*, Bellevue Hosp. and Mt. Sinai Hosp. A.A.; Col. Surg.; Am. Med. Ass.; N. Y. Path. Soc.; N. Y. Acad. Physiology and pathology of the kidneys, urinary bladder, intestines and liver.
- Beers, F(rank) T(roxeil)**, Washburn, Wis. *Chemistry*. Emporium, Pa., Feb. 19, 75. B.S., Pa. State, 98. Asst. chem., Pa. State, 98-99; chem-

- ist, Bellefonte Furnace Co, 99-00; duPont de Nemours and Co, 00-03, asst. supt, 03-06, supt, 06-08; *Barksdale Works*, 08-19, *manager*, 19-
Chem. Eng. Explosives.
- Beeson, Prof. J(asper) L(uther)**, 202 Columbia St, Milledgeville, Ga. *Chemistry*. Keener, Ala, Aug. 31, 67. A.B, Alabama, 88, A.M, 89; Ph.D, Hopkins, 93. Instr. physics, Alabama, and chemist, Ala. Geol. Surv, 88-89; research chemist, La. Exp. Sta, and prof. chem, La. Sch. of Sugar, 93-96; *prof. nat. science*, Bethel, 96-97; *chem. and physics*, Ga. Nor. and Indust. Col, 97- Prof. physics, Georgia, summer, 09. A.A; Chem. Soc. Action of alcohol on certain diazo compounds; sugar chemistry; nitric nitrogen gathered by the Leguminosae.
- Beeson, Dr. M(alcolm) A(lfred)**, Stillwater, Okla. *Agronomy*. Gadsden, Ala, June 20, 79. B.S, Ala. Polytech, 00; Hopkins, 01-03; hon. Sc.D. Prof. science, E. Miss. Female Col, 00-01; pres. and proprietor, Meridian Male Col, 03-14; *prof. agron. and agronomist*, Okla. Col, 15- Trustee, E. Miss. Female Col. A.A; Soc. Agron. Crops; farm management.
- Beetle, Dr. Ralph D(ennison)**, Dartmouth College, Hanover, N. H. *Mathematics*. New Bedford, Mass, Jan. 21, 86. A.B, Dartmouth, 06, A.M, 11; fellow, Princeton, 12-14, Ph.D, 14. Instr, high sch, Littleton, N. H, 06-07; *math*, Dartmouth, 07-12, 14-15, *asst. prof*, 15- A.A; Math. Soc. Differential geometry of curves and surfaces.
- Begeman, Prof. Louis**, 2315 Iowa St, Cedar Falls, Iowa. *Physics*. Evansville, Ind, March 1, 65. B.S, Michigan, 89, M.S, 97; Ph.D, Chicago, 10. Supt. schools, Corydon, Iowa, 89-95; *prof. physics and chem*, Parson's, 95-99; *prof. physics*, Iowa State Teachers Col, 99- A.A; Cent. Ass. Sci. and Math. Teachers; Iowa Acad. (pres, 12). Charge of the electron by the cloud method.
- Begg, Dean A(lexander) S(wanson)**, Harvard Medical School, Boston, Mass. *Embryology*. Council Bluffs, Iowa, May 23, 81. M.D, 07. Instr. path, Drake, 07-09, *asst. prof. path, histol. and embryol*, 09-10, *prof. histol. and embryol*, 10-13; teaching fellow, *Harvard Med. Sch*, 11-12, *instr. comp. anat*, 13-18, *asst. dean, demonstrator anat, and instr. histol*, 19- Research assoc, Carnegie Institution, 15-; U. S. Army, 17-19. A.A; Ass. Anat. Development of veins; cytology of intestinal epithelium.
- Behr, Dr. Arno**, Arlington Court, Pasadena, Calif. *Chemistry*. Palompen, Germany, Aug. 14, 46. Tübingen, 66; Berlin, 67; Ph.D, Heidelberg, 69. Chemist, Matthiessen and Wiechers Sug. Ref. Co, Jersey City, N. J, 74-81; supt, Chicago Sug. Ref. Co, 81-92. Perkin research medal, Soc. Chem. Indust, 09. Int. Cong. Applied Chem, London, 09. Chem. Soc; Soc. Chem. Indust; Chem. Gesell. Organic chemistry, pure and applied to the refining of sugar; the manufacture of starch and glucose from corn.
- Behre, Dr. E(llinor) H(elene)**, Louisiana State University, Baton Rouge, La. *Zoology*. Atlanta, Ga, Sept. 28, 86. A.B, Radcliffe, 08; Tulane, 13-15; Ph.D, Chicago, 18. Instr. in charge, dept. biol, Tulane, 12-15; *asst. zool*, Chicago, 15-18; research asst, sta. for exp. evolution, Carnegie Institution, 18-19; *instr. biol*, Newcomb, 19-20; *asst. prof. zool*, Louisiana, 20- Physiological zoology; anatomy.
- Behrend, B(ernard) A(rthur)**, 71 Colchester St, Brookline, Mass. *Engineering, Physics*. Villeneuve, Switzerland, May 9, 75. Polytech, Berlin, 94; London; Paris. Asst. chief electrician, Oerlikon Co, Switzerland, 98; chief engineer and chief designer, Bullock Elec. Mfg. Co, 00-09; chief electrical engineer and consulting engineer, Allis-Chalmers Co, 09; advisory engineer in charge, power dept, *Westinghouse Elec. and Mfg. Co*, 09-11, *consulting engineer*, 09- Scott medal, Franklin Inst, 12. A.A; Elec. Eng; Mech. Eng; Civil Eng; Am. Acad. Alternating current phenomena; induction motor; steam turbine generators; alternators and long lines; regulation and scientific methods of testing.
- Behrens, Prof. Charles A(ugust)**, 217 Lutz Ave, West Lafayette, Ind. *Bacteriology*. Grand Rapids, Mich, Jan. 5, 85. B.S, Michigan, 09, M.S, 10, Ph.D, 13. Instr. *bacter*, Michigan, 10-14; *prof. and head of dept*, *Purdue*, 14- A.A; Soc. Bact; Ass. Prof; fel. Ind. Acad; Mich. Acad. Protozoology; Trypanosoma brucei; Spirocheta novyi; pipets for holding and measuring fluids; acute poliomyelitis; Erdmann culture medium for Protozoa.
- Beilby, Dr. George Everett**, 247 State St, Albany, N. Y. *Pathology*. Harpersfield, N. Y, April 10, 76. M.D, 99. *Clin. prof. surg*, Albany Med. Col, 14- Asst. surgeon, Albany Hosp. Ass. Path. and Bact. Surgery; pathology and surgery of the thyroid gland.
- Beinhart, E(rnest) G(eorge)**, H. Zering Manufacturing Co, Cincinnati, Ohio. *Agriculture*. Cincinnati, Ohio, Sept. 24, 87. B.S, Iowa State, 10. Asst, chem. sect, Iowa Exp. Sta, 06-08, tobacco experiments, 08-09; in charge plant improvement, Sunnysbrook Tobacco Co, 09-10; *asst. in charge* New Eng. tobacco investigations, bur. plant indust, U. S. Dept. Agr, 11-19; *asst. manager*, H. Zering Mfg. Co, 19- A.A; Chem. Soc. Tobacco culture; plant nutrition.
- Belfield, Dr. W(illiam) T(homas)**, 32 N. State St, Chicago, Ill. *Medicine*. St. Louis, Mo, 56. Michigan, 72-73; M.D, Rush Med. Col, 78; Vienna. *Prof. bacter*, *Rush Med. Col*, 91-98; *genito-urinary surg*, 98- Cartwright fund lecturer, New York, 83. A.A; Ass. Genito-Urinary Surg. (pres, 02); Urol. Ass. (pres, 08). Biology and sociology of sex.
- Bell, Dr. A(lexander) Graham**, 1331 Connecticut Ave, N. W, Washington, D. C. *Physics*. Edinburgh, Scotland, March 3, 47. London, 68; hon. Ph.D, Würzburg, 82; hon. M.D, Heidelberg, 86; LL.D, Illinois Col, 81; Harvard, 96; Amherst, 01; St. Andrews, 02; Edinburgh, 06; hon. Sc.D, Oxford, 06, LL.D, 07; Dartmouth, 14; George Washington, 13. *Engaged in research*. With Gardiner G. Hubbard established 'Science,' 83. Regent, Smithsonian Inst, 98. Volta Prix, 80; Officier, Légion d'honneur, 82; medal, London Soc. Fine Arts, 02; Royal Albert medal; John Fritz medal, United Eng. Societies, 07; Cresson medal, Franklin Inst, 12; Hughes medal, Royal Soc, 13; Edison medal, 14. Aeronautic Cong, Jamestown Expos, 07 (pres); Second Int. Eugenics Cong. (hon. pres), 13. Nat. Acad; A.A; Am. Ass. Prom. Teaching

- Speech to Deaf (pres); Philos. Soc; Am. Acad; Wash. Acad; Wash. Philos. Soc; Wash. Anthropol. Soc; hon. mem. London Royal Inst. Invention of telephone (patent, March 17, 76); inductance balance; telephone probe; graphophone; electricity; phonetics; speech; aerial navigation; the instruction of the deaf in America; live stock breeding; application of electricity.
- Bell, Prof. E(lexious) T(hompson)**, University of Minnesota, Minneapolis, Minn. **Pathology*. Hatch, Mo. Aug. 31, 80. B.S. Missouri, 01, fellow, 01-02, M.D. 03; Bonn, 05-06. Asst. anat. Missouri, 02-03, instr. 03-07, asst. prof. 07-11; *path*, Minnesota, 11-16, *assoc. prof.* 16- In charge, dept. anat. Missouri, 03-04. Ass. Anat; Ass. Path. and Bact; Ass. Cancer Research; Am. Med. Ass. Experimental morphology; histogenesis of the thymus; adipose tissue; fatty metamorphosis; nephritis.
- Bell, Dr. E(ric) T(emple)**, University of Washington, Seattle, Wash. *Mathematics*. Aberdeen, Scotland, Feb. 7, 83. A.B. Stanford, 04; A.M. Washington (Seattle), 08; Ph.D. Columbia, 12. Asst. *math*, Washington (Seattle), 07-08, instr. and later, *asst. prof. math*, 12- A.A; Math. Soc; Math. Ass. Theory of numbers; numerical functions; analytical theorems in arithmetic.
- Bell, Prof. Henry Gough**, Temple Building, Toronto, Canada. *Agronomy*. Orangeville, Ont. May 24, 80. B.S.A. Toronto, 05. Asst. experimentalist, Ont. Agr. Col. 05-07; asst. prof. farm crops, Iowa State, 07-10; prof. agron. Maine, 11; agronomist, Nat. Fertilizer Ass. 11-18; *director, soil and crop improv. bur. Can. Fertilizer Ass.* 18- Phytopath. Soc; New Eng. Conf. Rural Progress (sec'y). Effect of storage on flour; variation in potatoes.
- Bell, Prof. J(ames) Carleton**, 1032 Sterling Place, Brooklyn, N. Y. *Psychology*. Mt. Vernon, Ohio, Dec. 11, 72. A.B. Denison, 96; A.M. Harvard, 03, Ph.D. 04. Instr. Latin, Boston Latin Sch. 04-05; asst. philos. Harvard, 05-06; instr. exp. psychol. Wellesley, 05-07; prof. educ. psychol. Brooklyn Train Sch. for Teachers, 07-12; art of teaching, Texas, 12-16; *psychol. and educ. Brooklyn Training Sch. for Teachers*, 16- Founder and managing ed. 'Jour. Educ. Psychol.' A.A; Psychol. Ass; N. Y. Soc. Exp. Study Educ. (sec'y-treas). Animal psychology; movement; visual perception; mental tests; educational measurements.
- Bell, Prof. James M(unsie)**, University of North Carolina, Chapel Hill, N. C. *Chemistry*. Chesley, Ont. April 19, 80. B.A. Toronto, 02, M.A. 05; Sage fellow, Cornell, 04-05, Ph.D. 05. Soil Chemist, bur. soils, U. S. Dept. Agr. 05-10; *assoc. prof. physical chem. North Carolina*, 10-13, *prof.* 13- A.A; Chem. Soc. Atomic weight of zirconium; thermal properties nitrotoluenes; chemical affinity and free energy.
- Bell, John Hume**, 477 Tillow Road, South Orange, N. J. *Electrical engineering*. Aberdeenshire, Scotland, Sept. 6, 79. *Telegraph engineer*, British Post Office, 04-11; *West. Elec. Co.* 11- Elec. Eng; British Inst. Elec. Eng. Land and submarine telegraphs; printing telegraphs; telegraph transmission.
- Bell, Dr. Louis**, 32 Sylvan Ave, West Newton, Mass. **Physics*. Chester, N. H., Dec. 5, 64. A.B. Dartmouth, 84; fellow, Hopkins, 85-87, Ph.D. 88. Prof. physics, Purdue, 88-89; ed. 'The Electrical World,' 90-92; *consulting elec. engineer*, 93-; lecturer elec. power transmission, Mass. Inst. Tech. 95-05. Int. Elec. Cong. St. Louis, 04 (sec'y, sect. D). A.A; Astron. Soc; Illum. Eng. Soc. (past pres); Nat. Elec. Light Ass; Elec. Eng. Am. Acad; Illum. Eng. Soc. London (v. pres). Spectroscopy; alternating current phenomena; wireless telephony; physiological optics; physical interpretation of albedo; oculars.
- Bell, Dr. W(illiam) B(onar)**, 803 Rittenhouse St, Washington, D. C. *Biology*. Milton, Iowa, June 2, 77. M.Di. Iowa State Nor, 99; Woods Hole, 01; A.B. Iowa, 02, fellow, 03-05, M.S. 03, Ph.D. 05; Smithsonian table, Naples Zool Sta, 05. Asst. prof. zool. and physiol. N. Dak. Col. 05-08, *prof.* 08-16; *asst. biologist, bur. biol. surv. U. S. Dept. Agr.* 16- A.A; Soc. Mammal; Ornith. Union; Wash. Biol. Soc. Homologous crustacean appendages; beetles, birds, mammals, and plants of North Dakota; extermination of ground squirrels, gophers, prairie dogs, and jack rabbits.
- Bellamy, Dr. A(ibert) W(illiam)**, University of Chicago, Chicago, Ill. *Zoology*. Yukon, Okla., June 30, 92. B.S. Kansas State, 14; fellow, Chicago, 16-17, Ph.D. 19. Asst. zool. Kansas State, 12-14, zool. and genet. 14-16; zool. Chicago, 17-18, *assoc.* 18-19, *instr. zool. and genet.* 19- A.A; Soc. Zool. Genetics; experimental evolution; development in Amphibia.
- Bellis, Arthur E(dward)**, 95 Princeton St, Springfield, Mass. *Metallurgy*. Waltham, Mass. May 26, 89. B.S. Mass. Inst. Tech. 13. Instr. chem. Mass. Inst. Tech. 13-15; *metallurgist*, N. E. Westinghouse, 15-17; *Springfield Armory*, 17- Chemist, Watertown Arsenal. Min. Eng; Soc. Test. Mat. Physical chemistry; metallography; heat treatment of steel.
- Beman, Prof. W(ooster) W(oodruff)**, University of Michigan, Ann Arbor, Mich. **Mathematics*. Southington, Conn. May 28, 50. A.B. Michigan, 70, A.M. 73; LL.D. Kalamazoo, 08. Instr. Greek and math, Kalamazoo, 70-71; *math, Michigan*, 71-74, *asst. prof.* 74-82, *assoc. prof.* 82-87, *prof.* 87- A.A. (sec'y, A. 90, v. pres. 97); Math. Soc; London Math. Soc; Math. Verein; Circolo Mat. di Palermo. History of mathematics.
- Benedict, Dr. A. L**, 377 Elmwood Ave, Buffalo, N. Y. *Physiology, Archeology*. Buffalo, Aug. 25, 65. Rochester, 83-85; A.B. Michigan, 87; M.D. Buffalo, 88; M.D. Pennsylvania, 89; hon. A.M. Ohio Wesleyan, 91. Instr. *therapeut. med. dept.* Buffalo, 90-96, *prof. physiol. and digestive diseases, dental dept.* 95-01. Supt. ethnol. and archeol. Pan-Am. Expos. 01; capt. M. C. 17-18; capt. M. C. N. Y. G. 19-20, major, 20-; ed. 'Buffalo Med. Jour.' 11-18. Prize, N. Y. State Med. Soc. 95, 96; gold medal, Am. Med. Ass. 00. Am. Acad. Med. (v. pres. 00); Gastro-Enterol. Ass. Physical diagnosis; physiologic chemistry and physics, as related to digestive organs; transition period of Seneca Indians; archeology of Niagara frontier; mound-builders.
- Benedict, Prof. Francis G(ano)**, Nutrition Laboratory, Vila St, Boston, Mass. **Chemistry*. Mil-

- waukee, Wis., Oct. 3, 70. A.B., Harvard, 93, A.M., 94; Ph.D., Heidelberg, 95; hon. Sc.D., Wesleyan, 11. Instr. chem., Mass. Col. Pharmacy, 93-94; Wesleyan, 96-01, assoc. prof., 01-05, prof., 05-07; *director, nutrition lab, Carnegie Institution*, 07- Physiol. chemist, nutrition investigations, U. S. Dept. Agr., 95-07; chemist, Storrs Exp. Sta., 96-01. Nat. Acad.; A.A.; Chem. Soc.; Soc. Biol. Chem.; Physiol. Soc.; Philos. Soc.; Am. Acad. Analytical methods; metabolism in man; temperature of the human body; respiration calorimeters.
- Benedict, Prof. H(arri)s M(iller)**, University of Cincinnati, Cincinnati, Ohio. *Botany*. Buda, Ill., Dec. 8, 73. A.B., Doane, 94; B.S., Nebraska, 96, A.M., 97; Ph.D., Cornell. Grad. asst. zool., Nebraska, 96-97; head, biol. dept., high sch., Lincoln, Nebr., 97-98; Omaha, 99-00; asst. biol., Cincinnati, 01-02; asst. prof., 03-09, assoc. prof., 09-11, *prof. bot.*, 11- A.A.; Bot. Soc.; Nature Study Soc.; Ohio Acad. Plant physiology; senility in plants.
- Benedict, Dr. H(arry) Y(andel)**, University of Texas, Austin, Tex. *Mathematics, Astronomy*. Louisville, Ky., Nov. 14, 69. Fellow, B.S., Texas, 92, A.M., 93; Ph.D., Harvard, 98; LL.D., Baylor, 20. Tutor math., Texas, 93; asst. observatory, Virginia, 93-95; instr., Texas, 99, adj. prof. math. and astron., 99-02, assoc. prof., 02-06, *prof. applied math*, 06-, *director, dept. of exten.*, 09-11, *dean, col. arts and sciences*, 11- Instr. math. and astron., Vanderbilt, 99. A.A.; Math. Soc.; Eng. Educ.
- Benedict, Dr. James E**, U. S. National Museum, Washington, D. C. *Biology*. Norwalk, Conn., Jan. 5, 54. A.M., Ph.D., Union. Res. naturalist, 'Albatross,' Atlantic cruise, 82-86; *asst. curator, U. S. Nat. Museum*, 89- Crustacea; annelids.
- Benedict, Dr. R(alph) C(urti)ss**, 322 E. 19th St., Brooklyn, N. Y. *Botany*. Syracuse, N. Y., June 14, 83. Ph.B., Syracuse, 06; Columbia, 08-09, fellow, 09-10, Ph.D., 11. Aid, N. Y. Bot. Garden, 06-08; instr. bot., Fordham, 10-11; High Sch. of Commerce, N. Y. City, 12-16; chairman, dept. biol., Bushwick High Sch., 16-19; *first asst. biol. Stuyvesant High Sch.*, 19- Instr. bot., N. Y. Univ., summer, 10; res. investigator, Brooklyn Bot. Garden, 14- A.A.; Bot. Soc.; Torrey Bot. Club; Fern Soc. (ed., 'Jour.', 10-). Phylogeny and classification of ferns.
- Benedict, Prof. Stanley R(ossiter)**, 477 First Ave., New York, N. Y. *Chemistry*. Cincinnati, Ohio, March 17, 84. A.B., Cincinnati, 06; Ph.D., Yale, 08. Instr. chem., Syracuse, 08-09; assoc. biol. chem., Columbia, 09-10; asst. prof. chem. path., med. col., Cornell, 10-11, chem., 11-12, *prof.*, 12- Harvey lecturer, N. Y. Acad. Med., 16. A.A.; Soc. Biol. Chem. (pres, 20); Physiol. Soc. Uric acid in its relation to metabolism.
- Benedict, Dr. Susan R(ose)**, 11 Barrett Place, Northampton, Mass. *History of mathematics*. Norwalk, Ohio, Nov. 29, 73. B.S., Smith, 95; A.M., Columbia, 06; Ph.D., Michigan, 14. Instr. math., Smith, 06-14, *assoc. prof.*, 14- Math. Soc.; Math. Ass. Algebraic symbols; early treatises on algorism.
- Benger, Dr. Ernest B(aden)**, Parlin, N. J. *Chemistry*. Belvidere, Ill., Dec. 20, 85. B.S., Grinnell, 07; M.S., Wisconsin, 13, fellow, 14-15, 16-17, Ph.D., 17. Teacher science, high sch., Minn. and Ky., 07-14; instr. chem., Wisconsin, 15-16, *research chemist and lab. director, E. I. duPont de Nemours and Co.*, 17- Chem. Soc. Physical and inorganic chemistry; photochemistry.
- Bengis, Dr. R(obert) O(liver)**, Heyden Chemical Works, Garfield, N. J. *Chemistry*. New Haven, Conn., May 2, 90. Ph.B., Yale, Ph.D., 13. Biochemist, pharmacol. lab., bur. chem., U. S. Dept. Agr., 14-16; asst. chief chemist, Calco Chem. Co., 16-19; *chief chemist, Heyden Chem. Co.*, 19- Chem. Soc. Organic, pharmaceutical and biological chemistry; dyes and intermediates.
- Bengtson, Prof. N(els) A(ugust)**, 1529 S. 24th St., Lincoln, Nebr. *Geography*. Winslow, Sweden, May 22, 79. A.B., Nebraska, 07, A.M., 08. Prof. geog., State Nor. Sch., Peru, Nebr., 03-04, 05-06; instr., Nebraska, 08-09, asst. prof., 09-12, assoc. prof. and later *prof. geol. and geog.*, 13- Instr. geog., Cornell, summer, 12; prof., Virginia, 13; U. S. Soil Surv., 14; Nebr. Geol. Surv., 15; collaborator, bur. soils, U. S. Dept. Agr., 14-; trade commissioner, U. S. Dept. Commerce, 19. A.A.; Ass. Geog.; Nebr. Acad. Geology; soil survey; Pennsylvanian and Permian stratigraphy of Nebraska; economic geography of Norway; geology of Honduras.
- Benjamin, Prof. C(harles) H(enry)**, Purdue University, La Fayette, Ind. *Mechanical engineering*. Patten, Maine, Aug. 29, 56. M.E., Maine, 81; hon. D.Eng., Case, 08. Instr. mech. eng., Maine, 80-83, prof., 83-86; Case, 89-07; dean, sch. eng., Purdue, 07-20, *director, Eng. Exp. Sta.*, 17- Mech. Eng. (v. pres, 17); Eng. Educ.; hon. mem. Cleveland Eng. Soc. Bursting of cast iron fly-wheels and cylinders; stresses in pulley arms; smoke abatement; lubrication; locomotive head lights; farm tractors.
- Benjamin, Prof. Earl W(hit)ney**, 208 Waite Ave., Ithaca, N. Y. *Poultry husbandry*. Almond, N. Y., Oct. 16, 89. B.S.A., Cornell, 11, M.S.A., 12, Ph.D., 14. Instr. *poultry husbandry, Cornell*, 11-14, asst. prof., 15-19, *prof.*, 20- Marketing.
- Benjamin, Dr. G(eorge) H(illard)**, 160 Fifth Ave., New York, N. Y. *Physics*. New York, Dec. 25, 52. Union, 72; M.D., Albany Med. Col., 74; Ph.D., Freiburg, 82. Indust. engineer and patent agent; pres., Conn. Development Co.; New Process Combustion Co. Ed., 'Appleton's Ency. of Applied Mech.'; 'Nat. Ency. of Applied Mech.' Medico-Legal Soc.; British Ass. Industrial chemistry; high explosives.
- Benjamin, Dr. Marcus**, U. S. National Museum, Washington, D. C. *Chemistry, Technology*. San Francisco, Calif., Jan. 17, 57. Ph.B., Columbia, 78; hon. A.M., Lafayette, 88; Ph.D., Nashville, 89; Sc.D., Pittsburgh, 05; LL.D., St. John's, (Md.), 10. Chemist, U. S. lab., Appraiser's Store, N. Y. City, 83-85; lecturer chem., N. Y. Woman's Med. Col., 84-86; *ed. U. S. Nat. Museum*, 96- Lecturer, Washington Cathedral, 11- Mem. jury of awards, Columbian, Nashville, Omaha, Pan-Am, Charleston, La. Purchase and Jamestown Expositions; ed. contributor, Appleton's Cyclopedias, 'Int. Cyclopedias,' 'Int. Yearbook,' 'New Practical Cyclopedias'; mem. U. S. Assay Commission, 96, 00, 04, 06, 12, 17, 18. Int. Cong. Arts and Science, St. Louis, 04

- (sec'y, sect. indust. chem). A.A.; (sec'y, I, 98, v. pres. and acting pres, 99, 00); Soc. Chem. Indust; fel. London Chem. Soc.
- Benner, Prof. R(aymond) C(alvin)**, Freemont, Ohio. *Chemistry*. Minneapolis, Minn, May 13, 77. B.S., Minnesota, 02; A.M., Wisconsin, 05, Ph.D, 09. Instr. chem, Mich. Agr. Col, 02-03; Wisconsin, 03-06; asst. prof, Arizona, 06-11; prof. electrometal, Pittsburgh, 11-13; *director, Freemont Lab, Nat. Carbon Co*, 13- Asst. Wis. Geol. Surv, 03-06; mem. U. S. Assay Commission, 12. A.A.; Chem. Soc. Yttrium earths; electrochemistry; primary cells; corrosion; catalysis.
- Bennett, Prof. Albert A(rnold)**, University of Texas, Austin, Tex. **Mathematics*. Yokohama, Japan, June 2, 88. A.B., A.M., Brown, 10, M.S., 11; Ph.D, Princeton, 15; Göttingen; Paris; Bologna; Chicago. Instr. math, Princeton, 14-16; adj. prof, Texas, 16-18, *assoc. prof*, 18- Math. and dynamics expert, ordnance dept, U. S. A, 19-; asst. ed, 'Annals of Math.' Math. Soc; Math. Ass. Exterior ballistics.
- Bennett, C(arlyle) W(ilson)**, Michigan Agricultural College, East Lansing, Mich. *Plant pathology*. Narrows, Ky, June 8, 95. B.S., Kentucky, 17; M.S., Mich. Agr. Col, 19. Asst. bot, Mich. Agr. Col, 17-19, *instr*, 19- Phytopath. Soc. Plant rots.
- Bennett, C(harles) W(illiam)**, Ithaca, N. Y. *Physical chemistry*. Hartford, Ky, March 29, 86. B.S., A.M., Vanderbilt, 09; Ph.D, Cornell, 11. Asst. chem. Vanderbilt, 07-09; Cornell, 09-11, *instr*, 11-13, asst. prof, 13-15; *chemical technologist*. Chem. Soc; Electrochem. Soc. Electrochemistry; electrolysis of solutions; photochemical effects; storage batteries; nitrogen fixation; phosphoric acid; alumina.
- Bennett, E(dmund) R**, Boise, Idaho. *Horticulture*. Geneva, Mich, June 3, 74. B.S., Mich. Agr. Col, 02, M. Hort, 08. Asst. hort, Conn. Col, 03-06; asst. horticulturist, Colo. Exp. Sta, 06-09, prof. hort, Colo. Agr. Col, 09-13; horticulturist, C. R. I. and P. R. R, 13-14; *field horticulturist*, Idaho, 16- Soc. Hort. Sci.
- Bennett, Prof. Edward**, University of Wisconsin, Madison, Wis. *Electrical engineering*. Pittsburgh, Pa, Oct. 26, 76. E.E., Pittsburgh, 97. Engineer, Nernst Lamp Co, 99-02, chief engineer, 03-04, consulting engineer, 04-05; head engineer, National Elec. Signaling Co, 05-06; engineer, Telluride Power Co, 06-09; *assoc. prof. elec. eng, Wisconsin*, 09-13, *prof*, 13- With Westinghouse Elec. and Mfg. Co. A.A.; Elec. Eng; Electrochem. Soc; Eng. Educ; Radio Eng; Illum. Eng. Soc; Ass. Prof. Nernst lamp development; lightning arresters; wireless telegraphy; power transmission.
- Bennett, Dr. Harold S(elden)**, 1 Grove Place, Ithaca, N. Y. *Chemistry*. A.B., Cornell, 13, Ph.D, 17. Teacher chem, Cornell, 13-15. Capt, C. W. S, 17-18; in charge, dept. chem, Forman Christian Col, Lahore, India, 19-20. Chem. Soc. Electrical endosmose; hydronitric acid.
- Bennett, Hugh H(ammond)**, Bureau of Soils, Washington, D. C. *Agriculture*. Wadesboro, N. C, Apr. 15, 81. B.S., North Carolina. *Soil scientist, bur. soils, U. S. Dept. Agr*, 03- Mem. agr. exped. to Canal Zone, 09; in charge agr. exped. to Alaska, 14. Lieut. engineers, 18, reserve officer, 18- A.A.; Soc. Agron. Soils.
- Bennett, Dr. James Percy**, University of California, Berkeley, Calif. *Botany*. Pender, Nebraska, Oct. 25, 86. A.B., Missouri, 11, A.M., 13; Ph.D, Wisconsin, 18. *Instr. bot*, Wisconsin, 15-18; *pomol, California*, 19- A.A.; Bot. Soc; Phytopath. Soc; Chem. Soc; Calif. Bot. Soc. Plant nutrition and growth; physiology and nutrition of fruit trees.
- Bennett, Prof. W(illiam) Z(ebina)**, College of Wooster, Wooster, Ohio. *Chemistry*. Montpelier, Vt, Feb. 25, 56. A.B., Harvard, 78, A.M., 81, Ph.D, 83; Berlin, 88. Asst. chem, Harvard, 78-80; master science, DeVaux, 80; adj. prof, Wooster, 80-83, prof, 83-86, chem. and physics, 86-02, *prof. chem. and director, chem. lab*, 02- A.A.; Chem. Soc; Cleveland Chem. Soc. Mucochloric acid; dichloroacrylic acid; tetrabromopropionic acid; methods for determining nitrites in water.
- Benoliel, S(olomon) D**, 4508 Locust St, Philadelphia, Pa. *Chemistry*. New York, N. Y., June 1, 74. B.S., Col. City of N. Y, 93; E.E., A.M., Columbia, 96. With Gen. Elec. Co, Schenectady, N. Y, 96-97; *instr. physics, elec. and chem*, Adelphi, 97-01; *gen. manager*, Roberts' Chem. Co, 01-06; *Int. Chem. Co*, 06- Lecturer, Boards of Educ, New York City and Brooklyn; Brooklyn Inst. Chem. Soc; Electrochem. Soc; Elec. Eng. Alkalies; synthetic muriatic acid; lubricating compounds; soap.
- Bensley, Dr. B(enjamin) A(rthur)**, University of Toronto, Toronto, Can. *Zoology*. Hamilton, Can, Nov. 5, 75. B.A., Toronto, 96; Senff fellow, Columbia, 99-00, Ph.D, 02. Lecturer, *zool*, Toronto, 02-06, *assoc. prof*, 06-14, *prof*, 14- Director, Ont. Museum Zool, Toronto. A.A.; Paleont. Soc; fel. Royal Soc. Can. Comparative anatomy; general mammalian and marsupial evolution.
- Bensley, Prof. R(obert) R(ussell)**, University of Chicago, Chicago, Ill. **Anatomy*. Hamilton, Can, Nov. 13, 67. B.A., Toronto, 89, M.B., 92, hon. D.Sc, 19. Asst. demonstrator biol, Toronto, 92-99, demonstrator, 99-01; asst. prof. *anat*, Chicago, 01-05, *assoc. prof*, 05-07, *prof*, 07- A.A.; Soc. Nat; Ass. Anat. (pres, 18-); Soc. Exp. Biol; British Ass. The gastric glands of mammals; esophageal glands of Urodela; microchemistry; the glands of Brunner; structure of the human stomach; salivary glands; pancreas; structure of protoplasm; thyroid gland.
- Benson, Prof. C(lara) C(ynthia)**, University of Toronto, Toronto, Can. *Biochemistry*. Port Hope, Can, June 5, 75. B.A., Toronto, 99, fellow, 99-03, Ph.D, 03. Instr. science, Lillian Massey Sch. Household Science, 03-05; lecturer *physiol. chem, Toronto*, 05-06, *assoc. prof*, 06- Chem. Soc; Soc. Biol. Chem; Home Econ. Ass; Can. Inst. Chem. Physiological and food chemistry; rates of chemical reactions; chemistry of physiological fluids; chemistry of fish.
- Benson, Prof. Harry K(reitzer)**, University of Washington, Seattle, Wash. *Chemistry*. Lebanon, Pa, Jan. 3, 77. A.B., Franklin and Marshall, 99, A.M., 02; fellow, Columbia, 06-07, Ph.D, 07. Instr. science, high sch, Kent, Wash, 00-03; *assoc. prof. chem, Washington (Seattle)*, 04-19, *prof. and head of dept*, 19- Asst. soil

- surv. Wash. State Geol. Surv. and bur. soils, U. S. Dept. Agr, 09-; commercial agent, U. S. Dept. Commerce, 14; consulting chemist, Am. Nitrogen Products Co, 17-; capt, ordnance dept, 18-19. Chem. Soc. (pres, Puget Sound sect, 09). Industrial chemistry; molten hydrates as solvents; soils of western Washington; wood tar from western conifers.
- Benson, Dr. Robert L(ouis)**, P. O. Box 356, Portland, Oregon. *Pathology*. Flint, Mich, May 30, 80. A.B, Michigan, 02, A.M, 04; M.D, Rush Med. Col, 10. Bacteriologist, Fla. State Board of Health, 10-12; *prof. path*, Oregon, 13- City bacteriologist, Portland, Oregon. Ass. Path. and Bact; Am. Med. Ass; Int. Ass. Med. Mus. Bacteriology.
- Bent, Arthur Cleveland**, Taunton, Mass. *Ornithology*. Taunton, Nov. 25, 66. A.B, Harvard, 89. Sec'y, *Bristol Co. Acad Sci*, 09-12, *pres*, 12- Ornith. Union; Nat. Ass. Audubon Soc; Nuttall Ornith. Club; Wilson Ornith. Club; Cooper Ornith. Club. Distribution and life histories of American birds.
- Bentley, Prof. Gordon M(ansir)**, Knoxville, Tenn. *Zoology, Entomology*. Great Barrington, Mass, Sept. 23, 76. B.S.A, Cornell, 00, A.M, 01. Prof. bot. and zool, Union Acad, Belleville, N. Y, 01-05; instr. entom, N. C. Col, and asst. state entomologist, 05-06; instr. *zool. and entom*, Tennessee, 06-08, *assoc. prof. and entomologist*, *Exp. Sta*, 08-; asst. state entomologist, 08-09, *state entomologist and plant pathologist*, 09-A.A. (v. pres, 18); Ass. Econ. Entom; Entom. Soc; Phytopath. Soc; Fed. Hort. Inspectors (pres); Tenn. Hort. Soc; Nursery Ass; Florists Ass; Beekeepers Ass. (sec'y-treas); E. Tenn. Beekeepers Ass. (pres).
- Bentley, Prof. John, Jr**, Cornell University, Ithaca, N. Y. *Forest engineering*. Brooklyn, N. Y, June 8, 80. With U. S. Forest Service, 07-11; asst. *prof. forest engineering*, Cornell, 12-17, *prof*, 17- Lecturer lumbering, Yale, 17-19. Soc. Foresters. Forest management.
- Bentley, Prof. Madison**, University Hall, Urbana, Ill. **Psychology*. Clinton, Iowa, June 18, 70. B.S, Nebraska, 95; Ph.D, Cornell, 98. Asst. *psychol*, Cornell, 97-98, instr, 98-02, asst. *prof*, 02-12; *prof. and director, psychol. lab*, Illinois, 12- Ed, 'Psychol. Index.' A.A; Psychol. Ass; Philos. Ass. The memory image; mental synthesis; comparative and social psychology; mental inheritance; eugenics.
- Bentley, Dr. William B(urdelle)**, Morris Ave, Athens, Ohio. *Chemistry*. Maple Valley, N. Y, Aug. 8, 66. A.B, Harvard, 89, A.M, 90, Ph.D, 98. Asst. chem, Harvard, 90-91; adj. *prof. chem. and physics*, Arkansas, 91-94; *assoc. prof*, 94-00; *prof. chem*, Ohio (*Athens*), 00- Asst. chem, U. S. Torpedo Sta, Newport, R. I, 90; capt, ordnance dept, U.S.A, 18-19. A.A; Chem. Soc; hon. fel. London Soc. Biol. Chem. Derivatives of symmetrical tribrom benzol.
- Benton, Prof. J(ohn) R(obert)**, Gainesville, Fla. *Physics*. Concord, N. H, June 6, 76. B.S, Trinity (Conn), 97, A.B, 98; Ph.D, Göttingen, 00. Instr. math, Princeton, 00-01; asst. physics, Cornell, 01-02; various positions in govt. scientific work, 02-04; research asst, geophys. lab, Carnegie Institution, 04-05; *prof. physics and elec. eng*, Florida, 05-, *dean, col. eng*, 10- A.A; Physical Soc; assoc. Elec. Eng; Eng. Educ. Mechanical properties of matter, especially elasticity.
- Benton, Ralph**, University of California, Berkeley, Calif. *Entomology*. Munich, Germany, Aug. 2, 84. B.S, Mont. Col, 06; B.L, California, 07, M.S, 09. Asst. mil. science and tactics, Mont. Col, 01-03, asst. apiculture, 04-05; asst. *entom*, California, 06-08, instr, 08-10; head, dept. agr, Los Angeles Norm. Sch, 10-12; *assoc. prof*, Southern California, 12-14; inspector, U. S. Biol. Surv, 14-18; lieut, Inf, 18-19; *instr. agr. educ*, California, 19- Asst, U. S. examiner surveys, Mont. summer, 01; asst. to entomologist, Mont. Exp. Sta, summers, 02-04; special field agent entom, U. S. Dept. Agr, in Europe, summer, 05. A.A; Entom. Soc; Nat. Bee Keepers' Ass; Calif. State Bee Keepers' Ass. Wintering of bees; varieties of bees of economic importance; the production of honey on a commercial basis; queen rearing on a commercial basis; control of mating of queen bees; artificial impregnation; the floral relationships of bees; wax secretion and production; bee diseases and resistant varieties of bees.
- Bentz, Dr. Charles A**, 126 W. Humbolt Parkway, Buffalo, N. Y. *Bacteriology*. Buffalo, Feb. 20, 79. M.D, Buffalo, 02. Lecturer histol. and bacter, Buffalo, 02-04, bacter, 04-07, embryol, 10, *assoc. prof. prev. med; city bacteriologist*. Clin. pathologist, Erie Co. Hosp; Sisters of Charity Hosp; St. Mary's Maternity Hosp; Mem. Hosp; Providence Retreat. Ass. Path. and Bact; Buffalo Acad. Med. Trichinosis; rhinophyma; tetanus; arthritis deformans; avian tuberculosis.
- Benzenzerg, George Henry**, 1018 Wells Building, Milwaukee, Wis. *Engineering*. New York, N. Y, May 31, 47. C.E, Michigan, 67, D.Eng, 12; Sc.D, Wisconsin, 11. Asst, U. S. Lake Surv, 66-69; C. M. and St. P. R. R. and M. and N. R. R, 60-73; asst. city engineer, Milwaukee, 73-82, city engineer, 82-99; consulting engineer, 95; chief engineer, Cincinnati Water Works, 04-09. Consulting engineer for cities throughout the U. S. A.A; Civil Eng. (pres, 07); Munic. Eng. (pres, 96); Am. Water Works Ass. (pres, 93); New Eng. Water Works Ass. Water purification.
- Berg, Prof. Ernst Julius**, Union University, Schenectady, N. Y. *Electrical Engineering*. Osterlund, Sweden, Jan. 9, 71. M.E, Royal Polytech. Stockholm, 92; hon. Sc.D, Union, 09. Elec. engineer, Gen. Elec. Co, 92-04, consulting engineer, 04-09; *prof. in charge, dept. elec. eng*, Illinois, 09-13; *Union*, 13- A.A; Elec. Eng; Math. Soc. Rotary converters; transmission line disturbances; electromagnetic radiation.
- Berg, Dr. William N(athan)**, U. S. Department of Agriculture, Washington, D. C. *Pathological chemistry*. Klein-Verdein, Hungary, Sept. 22, 81. B.S, Columbia, 04, Ph.D, 07; D.V.M, George Washington, 16. Asst. physiol. chem, Col. Physicians and Surgeons, Columbia, 04-07, tutor biol. chem, 07-08; *chemist, dairy div, bur. animal indust*, U. S. Dept. Agr, 08-12, *path. div*, 12- Capt, Sanit. C, 18-19. A.A; Soc. Exp. Biol; Soc. Biol. Chem; Wash. Acad. Determination

- of ammonia in milk; the digestibility of different proteins in various pepsin-acid and trypsin-base solutions; relation between the physiological action of ions and their physico-chemical properties; chemical changes in stored butter; slow proteolysis of casein; chemical nature of antitoxin; immunization against blackleg; anthrax serum.
- Bergeim, Dr. Olaf**, Jefferson Medical College, Philadelphia, Pa. *Physiological chemistry*. Watertown, S. Dak. Nov. 6, 88. B.S., S. Dak. Col. 08; M.S., Illinois, 12; Ph.D., Jefferson Med. Col. 14. Asst. chem., Illinois, 11-12; instr. physiol. chem. and toxicol. *Jefferson Med. Col.*, 12-14, demonstrator physiol. chem., 14-16, *org. and physiol. chem.*, 15-17, assoc., 17-19, *asst. prof.*, 19- Mem. research div. C. W. S., 18. Eighth Int. Cong. Applied Chem. A.A.; Soc. Biol. Chem.; Chem. Soc.; Physiol. Soc.; Soc. Exp. Biol. Digestion and metabolism.
- Berger, Prof. E(dward) W(illiam)**, State Plant Board, Gainesville, Fla. *Zoology*. Middleburg, Ohio, Nov. 29, 69. A.B., German Wallace, 91; Ph.B., Baldwin, 94; Ph.D., Hopkins, 99. Prof. science, Baldwin, 99-01; Lincoln High Sch., Cleveland, 01-02; *entomologist, Florida*, 06- A.A.; Entom. Soc.; Ass. Econ. Entom.; Ohio Acad.; Fla. Entom. Soc. Physiology and histology of Cubomedusae; Pseudoscorpionidae; habits of Hyphantria cunea; biology of Aleyrodidae.
- Bergey, Dr. D(avid) H(endricks)**, 206 S. 53d St., Philadelphia, Pa. *Bacteriology, Hygiene*. Montgomery Co, Pa, Dec. 27, 60. M.D., B.S., Pennsylvania, 84, Scott fellow, 94-95, D.P.H., 16; A.M., Ill. Wesleyan, 94. Instr. hygiene, *Pennsylvania*, 95-96, first asst., lab. hygiene, 96-03, *asst. prof. bacter.*, 03-16; *hygiene and bacter.*, 16- Capt. M. C., 17, major, 18. A.A.; Soc. Nat.; Soc. Bact.; Am. Med. Ass.; Soc. Exp. Biol. Composition of expired air; pseudo-diphtheria bacilli; hemolysis and bacteriology; influence of alcoholism upon hemolysis; anaphylaxis; phagocytosis; types of infection and immunity; influence of food preservatives on enzyme action; hygiene.
- Bergman, Prof. H(erbert) F(loyd)**, College of Hawaii, Honolulu, Hawaii. *Botany*. Medicine Lodge, Kans, Sept. 15, 83. B.S., Kansas State, 05; M.S., Minnesota, 15, Ph.D., 18. Asst. bot., Kansas State, 06-08; asst. prof. N. Dak. Col., 08-12; Minnesota, 12-17; asst. pathologist, bur. plant indust., U. S. Dept. Agr., 17-19; *prof. bot.*, *Col. of Hawaii*, 19- A.A.; Ecol. Soc. Plant physiology and ecology; flora of North Dakota; aeration of roots; plant succession.
- Bergtold, Prof. W(illiam) H(arry)**, 1159 Race St., Denver, Colo. *Ornithology*. Buffalo, N. Y., Oct. 28, 65. M.D., Buffalo, 86; hon. B.S., Hobart, 90. Prof. path., Buffalo, 90-94; Denver, 96-00. Mem. Ornith. Union; Soc. Mammal. Incubation periods of birds.
- Berkeley, Dr. W(illiam) N**, 12 Clay St., Baltimore, Md. *Chemistry*. Aldie, Va., Sept. 24, 67. Virginia, 87-88, 91-92; Ph.D., Hopkins, 99. Chemist, Dora Furnace Co, Va., 92-93; prof. chem., St. John's (Md.), 93-96; instr. science, Model and Training Sch., San Juan, P. R., 99; chemist, Superior Board of Health, P. R., 00-05; chemist in charge, Phila. pure food lab, U. S. Dept. Agr., 05-06; prof. physics and chem., Sweet Briar, 06-07; instr. indust. and gen. chem., Lehigh, 08-09; chemist, U. S. N. Exp. Sta., Annapolis, 09-18; ed. 'Fuel Bul.', U. S. Fuel Ad., 18-19; *industrial chemist*, 19- Instr., Diechman Sch., Baltimore, 98. A.A.; Chem. Soc. Rate of reduction of isomeric nitro-benzoic acids; food value of bananas.
- Berkey, Dr. Charles P(eter)**, Columbia University, New York, N. Y. **Geology*. Goshen, Ind., March 25, 67. B.S., Minnesota, 92, M.S., 93, Ph.D., 97. Instr. miner., Minnesota, 93-03; tutor *geol.*, *Columbia*, 03-07, instr., 07-10, asst. prof., 10-14, assoc. prof., 14-16, *prof.*, 16- Asst., Minn. and Wis. Geol. Surveys; special geologist, N. Y. Geol. Surv.; geologist, N. Y. City board of water supply, 06-18. A.A. (mem. council, 16); Geol. Soc.; Min. Eng.; fel. N. Y. Acad. (v. pres., 13); Minn. Acad. (cor. sec'y, 97-03). The geology and mineralogy of certain Keweenawan and Cambrian areas in Minnesota and Wisconsin; clays and other mineral resources; interpretation and chronology of certain laminated glacial deposits; structural and stratigraphic features of the Highlands of New York; structural, areal and engineering geology of New York City; quality of the bluestone of the Catskills; geology of the Catskill aqueduct; origin of the St. Peter sandstone of the Mississippi Valley; geology of Porto Rico and of the West Point quadrangle, N. Y.
- Berliner, Emile**, 1458 Columbia Road, Washington, D. C. *Electricity, Acoustics*. Hanover, Germany, May 20, 51. German schools. Chief instrument inspector, Bell Telephone Co, 78-81. Mem. Wash. Milk Conf., 07. John Scott medal, Franklin Inst. The loose contact telephone transmitter; telephone induction coil; the gramophone; milk supply.
- Berman, Dr. Nathan**, 29 Parker St., Port Chester, N. Y. *Bacteriology*. New Haven, Conn., Dec. 17, 93. Ph.B., Yale, 14, M.S., 16, Ph.D., 17; fellow, Hopkins, 18-19. *With Arlington Chem. Co*, 19- With Eli Lilly and Co, summer, 17; Red Cross sanit. service, 17-18; U. S. Pub. Health Service, summer, 18. Soc. Bact. Bacterial metabolism.
- Bernheim, Dr. Bertram M(oses)**, 2313 Eutaw Place, Baltimore, Md. *Surgery*. Paducah, Ky., Feb. 15, 80. A.B., Hopkins, 01, M.D., 05. Asst. surg., *Hopkins*, 12-14, *instr. clin. surg.*, 14- Visiting surgeon, Union Protestant Infirmary; Hosp. for Women of Md; Church Home and Infirmary; attending surgeon, Hebrew Hosp; major, M. C., A.E.F., 17-19. A.A.; Am. Med. Ass.; Col. Surg. (founder); Surg. Research Club; Berlin Surg. Soc. Surgery of the vascular system; blood transfusion; gangrene of the extremities.
- Bernstein, Prof. B(enjamin) A(ram)**, University of California, Berkeley, Calif. *Mathematics*. Posvol, Russia, May 20, 81. Baltimore City Col., 97-02; A.B., Hopkins, 05; Ph.D., California, 13. Instr. *math.*, *California*, 07-19, *asst. prof.*, 19- A.A.; Math. Soc.; Math. Ass. Mathematical logic; theory of probability.
- Bernton, Dr. Harry S(aul)**, 2013 O St., N. W., Washington, D. C. *Hygiene*. Jan. 15, 84. A.B., Harvard, 04, M.D., Harvard Med. Sch.,

08. Director, Bender Lab, Albany, N. Y., 09-14; pathologist, R. I. State Board of Health, 14-18; instr. path, Harvard Med. Sch., 16-18; *director, Child Welfare Soc., Washington*, 19-; Prof. med. juris, George Washington; lecturer hygiene, Georgetown. Ass. Path. and Bact; Int. Ass. Med. Mus. Child hygiene; bacteriology; pathology; epidemiology.
- Berolzheimer, Daniel D(eronde)**, 1 Madison Ave, New York, N. Y. *Chemistry*. New York, June 30, 77. Col. City of N. Y., 93-95; N. Y. Univ., 95-97; Würzburg, 97-00. Chemist in charge, physiol. and anal. lab. of Dr. Judson Daland, Phila., 00-04; director, Biochem. Lab., N. Y., 04-06; anal. lab., Arlington Chem. Co., Yonkers, N. Y., 06-10; librarian, N. Y. Chemists Club, 10-15; The Barrett Co., N. Y., 15-19; *asst. tech. ed., 'The Chem. Cat. Co.,' N. Y.*, 19-; Chem. Soc. (librarian, 10); Soc. Chem. Indust; N. Y. Chemists Club (librarian); Ohio Archeol. Soc; Soc. Chim. indust. Chemical and technical bibliography; carbonyl chlorid; poisonous war gases; chemical dictionary.
- Berry, Prof. Charles Scott**, 608 Oswego St, Ann Arbor, Mich. *Psychology*. Hamlin, Kans., May 23, 75. A.B., Hiram, 03; A.M., Harvard, 05, Ph.D., 07, James Walker fellow, Harvard, at Berlin, 07-08. Asst. econ, Hiram, 03-04; philos., Harvard, 06-07; acting asst. prof. *educ., Michigan*, 08-09, asst. prof., 09-15, assoc. prof., 15-19, *prof.*, 19-; *director, psychol. clinic, pub. schools, Detroit*, 19-; Capt. Sanit. C., 17-18, major, 18-19. A.A.; Psychol. Ass; Soc. Col. Teachers Educ. Comparative psychology; imitation in animals; psychology and education of exceptional children.
- Berry, Prof. Charles W(illiam)**, Massachusetts Institute of Technology, Cambridge, Mass. *Engineering*. Charlestown, Mass., May 21, 72. B.S., Mass. Inst. Tech., 95, Swett fellow, at Göttingen, 95-97. Asst. instr. *heat eng., Mass. Inst. Tech.*, 99-00, instr., 00-08, asst. prof., 08-12, assoc. prof., 12-20, *prof.*, 20-; *Refrig. Eng.* Application of thermodynamics to engineering problems; refrigeration; heat transmission.
- Berry, Prof. Edward W(ilber)**, Johns Hopkins University, Baltimore, Md. *Paleontology*. Newark, N. J., Feb. 10, 75. Hopkins, 05-06. Asst. *paleont., Hopkins*, 06-08, instr., 08-10, assoc., 10-13, assoc. prof., 13-17, *prof.*, 17-; Asst. state geologist, Md., 17-; geologist, U. S. Geol. Surv., 10-; mem. Williams Mem. exped. to S. Am., 19-; Walker prize, Boston Soc. Nat. Hist., 01. A.A.; Soc. Nat; Geol. Soc; Paleont. Soc; Philos. Soc; N. Y. Acad; Torrey Bot. Club (sec'y); Soc. géol. de France. Historical geology; floras and geological history of southeastern North America; geological and geographical distribution of flowering plants.
- Berry, George M(agruder)**, 661 Allen St, Syracuse, N. Y. *Chemistry*. Leonardtown, Md., Feb. 18, 78. B.S., George Washington, 99. Chemist, Park Steel Co., 99-03; Willson Aluminum Co., 03-04; consulting chemist, Wyckoff, Seamens and Benedict, 04-05; *chief chemist, Walcomb Steel Co.*, 05-; Lecturer metal, Syracuse, 16-; Chem. Soc. (sec'y, Syracuse sect, 11-13, v. pres, 15-16, pres, 16-18, counselor, 19); Electrochem. Soc; Min. Eng. Metallurgy; electric furnaces; effect of gases on steels when heated; melting and refining of fine steels.
- Berry, Prof. H(erman) C(laude)**, University of Pennsylvania, Philadelphia, Pa. *Engineering*. Near Zionsville, Ind. A.B., Indiana, 97; B.S.C.E., Purdue, 02. With T. St. L. and W. R. R., 02; instr., Colo. Sch. Mines, 02-03; with U. S. Reclamation Service, 03-04; instr. civil eng., Cornell, 04-05; *prof., Pennsylvania*, 05-; Assoc. Civil Eng; Soc. Test. Mat; Phila. Eng. Club. Reinforced concrete; beams; columns; arches.
- Berry, Prof. James B(erthold)**, Meadville, Pa. *Botany, Education*. Edwardsville, Ill., Aug. 2, 80. B.S.F., Minnesota, 10; M.S., Pa. State, 13; Munich, 13-14; Mich. Agr. Col., 17; Georgia, 18-19. Forest asst., U. S. Forest Service, 10-11; instr. forestry, Pa. State, and forester, Exp. Sta., 11-13; prof. forestry, Georgia, 14-17, forestry and plant path., 14-20; *supervisor vocational agr. educ., Crawford Co., Pa.*, 20-; Collaborator, U. S. Forest Service; bur. plant indust, U. S. Dept. Agr; 'Bot. Abstracts.' A.A.; Phytopath. Soc. Georgia plant diseases; southern woodland forestry; corn production; seed treatment.
- Berry, Prof. Otto Carter**, 633 Russell St, West Lafayette, Ind. *Engineering*. Ohio, Sept. 30, 83. A.B., Michigan, 05, B.S., 06; M.E., Wisconsin, 18. *Assoc. prof. eng., Purdue*, 17-; Automotive Eng. Carburetion.
- Berry, Dr. S(amuel) Stillman**, 745 W. Highland Ave, Redlands, Calif. *Zoology*. Unity, Maine, March 16, 87. A.B., Stanford, 09, Ph.D., 13; A.M., Harvard, 10. Asst. zool., Stanford, 10-11; research asst. and librarian, Scripps Inst., California, 13-16, research zoologist, 16-18; *asst., U. S. Bur. Fisheries*, 08-; A.A.; West. Soc. Nat; Calif. Acad; S. Calif. Acad; London Malacol. Soc. West American Mollusca; cephalopods of America, Japan, Hawaiian Islands, Kermadec Islands; chitons of western North America and North Pacific; biophotogenesis.
- Berry, Prof. W(illiam) J(ohnston)**, 224 St. Johns Place, Brooklyn, N. Y. *Mathematics*. Brooklyn, May 3, 83. C.E., Brooklyn Polytech, 03, M.S., 04; A.M., Harvard, 08. Instr. *math., Brooklyn Polytech*, 04-07; Harvard, 08-09; asst. prof., *Brooklyn Polytech*, 09-17, *assoc. prof.*, 17-; Sec'y, faculty, Brooklyn Polytech, 09-17. A.A.; Math. Ass; Math. Soc; Eng. Educ. Systems of linear partial differential expressions.
- Bessey, Prof. Ernst A(thearn)**, Michigan Agricultural College, E. Lansing, Mich. **Botany*. Ames, Iowa, Feb. 20, 77. A.B., Nebraska, 96, B.S., 97, A.M., 98; Ph.D., Halle, 04. Asst. veg. pathologist, U. S. Dept. Agr., 99-01, asst. in charge seed and plant introduction, 01-02, veg. pathologist, 04-06, pathologist in charge, sub-tropical lab., Miami, Fla., 06-08; *prof. bot. and bacter., Louisiana*, 08-10; *bot., Mich. Agr. Col.*, 10-; Lab. asst. bot., summer sch., Colorado, 94, 95, 96; field collector, N. Y. Bot. Garden, 97; div. agrost., U. S. Dept. Agr., 98, agr. explor., 02, 03, 04. A.A. (sec'y, G., 01); Bot. Soc; Phytopath. Soc; Torrey Bot. Club; Mich. Acad. (pres, 15); Int. Ass. Bot. Mycology; plant pathology; Florida strangling figs; flora of Louisiana and Michigan; plant diseases due to nematodes.

- Best, Dr. G(eorge) N(ewton)**, Rosemont, N. J. *Bryology*. Round Valley, N. J., Oct. 16, 46. Lafayette, 73; M.D., Pennsylvania, 75. A.A.; Torrey Bot. Club; Sullivant Moss Chapter (pres, 01); cor. mem. Phila. Bot. Club. Musci; Leskeaceae.
- Bethel, Ellsworth**, State Museum, Denver, Colo. *Botany*. Smyrna, Ohio, June 20, 63. B.S., U. S. Grant Univ, 86; hon. A.M., Denver, 05. Instr. biol. high sch., Denver, 90-17; *curator nat. hist. Colo. State Museum*, 12-; *pathologist, bur. plant indust. U. S. Dept. Agr.*, 17- Mem. Colo. Conservation Commission. Bot. Soc; Colo. Sci. Soc; Colo. Acad. (pres); Colo. Forestry Ass. (see'y). Fungi; algae; Myxomycetes.
- Bethune, Rev. C(harles) J(ames) S(tewart)**, Toronto, Can. *Entomology*. West Flamboro, Ont., Aug. 11, 38. Upper Canada, 55-56; B.A., Trinity (Can), 59, M.A., 62, D.C.L., 83. Ed., 'Canadian Entomologist,' 68-73; head master, Trinity Col. Sch., Port Hope, Ont., 70-99; ed., 'Canadian Entomologist,' 85-09; prof. entom. and zool., Ont. Agr. Col., 06-20. A.A.; Entom. Soc. (v. pres, 08); Ass. Econ. Entom.; Wash. Entom. Soc.; Buffalo Soc. Nat. Sci.; fel. Royal Soc. Can. (pres, sect. IV, 00); Can. Inst.; Ont. Entom. Soc. (pres, curator and librarian, 04); Ottawa Field-Nat. Club; N. S. Inst. Economic entomology; Canadian Lepidoptera; life histories of injurious insects.
- Betten, Prof. Cornelius**, 215 Kelvin Place, Ithaca, N. Y. *Biology*. Orange City, Iowa, Nov. 13, 77. A.B., Lake Forest, 00, A.M., 01; fellow, Cornell, 04-05, Ph.D., 06. Instr. biol., Buena Vista, 01-03; Lake Forest, 05-06, asst. prof., 06-07, prof., 07-15; see'y and register, N. Y. *State Col. Agr. Cornell*, 15-20, v. dean, 20- A.A.; Entom. Soc. Entomology; Trichoptera.
- Betts, Anson G(ardner)**, Staehhouse, N. C. *Metalurgy*. Troy, N. Y., April 14, 76. B.S., Yale, 97; A.M., Columbia, 98. Min. Eng; Chem. Soc; Electrochem. Soc; Soc. Chem. Indust. Electrochemical and metallurgical processes.
- Betts, Prof. George Herbert**, Northwestern University, Evanston, Ill. *Psychology*. Clarksville, Iowa, April 1, 68. Ph.B., Cornell (Iowa), 99, A.M., 02; Ph.M., Chicago, 04; Ph.D., Columbia, 09. Teacher and supt., pub. schools, Iowa, 89-97; instr. psychol. and educ., Cornell (Iowa), 99-01, prof., 02-18, director, summer sch., 05-18; *prof. religious educ.*, Boston, 18-19; *Northwestern*, 19- Exten. lecturer educ. psychol., Teachers Col., Columbia, 08-09. A.A. Educational psychology; the functions and distribution of mental imagery.
- Betts, Dr. Joseph B(arton)**, 400 Forest Ave., Buffalo, N. Y. *Pathology*. N. Y., June 10, 72. M.D., Albany Med. Col., 94. *Pathologist, Buffalo State Hosp.*, 95- Am. Med. Ass; Medico-Psychol. Ass. General and nervous histopathology.
- Betts, Dr. Philander**, 790 Broad St., Newark, N. J. *Engineering*. Nyack, N. Y., May 28, 68. B.S., Rutgers, 91, M.S., 95; E.E., Columbian, 03; Ph.D., George Washington, 14. Instr. and later asst. prof. elec. eng. and mech. eng., George Washington, 00-01; *chief engineer, N. J. Pub. Utilities Commission*, 10- Major, reserve corps engineers, 17-19, lieut. col., 19- A.A.; Elec. Eng; Mech. Eng; Elec. Ry. Ass; Illum. Eng. Soc; Eng. Educ; New Eng. Water Works Ass. Public utilities; economics; electric railway operation; copper plating of steel.
- Beutenmüller, William**, Highwood, N. J. **Entomology*. Hoboken, N. J., March 31, 64. Pub. and private schools, N. Y. City. Curator, dept. entom., Am. Museum Nat. Hist., 88-12. A.A.; fel. Entom. Soc; Ass. Econ. Entom.; N. Y. Entom. Soc. (pres, 00, ed., 'Jour.', Vols. I.-XI); cor. mem. Wash. Entom. Soc; Brooklyn Entom. Soc. Lepidoptera; Coleoptera; gall-insects; bibliography of American entomology; Sesiidae; the genus *Catocala*; insects of the Black Mountains, North Carolina; Lepidoptera found within 50 miles of New York City; insects injurious to forest trees.
- Bevan, Prof. Arthur (Charles)**, University of Montana, Missoula, Mont. *Geology*. Delaware, Ohio, Aug. 8, 88. B.S., Ohio Wesleyan, 12; Chicago, 14-17. Asst. *geol.*, Ohio Wesleyan, 13-14, instr., 14-15; asst., Chicago, 15-17; instr., Ohio State, 17-19; *asst. prof., Montana*, 19- A.A.; Ohio Acad. Geology of western Montana.
- Bevan, Dr. Arthur Dean**, 1550 State Parkway, Chicago, Ill. *Surgery, Anatomy*. Chicago, Aug. 6, 61. Sheffield Sci. Sch., Yale, 78-79; M.D., Rush Med. Col., 83; Leipzig, 92-93. Surgeon, U. S. Marine Hosp. Service, 83-88; prof. anat., Rush Med. Col., 88-89, assoc. prof. *surg.*, 98-02, *prof., Rush Med. Col. and Chicago*, 02- Surgeon, Presbyterian Hosp., 94- Prize, Chicago Med. Soc, 98. A.A.; Ass. Anat.; Surg. Ass; Am. Med. Ass. Surgical anatomy of liver and bile tracts; surgical treatment of gall-stones, of stomach and of undescended testis; iodid of potash in blastomycosis; traumatic neurosis; the effect of X-rays on malignant tumors.
- Bevier, Prof. Isabel**, University of Illinois, Urbana, Ill. *Home economics*. Plymouth, Ohio, Nov. 14, 60. Ph.B., Wooster, 85, Ph.M., 88; summer sch., Harvard, 88; Prof. Atwater's lab, 94; Mass. Inst. Tech., 98. Principal, high sch., Shelby, Ohio, 85-87; Mt. Vernon, Ohio, 87-88; *prof. nat. science*, Pa. Col. for Women, 88-97; chem., Lake Erie, 98-99; *home economics and head of dept., Illinois*, 00- Asst. nutrition investigations, U. S. Dept. Agr., 94-99; mem. jury of awards, Columbian Expos, 93; board of editors, 'Jour. Home Econ.' A.A.; Chem. Soc; Pub. Health Ass; Home Econ. Ass. (v. pres). Selection and preparation of food; bread making; planning of meals.
- Beyer, Prof. Geo(rge) E(ugene)**, 364 Audubon St., New Orleans, La. *Biology*. Meissen, Saxony, Sept. 9, 61. Dresden, 73-79; Berlin, 79-80; special studies under Brehm, Standinger and Engelhardt. Instr. nat. hist., Tulane, 95-97, asst. prof., biol., 97-02, assoc. prof., 02-12, prof., 12-18, med. entom. and parasitol., sch. trop. med. and hygiene, 16-18; *med. entomologist, La. State Board of Health*, 19- Asst. surgeon, U. S. Marine Hosp. Service, Vera Cruz, Mex; special inspector, U. S. Dept. Agr. A.A.; fel. Ornith. Union; Micros. Soc; Pub. Health Ass; Bird-lore Soc; La. Soc. Nat. (pres); La. Audubon Soc. (pres). Birds; reptiles; archeology of Louisiana; mosquitoes and their relation

- to disease; yellow fever organism; flies in public markets; plague.
- Beyer, Prof. S(amuel) W(alker)**, Iowa State College, Ames, Iowa. *Geology*. Clearfield, Pa, May 15, 65. B.S. Iowa State, 89; Ph.D. Hopkins, 95. Instr. *geol. Iowa State*, 91-95, asst. prof, 95-98, prof, 98-, v. dean, eng. div, 08-17, dean, 17-18, *indust. science div*, 19- Asst. Iowa Geol. Surv, 92-; asst. geologist, U. S. Geol. Surv, 01- A.A.; Geol. Soc. (councilor, 13); Min. Eng; Eng Educ; Wash. Geol. Soc; fel. Iowa Acad. (v. pres, 08). Economic geology; Iowa clays, quarry products and peat deposits; Iowa road and concrete materials.
- Bibbins, Prof. A(rthur Barneveld)**, Lee Mineral Co, 201 Park Ave, Baltimore, Md. *Geology*. Hanover, Mich, Aug. 6, 60. Ph.B. Albion, 87; Hopkins, 87-89. Curator and head, dept. geol. and miner, Goucher, 92-16; *investigator for oil and gas*. Mem. Md. Geol. Surv; U. S. Geol. Surv. A.A.; Md. Acad. (pres, 20-). The Potomac group.
- Bichowsky, Dr. F(rancis) Russell v**, Geophysical Laboratory, Washington, D. C. *Physical chemistry*. San Gabriel, Calif, Feb. 19, 89. A.B. Pomona, 12; M.S. California, 14, Ph.D. 16. Physical chemist, geophys. lab, Carnegie Institution, 16-19; *research fellow, Nat. Research Council, California*, 19- Chem. Soc; Physical Soc; Wash. Philos. Soc. Equilibria in the hydrogen-sulphur-oxygen system; atom structure; radiation law; low temperature calorimetry.
- Bicknell, E(ugene) P(intard)**, 30 Pine St, New York, N. Y. *Botany, Ornithology*. Woodmere, L. I, N. Y. A.A.; Bot. Soc; fel. Ornith. Union; Torrey Bot. Club; Phila. Bot. Club.
- Biddle, Dr. H(enry) C(halmers)**, University of California, Berkeley, Calif. *Chemistry*. Kirkwood, Ill, Oct. 4, 69. A.B. Monmouth, 91; grad, McCormick Theol. Sem, 96; fellow, Chicago, 97-99, Ph.D. 00. Instr. chem. and physics, Monmouth, 91-92, prof, 92-93; *chem, Maryville*, 99-00; asst, Chicago, 00-01; instr, *California*, 01-06, asst. prof, 06- Chem. Soc; Chem. Gesell. Derivatives of formhydroxamic acid and their relation to fulminic acid; the reduction of copper by solutions of ferrous salts; the determination of molecular weights; decomposition of the esters of formylchloridoxime.
- Bidwell, Dr. Charles C(larence)**, 105 Valentine Place, Ithaca, N. Y. *Physics*. Rochester, N. Y., Oct. 23, 81. A.B. Rochester, 04; Ph.D. Cornell, 14. Instr. high sch, Cranford, N. J, 08-10; *physics, Cornell*, 11-17; asst. prof, 17- Research fellow, Carnegie Institution, 14-15. A.A.; Physical Soc. Thermo-electric relations in oxids; carbon-graphite thermo-junction; actual and black-body temperatures for various metals.
- Biefeld, Prof. P(aul)**, Denison University, Granville, Ohio. *Physical chemistry*. Königswalde, Germany, March 22, 67. B.S. Wisconsin, 94; Ph.D. Zürich, 00. Asst. high sch, Appleton, Wis, 94-97; asst. physics to Prof. H. F. Weber, Zürich, 99-00; prof. physics and math, Tech. Hildburghausen, Germany, 00-06; physics and astron, Buchtel, 06-11; *prof. astron. and director Swasey Observatory, Denison*, 11- Asst. Yerkes Observatory, summer, 19; mem. solar eclipse exped. to Colo, 18. Hon. mem. Sta. Eng; Pacific Astron. Soc. Physics; electrical engineering; electrolysis; constant of diffusion.
- Biehn, Prof. J(oseph) F(avil)**, 5444 Lakewood Ave, Chicago, Ill. *Bacteriology*. Chicago, April 1, 78. A.M. Northwestern, 98, M.D. 01; Post-Grad. Med. Sch, 01-02. Instr. bacter. and clin. path, Northwestern, 99-02; asst. prof. path, Post-Grad. Med. Sch, 01-02; prof. bacter, sanit. sciences and pub. health, Dearborn Med. Sch, 03-05; supt. and bacteriologist, Munic. Lab, Chicago, 04-09; *director, scientific and research laboratories, Abbott Alkaloidal Co*, 09- Bacteriologist, Mercy, Samaritan, Wesley and Post-Grad. Hosp. Training Schools, 01-04; prof. bacter. and special path, Am. Med. Col; path. and bacter, Dearborn Post-Grad. Med. Sch. A.A.; Am. Med. Ass; Chicago Path. Soc. Comparative value of antiseptics; bacteriology of scarlet fever; methods of preserving vaccine; hemolytic action of streptococci serums; diphtheria; water analysis; bacteriology of Chicago milk supply; ventilation of street cars; opsonic therapy; pasteurization of milk; sanitary examination of waters of south shore of Lake Michigan; anti-pneumococcus serums and opsonins.
- Bierring, Dr. Walter L(awrence)**, Bankers Trust Building, Des Moines, Iowa. *Pathology*. Davenport, Iowa, July 15, 68. M.D. Iowa, 92, 94; Vienna and Heidelberg, 92; Vienna, 93, 96, 01; Pasteur Inst, Paris, 94. Prof. path. and bacter, Iowa, 93-03, theory and practise of med. and clin. med, 03-10; med, Drake, 10-13; *pres, Iowa State Board of Health, and med. examiner, Iowa*, 13- Mem. Nat. Board Med. Examiners, 16- A.A.; Am. Med. Ass. (chairman, sect. med, 19); Ass. Tuber; Am. Acad. Med. Bacteriology; hematology; pernicious anemia; chloroma; cardio-vascular diseases.
- Bigelow, Dr. Edward F(uller)**, Arcadia, Sound Beach, Conn. *Biology*. Colechester, Conn, Jan. 14, 60. Yale, 96-97; Cold Spring Harbor, 99; R. I. Col, 99; Woods Hole, 00-01; A.M. Ph.D. Taylor, 99. Ed. various scientific magazines, 99-00; *nature and science ed, 'St. Nicholas Magazine'*, 00-; ed, *'Guide to Nature.'* Scout naturalist, Boy Scouts of Am, and naturalist ed, *'Boys' Life'*, 16-20; naturalist guide, Camp Fire Girls of Am, and asst. ed, *'Every-girl's Mag.'*, 20-; director, summer schools of nature study, Conn. Assoc. Ornith. Union; Agassiz Ass. (pres, 07-); Brooklyn Inst; N. Y. Micros. Soc. Germination of seeds and artificial growth of plants with Sachs' solution; aquatic microscopy; life histories of insects; rabbits; honey bees.
- Bigelow, Prof. Frank H(agar)**, Observatorio Magnetico, Pilar, F. C. C. A, Argentina. *Meteorology, Solar physics*. Concord, Mass, Aug. 28, 51. A.B. Harvard, 73, A.M. 80; B.D. Episcopal Theol. Sch, Cambridge, 80; L.H.D. George Washington, 98. Asst. astronomer, Cordoba Observatory, 73-76; U. S. Naval Observatory, 77; Cordoba Observatory, 81-83; rector, St. Paul's Church, Natick, Mass, 80-81; prof. math, Racine, 84-89; asst, *'Nautical Almanac' Office*, 89-91; prof. meteorol, U. S. Weather Bur, 91-10; solar physics, George Washington, 94-10; *director, Solar and Magnetic Observatory*, 15-

- Mem. U. S. eclipse expeditions to W. Africa, 89; S.C. 00; Spain, 05; asst. minister, St. John's Church, Washington, 91-10; ed, 'Monthly Weather Rev,' 09-10; prof. meteorol, Oficina Meteorol, Buenos Ayres, 10-; mem. Int. Solar Commission. A.A (sec'y, A, 91); Astron. Soc; Ass. Prom. Quaternions; Wash. Acad; Wash. Philos. Soc. (pres, 98); Soc. Cient. Ant. Alz; cor. mem. Meteor. Gesell. Solar physics; terrestrial magnetism; meteorology; barometry of the United States; dynamics of the atmosphere; temperature and vapor tension; variations in relation to solar radiation; evaporation at the Salton Sea; climatology of the United States; atmospheric radiation and circulation; the sun's radiation.
- Bigelow, Prof. H(arold) E(ugene)**, Sackville, N. B., Can. *Chemistry*. Spencer's Island, N. S., Oct. 7, 81. B.A., Mt. Allison, 03; Harvard, 07, A.M., 08, Ph.D., 11. Prof. chem, Mt. Allison, 11-14, dean, McClellan Sch. of Applied Sci., 13-14; asst. prof. chem, Brown, 14-15; prof, Mt. Allison, 15- A.A; Chem. Soc; Chem. Gesell. Replacement of hydrogen in benzene substituted compounds; barium.
- Bigelow, Prof. Harriet W(illiams)**, Smith College Observatory, Northampton, Mass. *Astronomy*. Fayetteville, N. Y., June 7, 70. A.B., Smith, 93; Ph.D., Michigan, 04. Asst. astron, Smith, 96-01, instr, 04-06, assoc. prof, 06-11, prof, 11- A.A; Astron. Soc. Comets; positions of stars.
- Bigelow, Dr. Henry (Bryant)**, Museum of Comparative Zoology, Cambridge, Mass. **Zoology*. Boston, Mass., Oct. 3, 79. A.B., Harvard, 01, A.M., 04, Ph.D., 06. Asst. invert. zool, museum comp. zool, Harvard, 06-13, curator coelenterates, 13- Agassiz exped. to Maldive Islands, 01-02; Brown-Harvard exped. to Labrador, 00; 'Albatross' E. Pacific exped, 04-05; Agassiz exped. to W. Indies, 07. A.A; Soc. Nat; Soc. Zool; mem. Ornith. Union; Am. Acad; Boston Soc. Nat. Hist; fel. Royal Geog. Soc. Medusae; cytology; oceanography; Siphonophorae; Philippine Medusae; cytology of the Coelenterata.
- Bigelow, Dr. Lucius A(urelius)**, Brown University, Providence, R. I. *Chemistry*. B.S., Mass. Inst. Tech, 15; Harvard, 16-17; Ph.D., Yale, 19. Asst. chem, Mass. Inst. Tech, 15-16; Yale, 17-18; instr, St. Lawrence, 19-20; org. chem, Brown, 20- Chem. Soc. Side chain oxidations with potassium permanganate.
- Bigelow, Prof. Maurice A(lpheus)**, Teachers College, Columbia University, New York, N. Y. **Zoology*. Union Co, Ohio, Dec. 8, 72. B.S., Ohio Wesleyan, 94; M.S., Northwestern, 96; Ph.D., Harvard, 01. Instr. biol, Ohio Wesleyan, 94-95; zool, Northwestern, 96-98; biol, Teachers Col, Columbia, 99-03, adj. prof, 03-07, prof, 07- A.A. (sec'y, F, 08); Soc. Nat; Soc. Zool; Nature Study Soc. (sec'y-treas. and ed, 08); fel. N. Y. Acad. Comparative studies of the early development of some lower Crustacea, especially Cirripedia.
- Bigelow, Dr. Robert P(ayne)**, Massachusetts Institute of Technology, Cambridge, Mass. **Zoology*. Baldwinville, N. Y., July 10, 63. B.S., Harvard, 87; Ph.D., Hopkins, 92, Adam T. Bruce fellow, 91-93. Instr. biol, Mass. Inst. Tech, 93-12, asst. prof. zool, 12-15, assoc. prof, 15-, li-
brarian, 95- Ed, 'Am. Naturalist,' 97-98; 'Tech. Quarterly,' 95-08. A.A; Soc. Nat; Soc. Zool; Ass. Anat; Am. Acad; Boston Soc. Nat. Hist. Embryology of Medusae; Crustacea; Stomatopoda from the Pacific Ocean.
- Bigelow, Dr. S(amuel) Lawrence**, 1520 Hill St, Ann Arbor, Mich. **Chemistry*. Boston, Mass., Feb. 23, 70. A.B., Harvard, 91; B.S., Mass. Inst. Tech, 95; Ph.D., Leipzig, 98. Instr. gen. chem, Michigan, 98-01, asst. prof. and acting director, lab. gen. chem, 01-04, junior prof, 04-05, gen. and physical chem, 05-07, prof, 07- A.A; Chem. Soc; Electrochem. Soc; Mich. Acad; Wash. Acad; Franklin Inst. Catalysis; decomposition point of electrolytes; polarization with low voltages and the residual current; colloidal solutions; capillarity; osmosis; surface tension.
- Bigelow, W(illard) D(ell)**, National Canners Association, 1739 H St., N. W., Washington, D. C. **Chemistry*. Gardner, Kans, May 31, 66. A.B., Amherst, 89. Assoc. prof. chem, Oregon, 89-90; instr, high schools, Washington, 91-92; prof, med. dept, National Univ, 91-98; asst. chemist, U. S. Dept. Agr, 92-01, chief, div. of foods, bur. chem, 01-03, asst. chief, 03-13; chief chemist, Nat. Canners Ass, 13- A.A; Chem. Soc; Soc. Bact; Soc. Test. Mat. Food chemistry; development, ripening and storage of fruits; influence of preservatives on health and digestion; composition and purity of foods; food inspection and enforcement of food laws; technology of canning.
- Biggs, Dr. George P(atten)**, 133 W. 71st St, New York, N. Y. *Pathology*. Trumansburg, N. Y., Oct. 26, 67. M.D., Univ. and Bellevue Hosp. Med. Col, 89. Asst. pathologist, N. Y. Hosp, 91-96, pathologist, 96-06; Health Dept, N. Y. City, 94-14. Prof. physiol, N. Y. Vet. Col, 92-97; lecturer special path, Univ. and Bellevue Hosp. Med. Col, 98-03. N. Y. Acad. Med; N. Y. Path Soc.
- Biggs, Prof. Hermann M**, 39 W. 56th St, New York, N. Y. **Medicine*. Trumansburg, N. Y., Sept. 29, 59. A.B., Cornell, 82; M.D., Univ. and Bellevue Hosp. Med. Col, 83; LL.D., N. Y. Univ, 09; Rochester, 18; Sc.D., Harvard, 20; hon. F.R.C.P., Edinburgh. Prof. clin. med. and assoc. prof. med, Univ. and Bellevue Hosp. Med. Col, 87-14; pathologist and director, bacter. lab, Health Dept, N. Y. City, 92-14, chief med. officer, 02-14; N. Y. State Commissioner of Health, 14- Director, Rockefeller Inst; mem. Int. Health Board, Rockefeller Foundation; med. director gen, League of Red Cross Societies. A.A; Ass. Path. and Bact; Am. Physicians; Am. Med. Ass; Nat. Ass. Tuber. (pres); N. Y. Acad. Med; N. Y. Path. Soc; British Med. Ass; hon. fel. British Sanit. Inst; cor. mem. Int. Bur. for Tuber. Bacteriology; clinical and preventive medicine.
- Bigney, Prof. A(ndrew) J(ohnson)**, Evansville College, Evansville, Ind. *Biology*. Moores Hill, Ind., Feb. 15, 64. A.B., Moores Hill, 88, A.M., 91, Sc.D., 13; Hopkins, 93-94; Woods Hole, 02. Prof. biol. and geol, Moores Hill, 88-92, 94-17, acting pres, 09, 15-16; asst. zool, Harvard, 17-18; asst. prof. physiol, Syracuse, 18-19; prof. zool, Evansville, 19- Asst. biol, Hopkins, 93-94. A.A; fel. Ind. Acad. (sec'y, 10-15, pres, 15). Amoeba; early stages in various eggs; pro-

- tective coloring in terns; nitrifying bacteria; medicinal value of *Eupatorium perfoliatum*; effect of adrenin on pigment of skin and retina of frog; science progress.
- van der Bijl, Dr. H(endrik) J(ohannes)**, Department of Mines, Pretoria, S. Africa. **Physics*. Pretoria, S. Africa, Nov. 23, 87. B.A., Cape of Good Hope, 08; A.M., Ph.D., Leipzig, 12. Instr. physics, Royal Sch. Tech., Dresden, 12-13; research physicist, Western Elec. Co., 13-20; *tech. adviser, bur. mines. S. Africa*, 20- Physical Soc; Elec. Eng; Radio Eng. Conduction of electricity in high vacua; thermionic vacuum tube.
- Bill, Dr. E(arl) Gordon**, Dartmouth College, Hanover, N. H. *Mathematics*. Billtown, N. S. June 23, 84. A.B., Acadia, 02; A.B., Yale, 05, A.M., 06, Ph.D., 08; Bonn, 10-11. Asst. math, Sheffield Sci. Sch., Yale, 07-08, instr., 08-10; Purdue, 11-12; asst. prof., *Dartmouth*, 12-20, *prof.*, 20- Math. Soc; Math. Ass; Math. Verein. Calculus of variations; non-euclidean geometry.
- Billings, Erle M(onroe)**, 484 Woodbine Ave, Rochester, N. Y. *Chemistry*. Canton, N. Y., March 4, 89. B.S., St. Lawrence, 11; M.S., Rochester, 15. V. principal, Lowville Acad., 11-12; first asst. chem., West High Sch., Rochester, 12-17, acting head, dept. chem., 17-18; organic research chemist, *Eastman Kodak Co.*, 18-19, *sec'y, research lab.*, 19- Chem. Soc. (sec'y-treas., Rochester sect., 18-); West. N. Y. Physics Club (pres., 16); N. Y. Teachers' Ass. (organizer and pres., science sect., 16). Organic chemistry; cellulose.
- Billings, Dr. Frank**, 1550 N. State Parkway, Chicago, Ill. **Medicine*. Highland, Wis., April 2, 54. M.D., Northwestern, 81, M.S., 90; Vienna, 85-86; Sc.D., Harvard, 15. Intern., Cook Co. Hosp., Chicago, 81-82; demonstrator anat., Northwestern, 82-85, *prof.*, physical diagnosis, 87-90, *med.*, 90-98; *Rush Med. Col.*, 98-, *dean of faculty*, 99-, *prof. med.*, *Chicago*, 05-; *attending physician, Presb. Hosp.*, 98- Shattuck lecturer, Harvard, 02; Lane lecturer, Stanford, 16; pres., Ill. State Board of Charities, 06-12; col., M. C., 17-19; lieut. col. Red Cross and chairman, mission to Russia, 17. A.A; Ass. Path. and Bact; Am. Physicians (pres., 07); Am. Med. Ass. (pres., 02, treas., 07-10); Ass. Tuber. (pres., 08); Chicago Path. Soc; Chicago Acad. Internal medicine.
- Billings, Dr. F(rederick) H(oratio)**, Redlands, Calif. *Botany*. Chicago, Ill., May 26, 69. A.B., Stanford, 96; A.M., Harvard, 97; Ph.D., Munich, 01. Asst. prof. nat. science, Pomona, 91-93; prof. bot., Louisiana, 01-07; assoc. prof. bot. and bacter., Kansas, 07-13, prof. bacter., 13-17. Soc. Bact; Pub. Health Ass; Kans. Acad. Plant embryology; bacteriology; citriculture.
- Billings, Dr. John S(edgwick)**, Douglaston, L. I., N. Y. *Medicine*. Washington, D. C., July 31, 69. A.B., Hopkins, 89; M.D., Pennsylvania, 92. Deputy health commissioner, N. Y. City, 16-19; med. director, east. group of telephone companies, 19-20; *director*, N. Y. *Tuber. Ass.*, 20- Ass. Tuber. (director, 19); N. Y. Acad. Med. Preventive and industrial medicine; tuberculosis.
- Billingsley, Paul**, Pioneer Building, Seattle Wash. *Geology*. New York, N. Y., Nov. 30, 87. A.B., Columbia, 08, A.M., 10. *Geologist, Anaconda Copper Mining Co.*, 10-18, 19- Lieut. gen. staff, U.S.A., 18-19. A.A; N. Y. Acad. Geology of boulder batholith of Montana; Montana ore deposits.
- Bills, Dr. Marion A(lmira)**, 1247 Murdock St., Pittsburgh, Pa. *Psychology*. Allegan, Mich., 88. A.B., Michigan, 08; Ph.D., Bryn Mawr, 17. Asst. psychol., Michigan, 15-17; prof., Oxford (Ohio), 17-18; asst. prof., Kansas, 18-19; *research asst. bur. personnel, Carnegie Inst. Tech.*, 19- Rise of visual sensation with time; effect of fumes of wood alcohol on vision; advertising.
- Bilising, Prof. Sherman W.**, Agricultural and Mechanical College of Texas, College Station, Tex. *Entomology*. Crestline, Ohio, Dec. 8, 85. B.S., Otterbein, 12; A.B., Ohio State, 12, fellow, 12-13, A.M., 13; California, 15. Instr. *entom. Tex. Col.*, 13-15, assoc. prof., 15-16, *prof.*, 16- A.A; Entom. Soc; Ass. Econ. Entom. Insect food of spiders.
- Binford, Pres. Raymond**, Guilford College, Guilford, N. C. *Zoology*. Carthage, Ind., July 15, 76. B.S., Earlham, 01; M.S., Chicago, 06; Ph.D., Hopkins, 12. Prof. biol., Guilford, 01-14; zool., Earlham, 14-18; *pres, Guilford*, 18- Scientific investigator, Beaufort Lab, Bur. Fisheries, summers, 08-11; instr. invert. zool., Woods Hole, 12-14. A.A; Soc. Zool. Sporangium in ferns; life histories of crabs; fertilization in crustaceans.
- Bingham, Prof. Eugene C(ook)**, Lafayette College, Easton, Pa. **Physical chemistry*. Cornwall, Vt., Dec. 8, 78. A.B., Middlebury, 99; Ph.D., Hopkins, 05. Prof. chem., Richmond, 06-15; asst. physicist, Bur. Standards, 15-16; *prof. chem, Lafayette*, 16- Chemist, Bur. Standards, 18. A.A; Chem. Soc; Soc. Test. Mat; hon. mem. Va. Chemists' Club. Fluidity and plasticity; viscosity; fluidity; solubility.
- Bingham, Major Harold C(lyde)**, 710 Varnum St., N. W., Washington, D. C. *Psychology*. Rowan, Iowa, Jan. 21, 88. A.B., Ellsworth, 10; A.M., Harvard, 12. Prof. educ. and psychol., Ellsworth, 12-17; asst. psychol., Harvard, 15-16; psychol. examiner, *S. C. S. G. O.*, 17-19, *major in charge psychol.*, 19- Psychol. Ass. Animal behavior; intelligence measurements.
- Bingham, Prof. Hiram**, Yale University, New Haven, Conn. *Geography, History, Aeronautics*. Honolulu, Hawaii, Nov. 19, 75. A.B., Yale, 98; A.M., California, 00; A.M., Harvard, 01, Ph.D., 05; Litt.D., Cuzeo, 15. Austin teaching fellow, Harvard, 01-02, 04-05; asst. hist., 03-04; preceptor, Princeton, 05-07; lecturer S. Am. geog. and hist., *Yale*, 07-08, *Latin Am. hist.*, 08-10, asst. prof. and curator Latin Am. collections, 10-15, *prof.*, 15- Shaw lecturer diplom. hist., Hopkins, 10; director, Yale and Nat. Geog. Soc. exped. to Peru, 11-15. Major and lieut. col., Air Service, A.E.F., 17-19; reserve mil. aviator. A.A; Ass. Geog; Anthropol. Ass. (mem. council, 19-); Antiq. Soc; Am. Council Learned Societies (exec. committee); Am. Alpine Club; Pol. Sci. Ass; Am. Hist. Ass; fel. Royal Geog. Soc; Royal Anthropol. Inst; Hispanic Soc; Nat. Acad. Hist., Bogota; Soc. Geog. de Lima. South Amer-

ican geography and history, particularly Venezuela, Colombia and Peru; bibliography; trade routes from Buenos Ayres to Lima; Viteos and Machu Picchu, Inca cities.

Bingham, Dr. W(alter) V(an Dyke), Carnegie Institute of Technology, Pittsburgh, Pa. **Psychology*. Swan Lake, Iowa, Oct. 20, 80. A.B., Beloit, 01; fellow, Chicago, 05-06, Ph.D., 07; A.M., Harvard, 08. Instr., secondary schools, 01-05; assoc. psychol., Chicago, 06-07; instr. educ. psychol., Teachers Col., Columbia, 08-10; asst. prof. psychol. and educ., Dartmouth, 10-15, prof. psychol., *Carnegie Inst. Tech.*, 15-18, *director, div. applied psychol.*, 18- Exec. sec'y, committee on classification of personnel in army, 17-18; lieut. col., U.S.A., 18-19; chairman, div. anthrop. and psychol., Nat. Research Council, 19-20. A.A. (sec'y, council, 17); Psychol. Ass. (sec'y, 11-13, mem. council, 17-19); Int. Musikgesell. Audition; psychological effects of music.

Binney, M(organ) T(hompson), 615 N. Lake St., Madison, Wis. *Plant pathology*. Racine, Wis., June 11, 91. B.S., Kansas State, 16; M.S., Wisconsin, 18. *Asst. instr. plant path.*, Kansas State, 15-16; *Wisconsin*, 16-; *asst. pathologist, office cereal disease investigations, bur. plant indust.*, U. S. Dept. Agr., 16- A.A.; Phytopath. Soc. Wheat rusts; *Pleosphaerulina briosiana* on alfalfa.

Binnie, Dr. J(ohn) F(airbairn), Rialto Building, Kansas City, Mo. *Surgery*. Stirling, Scotland, April 22, 63. A.M., Aberdeen, 82, M.B., C.M., 86. Prof. surg., Kansas, 05. Lieut. col., U.S.A. Surg. Ass. (v. pres, 08, 20).

Binns, Prof. Charles F(ergus), Alfred, N. Y. *Ceramics*. Worcester, England, Oct. 4, 57. King's scholar, Worcester Cathedral Sch., 68-72; hon. M.S., Alfred. With Royal Porcelain Works, Worcester England, 72-97; examiner in pottery and porcelain, London, 95-97; principal, Tech. Sch., Trenton, N. J., 98-00; *director*, N. Y. State Sch. *Clay-working and Ceramics*, 00- Supt., Ceramic Art Co., Trenton, N. J., 99; mem. jury on ceramics, St. Louis Expos., 04 (sec'y). Silver medal, Paris, 00. Ceramic Soc. (v. pres, 00, pres, 01, sec'y, 18). Technology of clays, glazes and fuels for potter's use; art and history of pottery.

Bioletti, Prof. Frederic T(heodore), University of California, Berkeley, Calif. *Botany, Horticulture*. Liverpool, England, July 21, 65. B.S., California, 94, M.S., 98. Instr. viticulture, California, 94-02; horticulturist, Elsenburg Col., Cape Colony, 02-05; assoc. prof. viticulture, California, 05-14, *prof.*, viticulture and enology, 14-19, *viticulture*, 19- Chairman, Citrus Commission, Cape Colony. A.A.; Soc. Hort. Sci.; San Francisco Micros. Soc. Viticulture; zymology; enology.

Birch, Prof. Raymond R(ussell), Cornell University, Ithaca, N. Y. *Veterinary medicine*. Zeandale, Kans., 81. B.S., Kansas State, 06; D.V.M., Cornell, 12, Ph.D., 16. Agr. inspector, Bur. Agr., P. I., 07-08, specialist animal indust., 09; instr. asst. prof. and later *prof. vet. research*, N. Y. State Vet. Col., Cornell, and in charge, *Vet. Exp. Sta.*, 12- Vet. Med. Ass.; U. S. Live Stock Sanit. Ass. Hog cholera; tuberculosis.

Birchard, Dr. F(rederick) J(ames), Department of Trade and Commerce, Postal Station B, Winnipeg, Can. *Biological chemistry*. Toronto, Can., Dec. 17, 75. B.A., Toronto, 01; Ph.D., Leipzig, 09. Fellow chem., Rockefeller Hosp., 10; fellow and asst., Rockefeller Inst., 10-12; *chemist*, bur. animal indust., U. S. Dept. Agr., 13; *dept. Trade and Commerce*, Winnipeg. Soc. Biol. Chem.; Soc. Exp. Biol. Proteins and their split-products.

Bird, Prof. Grace E(lecta), 81 Camp St., Providence, R. I. *Psychology*. Brooklyn, N. Y. Ph.B., Chicago; A.M., Columbia, 16; Ph.D., Brown, 18. *Psychologist*, R. I. Col. *Educ.*, 14-; *prof. educ. psychol.*, R. I. Col., 19- Educational psychology; tests and measurements; improvement with practice.

Bird, H(enry), Rye, N. Y. *Entomology*. Rye, Oct. 12, 69. Pub. schools. *Consulting entomologist*. A.A.; Entom. Soc.; fel. N. Y. Acad.; N. Y. Entom. Soc. Economic entomology; noctuid moths of North America; *Papaipema* and allies; acid soil plants; artificial acidulation of soils.

Bird, Dr. R(obert) M(ontgomery), University, Va. *Chemistry*. Petersburg, Va., June 13, 67. B.A., B.S., Hampden-Sidney, 97; Ph.D., Hopkins, 01. Prof. science and math, Frederick Col., Md., 98-99; acting prof. chem., Miss. Agr. Col., 01-02; acting prof. agr. chem., Missouri, and chemist, Exp. Sta., 02-03, instr. agr. chem., 03-05, asst. prof., 05-06, acting prof., 06-07; *prof. chem.*, Virginia, 07- Chemist, committee on educ. and special training, war plans div., general staff, U.S.A. A.A.; Chem. Soc. Reactions of ortho-sulphobenzoic acid; toxic agents for orchards; analytical methods; positive ions from non-metallic elements; wood extracts.

Bird, Prof. William W(arren), 10 Harvard St., Worcester, Mass. *Mechanical engineering*. Somerville, Mass., April 11, 66. B.S., Worcester, 87. Asst. and instr. mech. eng., Worcester, 87-91, asst. prof. steam eng., 94-96, *prof. mech. eng.*, 04- Mech. Eng.; Soc. Test. Mat. Cylinder condensation; power transmission by leather belting; twist drill tests.

Birdsall, Lewis I(saac), Filtration Plant, Minneapolis, Minn. *Sanitary science*. Patterson, N. Y., Oct. 16, 84. A.B., Williams, 07; A.M., Illinois, 09. Chemist, Ill. State Water Surv., 07-09; commercial chemist and bacteriologist, 10-11; supt. filtration, Rock Island, Ill., 11-12; *supt. filtration*, Minneapolis, 13- A.A.; Water Works Ass.; Pub. Health Ass.; Chem. Soc.; Minneapolis Eng. Club. Water purification; Lake Michigan water; a standard culture medium for water works laboratories.

Birge, Pres. E(dward) A(sahel), University of Wisconsin, Madison, Wis. **Zoology, Limnology*. Troy, N. Y., Sept. 7, 51. A.B., Williams, 73, A.M., 76, LL.D., 03; Ph.D., Harvard, 78; Leipzig, 80-81; hon. Sc.D., Pittsburgh, 97; LL.D., Wisconsin, 05; Missouri, 19. Instr. nat. hist., Wisconsin, 75-79, prof. zool., 79-11, dean, col. letters and science, 91-19, acting pres., 00-03, *pres.*, 18- Commissioner fisheries, Wis., 95-15; director, Wis. Geol. and Nat. Hist. Surv., 97-19, *pres.*, commissioners, 19-; commissioner forestry, Wis., 07-15; Wis. Conservation Commission, 08-15.

- A.A.; Soc. Nat.; Soc. Zool. (pres, cent. branch, 08, 10); Ecol. Soc.; Micros. Soc. (pres, 02); Fisheries Soc. (pres, 07); Wash. Acad.; Wis. Acad. (pres, 90, 18-21). Cladocera; lake temperatures; biology of plankton.
- Birge, Dr. R(aymond) T(hayer)**, University of California, Berkeley, Calif. *Physics*. Brooklyn, N. Y., March 13, 87. A.B., Wisconsin, 09, A.M., 10, Ph.D., 14. Instr. *physics*, Syracuse, 13-15, asst. prof., 15-18; instr. *California*, 18-20, asst. prof., 20- A.A.; Physical Soc. Spectroscopy; band and line series relations in spectra; Planck constant; concave grating; indicators.
- Birkett, Prof. H(erbert) S(tanley)**, McGill University, Montreal, Can. *Medicine*. Hamilton, Can., July 17, 64. M.D., McGill, 86. *Prof. otolaryngol.*, McGill, 94-, dean, med. faculty, 14- Chief, oto-laryngol. clinic, Royal Victoria Hosp; consultant, Alexandra Hosp. and Mackay Inst. for Infectious Diseases. Laryngol. Ass. (pres, 07); Laryngol. Rhinol. and Otol. Soc. (pres, 18). Otolaryngology.
- Birkhoff, Prof. George David**, 122 Craigie St., Cambridge, Mass. **Mathematics*. Overisel, Mich., March 21, 84. A.B., Harvard, 05, A.M., 06; Ph.D., Chicago, 07. Instr. *math*, Wisconsin, 07-09; preceptor, Princeton, 09-11, prof., 11-12; asst. prof., *Harvard*, 12-19, prof., 19- Querini-Stempalia Prize, 19. Nat. Acad.; A.A.; Math. Soc.; Am. Acad.; Royal Danish Acad. Differential equations.
- Birnie, Col. R(ogers)**, U. S. A. (retired), 511 Fifth Ave., New York, N. Y. *Mechanical engineering*. Glen Burn Farm, Md., April 5, 51. Grad. U. S. Mil. Acad., 72. Lieut. 13th U. S. Inf., 72-78; lieut. ordnance dept., U.S.A., 78-86, capt., 86-01, major, 01-06, lieut. col., 06-07, col., 07-15, retired, 15. Inf. service, Camp Douglas, Utah, 72-74; in charge of party, U. S. Geol. Surveys west of 100th meridian, 74-78; chief ordnance officer, Seventh Army Corps, 98-99; Div. of Cuba, 99; mem. Ordnance Board, 99, pres, 00-02, 08-12, 13-15; commanding, ordnance proving ground, Sandy Hook, N. J., 08-12; acting chief of ordnance, U.S.A., 12-13; mem. firm, Birnie, Hawkins and Watson, 19-Chevalier Legion of Honor. A.A.; Mech. Eng. Gun construction; ordnance materials.
- Bisby, Prof. G(uy) R(ichard)**, Agricultural College, Winnipeg, Can. *Botany*. Brookings, S. Dak., Aug. 17, 89. B.S., S. Dak. Col., 12; A.M., Columbia, 17; Ph.D., Minnesota, 18. Lab. asst., Brooklyn Bot. Garden, 13-14; asst. bot., Purdue, 15-16; instr. *plant path*, Minnesota, 16-18; asst. prof., 18-20; prof., *Manitoba Agr. Col.*, 20- Consulting pathologist, Am. Potato Co., summers, 14, 15. A.A.; Phytopath. Soc.; Bot. Soc. Plant pathology; slime moulds; rusts; potato diseases.
- Bisch, Dr. L(ouis) E(dward)**, Haywood Building, Asheville, N. C. *Neuropsychiatry*. Brooklyn, N. Y., March 10, 85. A.B., Columbia, 07, M.D., 11, Ph.D., 12. Intern, Manhattan State Hosp, 11-13; lecturer educ. psychol., Teachers Col., Columbia, 13-15, assoc., 15-16; instr. neuropath., N. Y. Post-Grad. Med. Sch., 14-15; organizer and director, Psychopathic Lab., N. Y. City, 16; Mental Hygiene Clinic, Norfolk, Va., 18-19; res. med. director, Hillcrest Manor, Asheville, N. C., 19- Physician, Clearing House for Mental Defectives, N. Y. City, 12-15; physician, N. Y. Neur. Inst., 12-16; director, psychiat. div., fifth naval dist., U.S.N.R.F., 17-19. A.A.; Medico-Psychol. Ass.; Am. Med. Ass.; Eugenics Research Ass. Clinical psychology; biochemistry.
- Bishop, Prof. Avard L(ongley)**, Yale University, New Haven, Conn. *Business administration*. Williamstown, N. S., March 4, 75. B.A., Acadia, 01; A.B., Yale, 03, A.M., 04, Ph.D., 06. Instr. commercial geog., Yale, 04-08, asst. prof. science of society, 08-11, geog. and commerce, *Sheffield Sci. Sch.*, 11-14, prof., 14-18, *business administration*, 18- Ass. Prof.; Econ. Ass.
- Bishop, Earl S(tephen)**, Edgewood Arsenal, Edgewood, Md. *Agricultural chemistry*. Imperial, Nebr., Jan. 14, 89. B.S., Nebr. Wesleyan, 09; A.M., Nebraska, 11; fellow, Queen's (Can.), 11-13. Asst. chemist, Nebr. Exp. Sta., 13-14; fellow, Mellon Inst., 14-17; with Gas Service, U.S.A., 17-19; state chemist, Nebr., 19; *research chemist*, Edgewood Arsenal, 20- Chem. Soc. Cereals; soils, legumes; humus; fertilizers; war gases; explosives.
- Bishop, Prof. F(ederic) L(endall)**, University of Pittsburgh, Pittsburgh, Pa. *Physics*. St. Johnsbury, Vt., Aug. 26, 74. B.S., Mass. Inst. Tech., 98; Ph.D., Chicago, 05. Head, dept. physics, Bradley Polytech. Inst., 98-09; prof. *physics and dean*, col. eng., Pittsburgh, 09- A.A.; Physical Soc.; Elec. Eng.; Eng. Educ. (sec'y). Thermal conductivity; heat of dilution; variation of wave length with pressure; surface tension; high temperature; viscosity; glass technology.
- Bishop, H(arry) E(ldridge)**, 3344 S. Michigan Ave., Chicago, Ill. *Chemistry*. Indianapolis, Ind., Jan. 22, 76. B.S., Purdue. Asst. chem., Shortridge High Sch., Indianapolis, Ind., 00-02; food chemist, Ind. State Lab. of Hygiene, 05-19; chemist, *Glass Container Ass. of Am.*, 20- Director, chem. lab., Ind. Dental Col., 13-19. Chem. Soc.; Agr. Chem.; Ind. Acad. Food preservation.
- Bishop, Howard B(erkey)**, 284 Springfield Ave., Summit, N. J. *Chemistry*. Bloomington, Ill., Jan. 24, 78. B.S., Michigan, 00. Chief chemist, anal. lab., Gen. Chem. Co., Laurel Hill, N. Y., 02-10, research chemist, 10-17; chief chemist, Nat. Aniline and Chem. Co., 17-19; *consulting chemist*, 20- W. H. Nichols medal, Am. Chem. Soc., 08. A.A.; Chem. Soc.; Soc. Chem. Indust.; Chem. Eng.; N. Y. Chemists Club. Analytical chemistry; manufacture of acids, alkalies and salts.
- Bishop, Dr. Louis B(ennett)**, 356 Orange St., New Haven, Conn. *Ornithology*. Guilford, Conn., June 5, 65. A.B., Yale, 86, M.D., 88. Head, dept. pediat., New Haven Dispensary, 96-08; instr. pediat., Yale, 99-08. A.A.; fel. Ornith. Union; Conn. Acad.; N. Y. Linnean Soc.; cor. mem. Nuttall Ornith. Club; Cooper (Calif) Ornith. Club; Wilson Ornith. Club; Wash. Biol. Soc.
- Bishop, Dr. L(ouis) Faugeres**, 54 W. 55th St., New York, N. Y. *Medicine*. New Brunswick, N. J., March 14, 65. A.B., Rutgers, 85, A.M., 89, Sc.D., 19; M.D., Columbia, 89. Instr. chem. and phys-

- ics, Princeton Prep. Sch, 85-86; house physician, St. Luke's Hosp, N. Y. City, 89-92; clin. director, *Fordham*, 04-08, *clin. prof. heart and blood vessel diseases*, 05- A.A.; N. Y. Acad. Med. (sec'y and chairman, sect. med). Blood pressure in man; cause of heart disease.
- Bishop, Miss Mabel**, Hood College, Frederick, Md. *Biology*. Bridgeport, Conn, 81. A.B, Wellesley, 05; fellow, Smith, 07-09, A.M, 08; Hopkins, 10-11; Michigan, 12-13; Cornell, 14; Wellesley fellow, Chicago, 16-17. Lab. asst. path, med. col, Cornell, 05-07; instr. biol, Goucher, 09-11; research asst. embryol. and histol, Michigan, 12-13; *head, dept. biol*, Rockford, 14-19; *Hood*, 19- In charge embryol, Cold Spring Harbor, 08- A.A.; Pub. Health Ass; Social Hygiene Ass. Embryology; nervous system, heart and anterior arteries of a dicephalous pig embryo.
- Bishop, Sherman C**, New York State Museum, Albany, N. Y. *Zoology*. Sloatsburg, N. Y, Nov. 18, 87. B.S, Cornell, 13. Asst. entom, Cornell, 09-13, plant path. and entom, 14-15, biol, 15-16; *zoologist*, N. Y. State Museum, 16- Assoc. mem. Ornith. Union; Soc. Mammal; Soc. Ichthyol. and Herp. Spiders; reptiles; batrachians.
- Bishopp, F(red) C(orry)**, Box 208, Dallas, Tex. *Entomology*. Virginia Dale, Colo, Jan. 14, 84. B.S, Colo. Agr. Col, 02, fellow, 02-03. Asst. prof. entom. and zool, Md. Col. and asst. state entomologist, 03-04; special field agent, *bur. entom*, U. S. Dept. Agr, 04-08, agent and expert, 08-11, entom. asst, 11-16, *entomologist*, 16- A.A.; Ass. Econ. Entom; Entom. Soc; Wash. Entom. Soc; Tex. Acad. Veterinary and medical entomology; cotton insect pests.
- Bissell, Prof. G(eorge) W(elton)**, Michigan Agricultural College, E. Lansing, Mich. *Mechanical engineering*. Poughkeepsie, N. Y, July 14, 66. M.E, Cornell, 88. Instr. exp. eng, Cornell, 88-91; prof. mech. eng, Iowa State, 92-07, v. dean eng, 04-07; *dean eng*, Mich. Agr. Col, 07- Mech. Eng; Eng. Educ; Mich. Eng. Soc; Detroit Eng. Soc. Properties of lubricants; steam-engine economies.
- Bissell, Prof. Wayne W(illiam)**, Mayo Clinic, Rochester, Minn. *Pathology*. Lodi, Wis, June 18, 86. B.S, Wisconsin, 09; M.D, Rush Med. Col, 11. Res. pathologist, Cook Co. Hosp, Chicago, 13-16; *asst. prof. path*, Mayo Foundation, Minnesota, 16- Ass. Path. and Bact. Defects of the heart; coma; fat embolism; shock; influenza; blood cultures.
- Bisson, Prof. Charles S(tewart)**, State School of Mines, Rapid City, S. Dak. *Chemistry*. San Jose, Calif, March 15, 91. B.S, California, 15, M.S, 16, Ph.D, 19. Asst. chem, California, 16-19; *prof. in charge of dept*, S. Dak. Sch. Mines, 19- Chem. Soc. Physical and inorganic chemistry; electromotive force and thermal measurements; columbium; tantalum.
- Bitting, Dr. A(rvill) W(ayne)**, 3344 S. Michigan Ave, Chicago, Ill. *Chemistry*. Bourbon, Ind, May 24, 70. B.S, Purdue, 91; D.V.S, Iowa State, 95; M.D, Indiana, 00. Comparative pathologist, Fla. Exp. Sta, 91-93; Purdue, and Exp. Sta, 93-97; food technologist, bur. chem, U. S. Dept. Agr, 07-13; Nat. Canners Ass, 13-18; *director research*, Glass Container Ass, 19- Exec, subsistence div, Q. M. C, 18-19. Chem. Soc; Am. Med. Ass; Soc. Bact. Food technology: canning.
- Bitting, Mrs. K(atherine) G(olden)**, 3344 S. Michigan Ave, Chicago, Ill. *Botany*. Stratford, Can, April 29, 69. B.S, Purdue, 90, M.S, 92. Asst. botanist, Ind. Exp. Sta, 90-93; instr. biol, Purdue, 93-01, asst. prof, 01-05; micro-analyst, bur. chem, U. S. Dept. Agr, 07-13; Nat. Canners Ass, 13-18; *bacteriologist*, Glass Container Ass, 19- A.A.; Bot. Soc; Soc. Bact; Ind. Acad. Micro-organisms of preserved foods.
- Bixby, Gen. W(illiam) H(erburt)**, U. S. A. (retired), 1709 Lanier Place, N. W, Washington, D. C. *Civil and military engineering*. Charlestown, Mass, Dec. 27, 49. Mass. Inst. Tech, 66-67; grad, U. S. Mil. Acad, 73; postgrad, U. S. A. Eng. Sch, 75; Ecole des Ponts et Chaussées, 81. Asst. prof. eng, U. S. Mil. Acad, 75-79; U. S. engineer to attend French army manœuvres, 80, and to examine and report on iron fortifications in Europe, 81-82; capt, corps engineers, 83-95, major, 95-04, lieut. col, 04-08, col, 08-10, brig. gen. and chief of engineers, U. S. A, 10-13. Adjut, U. S. battalion engineers, 82-83; in charge various U. S. harbor, river, lighthouse and fortification improvements, 84-18; Charleston earthquake eng. duty, 87; lecturer coast defences, U. S. Naval War Col, 87; U. S. lighthouse engineer, 95-01, 17-19; U. S. lighthouse inspector, 98-99; mem. U. S. board on long-span suspension bridges, 93; steel and Portland cement, 00; chief engineer, Dept. of the Lakes, Dak. and Mo, U. S. A, 07-08; pres, Miss. River Commission, 08-10, 17-18; pres, Int. Navig. Cong, 12; chairman, eng. sect, Pan-Am. Sci. Cong, 15; Chevalier Légion d'honneur. Civil Eng; Mech. Eng; Soc. Test. Mat; Naval Inst; U. S. Mil. Service Inst; Terminal Eng. (pres, 12); Soc. Am. Wars. (commanding general, 14-17); Cavalry Ass; Econ. Ass; Am. Acad; Wash. Acad; British Ass; British Inst. Civil Eng; Soc. des Ing. civils de France. Graphical solutions; wind pressures; Portland cement; iron for fortifications; bridges; canals; river, harbor, and lighthouse improvements.
- Bizzell, Prof. James A(drian)**, New York College of Agriculture, Ithaca, N. Y. *Chemistry*. Glenwood, N. C, April 13, 76. B.S, N. C. Col, 95, M.S, 00; fellow, Cornell, 01-02, Ph.D, 03. Instr. chem, N. C. Col, and asst. chemist, Exp. Sta, 95-01; asst. chemist, N. Y. Exp. Sta, Cornell, 03-07, asst. prof. soil technol, N. Y. State Col. Agr, 07-12, *prof*, 12- Soil technology and fertility.
- Black, Dr. Caroline A(dair)**, Connecticut College for Women, New London, Conn. *Botany*. Syracuse, N. Y, Jan. 28, 87. A.B, Indiana, 08, A.M, 09, Ph.D, 12. Teaching fellow bot, Indiana, 08-10, instr, 09-10; instr, N. H. Col, and asst. botanist, Exp. Sta, 10-12, asst. prof, 12-15, *assoc. prof*, 15-17; *Conn. Col. for Women*, 17- Instr, Indiana, summers, 09-10. A.A.; Bot. Soc. Plant morphology and cytology; plant diseases.
- Black, Prof. Davidson**, Peking Union Medical College, Peking, China. *Anatomy*. Toronto, Can, July 25, 84. M.B, Toronto, 06, B.A, 09; Manchester, 14; Cent. Dutch Inst. for Brain

- Research, 14. Asst. histol, Toronto, 08-09; instr. histol. and embryol, Western Reserve, 09-11, assoc, 11-13, asst. prof. anat, 13-17; *prof. neur. and embryol, Peking Union Med. Col, 18-* Capt. M. C. Can, 17-19. A.A.; Ass. Anat.; Soc. Mammal. Comparative neurology; physical anthropology.
- Black, Dr. Homer V (an Valkenburgh)**, Athens, Ga. *Chemistry*. Americus, Ga, Jan. 16, 77. A.B, Georgia, 96; Ph.D, Hopkins, 00. Adj. prof. chem, Ga. Tech, 00-02, junior prof, 02-07; adj. prof, Georgia, 07-10, assoc. prof, 10-19, *prof, 19-* Chem. Soc. Analytical methods; permanganates of barium, strontium and calcium; cotton seed oil.
- Black, Prof. J (ames) H (arvey)**, 3915 Cedar Springs Road, Dallas, Tex. *Bacteriology*. Huntington, W. Va, March 27, 84. M.D, Southern Methodist, 07. Prof. bacter. and histol, Southern Methodist, 07-08, bacter. and physiol, 08-12, bacter. and path, 12-15, dean, med. faculty, 14-15; *prof. bacter. and prev. med, Baylor, 15-* A.A.; Micros. Soc.; Soc. Bact.; Am. Med. Ass. Immunology; colloidal gold solutions.
- Black, N (ewton) Henry**, Roxbury Latin School, Boston, Mass. *Physics, Chemistry*. Putney, Vt, May 3, 74. A.B, Harvard, 96, A.M, 06; Berlin, 12-13. Instr, St. George's Sch, Newport, R. I, 96-98; high sch, Concord, N. H, 98-00; *master physics and chem, Roxbury Latin Sch, 00-* A.A.; assoc. Physical Soc; Elec. Eng; East. Ass. Physics Teachers. Physical chemistry; refractive index of solutions.
- Black, Otis Fisher**, U. S. Department of Agriculture, Washington, D. C. *Chemistry*. Cambridge, Mass, March 11, 67. A.B, Harvard, 91; fellow, Northwestern, 92-93, A.M, 94. Asst. chem, Harvard, 95-01, instr, 01-06, research asst. biol. chem, Harvard Med. Sch, 06-09; *chemist, bur. plant indust, U. S. Dept. Agr, 09-* A.A.; Soc. Biol. Chem; Chem. Soc; Wash. Acad. Organic, analytical and biological chemistry.
- Black, Gen. W (illiam) M (urray)**, U. S. A, 2324 California St, Washington, D. C. *Engineering*. Lancaster, Pa, Dec. 8, 55. Franklin and Marshall, 70-73, Sc.D, 12; grad, U. S. Mil. Acad, 77; D.Eng, Pa. Mil. Col, 20. Promoted through all grades to col, 77-16, major gen. and chief of engineers, 16-19, retired, 19; *mem. firm, Black, McKinney and Stewart*; instr. practical mil. eng, U. S. Mil. Acad, 82-86; civil eng, U. S. Eng. Sch, 91-95; commander, Eng. Sch. of Application, 01-03; adviser, Dept. Pub. Works, Cuba, 06-09; chief engineer officer in charge river and harbor works, Dist. No. 1, N. Y, Depts. East and Gulf, 09-16. Engineer commissioner, D. C, 97-98; lieut. col. and chief engineer, U. S. Vols, Spanish-Am. War, and in charge cleaning of Havana, Cuba, 99-01; senior mem. of board for raising of 'Maine,' 10-12. Rowland prize, Civil Eng, 93; Fry prize, U. S. Mil. Service Inst, 03; D. S. medal. Civil Eng; U. S. Mil. Service Inst; Soc. Am. and For. Wars. Harbors on sandy coasts; improvements in methods and materials of military engineering.
- Blackader, Dr. A (lexander) D (ougall)**, 236 Mountain St, Montreal, Can. *Medicine*. Montreal, June 19, 47. B.A., McGill, 70, M.D, C.M, 71; M.R.C.S, London, 74, M.A, 17; Vienna, 84; Prague, 88. Lecturer and later prof. *diseases of children, McGill, 81-*, *prof. pharmacol. and therapeut, 91-*; consulting physician, Montreal Gen. Hosp; Children's Mem. Hosp; Montreal Foundling and Baby Hosp; pres, Alexandra Hosp. A.A.; emer. mem. Am. Physicians; Pediat. Soc. (pres, 93); Climat. Ass; Can. Med. Ass. (pres, 17); Montreal Medico-Chirurg. Soc. (pres, 96). Clinical medicine, especially pediatrics; pharmacology.
- Blackman, E (lmer) E (llsworth)**, 136 S. 29th St, Lincoln, Nebr. *Archeology*. Davenport, Iowa, Aug. 16, 63. Pub. schools. Instr, pub. schools, 83-99; *archeologist and curator, museum, Nebr. Hist. Soc, 00-* A.A.; Mus. Ass; Miss. Valley His. Ass. Ethnology; history; the archeology and the Indians of Nebraska.
- Blackman, Dr. M (aulsby) W (illett)**, N. Y. State College of Forestry, Syracuse, N. Y. *Zoology*. Lawrence, Kans, March 26, 76. A.B, Kansas, 01, A.M, 02; Austin fellow, Harvard, 04-05, Ph.D, 05. Instr. zool. and histol, Kansas, 01-04; comp. anat. and embryol, Western Reserve, 05-07, lecturer histol, 07-09; asst. prof. zool, Syracuse, 09-11, assoc. prof, 11-13; *prof. forest entom, N. Y. State Col. Forestry, Syracuse, 13-* A.A.; Entom. Soc; Ass. Econ. Entom; Ecol. Soc; Ass. Prof. Spermatogenesis of myriapods; histology of scent glands of Mephitis; Pituitogenes; boring insects; Lipidae; Cirambycidae; Buprestidae; insects in dyeing, dead and decaying hickory.
- Blackwelder, Dr. Eliot**, 317 Railway Exchange Building, Denver, Colo. **Geology*. Chicago, Ill, June 4, 80. A.B, Chicago, 01, fellow, 02-04, Ph.D, 14. Instr. geol, Chicago, 02-03; Wisconsin, 05-06, asst. prof, 06-09, assoc. prof, 09-10, prof, 10-16; prof. and head of dept, Illinois, 16-19; acting prof, Stanford, 19; *chief geologist, Argus Oil Co, 19-* Asst. geologist, U. S. Geol. Surv, 06-09, geologist, 09-18; asst. Carnegie exped. to China, 03-04; mem. Calif. Petrol. Commission, 17. A.A.; Geol. Soc; Ass. Geog; Min. Eng; Ass. Petrol. Geol; Ecol. Soc; Ornith. Union; Chicago Acad. Glacial, stratigraphic, economic and historical geology; sedimentation; ornithology.
- Blackwell, F (rancis) O (gden)**, 49 Wall St, New York, N. Y. *Engineering*. New York, June 23, 67. C.E, Princeton, 87. *Consulting engineer*. Telford premium, British Inst. Civil Eng, 10. Civil Eng; Mech. Eng; Elec. Eng; British Inst. Civil Eng. Hydraulic, steam and electric construction.
- Blackwell, Dr. H (oward) L (ane)**, 4 Riedesel Ave, Cambridge, Mass. **Physics*. East Orange, N. J, July 19, 76. A.B, Harvard, 99, A.M, 00, Ph.D, 05. Eng. offices, Crocker-Wheeler Co, 00-01; asst. *physics, Harvard, 01, research fellow, 05-* Physical Soc; Elec. Eng. Double refraction in an electrostatic field.
- Blair, Andrew A (lexander)**, 406 Locust St, Philadelphia, Pa. **Chemistry*. Woodford Co, Ky, Sept. 20, 48. Grad, U. S. Naval Acad, 66. Midshipman and ensign, U. S. N, 62-69; chief chemist, U. S. Board to test iron, steel and other metals, 75-78; div. mining geol, U. S. Geol. Surv, and tenth census, 79-81; *consulting chemist, 82-* A.A.; Chem. Soc; Soc. Chem.

- Indust; Min. Eng; Philos. Soc. Chemical analysis of iron and steel, ores and alloys.
- Blair, E(oy) J(ay)**, 700 University St, Montreal, Canada. *Forestry*. Rockburn, Que, July 5, 89. B.A, McGill, 14. *Pathologist, Can. Forest Products Laboratories*, 15- A.A.; Soc. Foresters; *Phytopath. Soc*; Can. Soc. Forest Eng; Can. Forestry Ass; Can. Phytopath. Soc. Decay of structural timber.
- Blair, Dr. Vilray Papin**, Metropolitan Building, St. Louis, Mo. *Anatomy*. St. Louis, 71. A.M, Christian Brothers Col, 89; M.D, Washington (St. Louis), 93. Instr. *med. dept, Washington (St. Louis)*, 94-97, demonstrator anat. and lecturer osteol, 97-99, demonstrator anat. and lecturer descriptive anat, 99-04, asst. prof. anat, 04-08, *clin. prof. surg*, 08-, *prof. oral surg, dental dept*, 07-, *assoc. surg*, 14- Chief, sect. oral and plastic surg, U. S. A., 17-18; senior consultant, maxillo-facial surg, A.E.F., 18; consultant oral and plastic surg, U.S.A., 19. A.A.; Surg. Ass; Ass. Anat; Am. Med. Ass; Col. Surg; Archeol. Inst; Soc. Int. de Chirurg.
- Blair, Dr. W(illiam) Reid**, N. Y. Zoological Park, New York, N. Y. *Comparative medicine*. Philadelphia, Pa, Jan. 27, 75. D.V.S., McGill, 02. *Veterinarian and pathologist*, N. Y. Zool. Park, 02-; *prof. comp. path*, N. Y. Univ, 05- Lecturer comp. path, Toronto, 13-14. Vet. Med. Ass. (v. pres, 13); N. Y. Vet. Med. Ass. (pres, 10); fel. N. Y. Zool. Soc. Comparative pathology; diseases of wild animals in confinement; tuberculosis; osteomalacia in primates.
- Blair, Dr. W(illiam) M Richards**, 3420 Porter St, Washington, D. C. *Meteorology*. Coleraine, Ireland, Nov. 7, 74. B.S., Chicago, 04, Ph.D, 06. Principal, high sch, Pittsburg, Kans, 97-99; assoc. physics and math, State Nor. Sch, Oshkosh, Wis, 00-02; asst. Chicago, 02-06; research director, Mount Weather Observatory, Bluemont, Va, 06-14; *chief, div. aerol. investigations*, U. S. Weather Bur, 14- Major and officer in command meteorol. sect, Sig. C, 17-19, lieut. col, 19-; mem. Geophys. Union. Mem. Interallied Committee for Aerial Navig, Paris, 19; Int. Wireless Commission, Paris, 19; Radio Protocol, Wash, 20. A.A.; Physical Soc; Meteorol. Soc; Wash. Acad; Wash. Philos. Soc; Royal Meteor. Soc; Int. Commission Meteorol. for Aeronaut. Convection systems in the atmosphere; diurnal and planetary convection systems; mountain and valley temperatures and circulation.
- Blaisdell, Dr. F(rank) E(llsworth)**, 1520 Lake St, San Francisco, Calif. *Biology*. Pittsfield, N. H, March 13, 62. M.D, Cooper Med. Col, San Francisco, 89. County entomologist, San Diego, 86; demonstrator anat. and instr. biol. embryol. and histol. assoc. prof. and later prof. anat, Cooper Med. Col, 00-10; asst. prof. anat. and later *assoc. prof. surg, Stanford*, 10- A.A.; Entom. Soc; Pacific Coast Entom. Soc. (sec'y, 01-20). Development of animals; life histories of insects; taxonomy of Coleoptera; the Tenebrionidae; comparative anatomy of the parametrium in vertebrates.
- Blake, Dr. E(dwin) M(ortimer)**, 145 St. James Place, Brooklyn, N. Y. **Mathematics*. New York, N. Y, June 16, 68. E.M., Columbia, 90, Ph.D,
93. Instr. math, Purdue, 96-98; California, 00-04; prof. math. and mech, Arizona, 04-10. A.A; Eeon. Ass. Kinematics.
- Blake, Prof. F(rederic) C(olumbus)**, Ohio State University, Columbus, Ohio. **Physics*. Decatur, Ill, Oct. 30, 77. Ph.B, Colorado, 01; John Tyndall fellow, Columbia, 04-07, Ph.D, 05; Cambridge, 05-06; Berlin, 06-07. Asst. prof. *physics, Ohio State*, 07-12, *prof*, 12- A.A; Physical Soc; Am. Geog. Soc. Electric waves; resistance of metals in a magnetic field; standing waves in a Lecher wire system; value of 'h' from X-rays; critical absorption of X-rays; dielectric constant of water; self and mutual elastance.
- Blake, Prof. I(rving) H(ill)**, 46 N. Main St, Orono, Maine. *Zoology*. Augusta, Maine, Feb. 15, 88. A.B, Bates, 11; A.M, Brown, 12. Asst. comp. anat, Brown, 12-13; instr. zool. and physiol, Oregon Col, 13-16; zool, Syracuse, 16-18; *assoc. prof. biol, Maine*, 18- A.A.; Soc. Mammal; Ecol. Soc. Ecology; digestive tract of teleost fishes.
- Blake, J(ames) Henry**, 117 Elm St, W. Somerville, Mass. *Conchology, Zoology*. Boston. Mass, July 8, 45. Lawrence Sci. Sch, Harvard, 67-72. Asst. and curator conchol, museum comp. zool, Harvard, 72-76; *lecturer and zool. artist*. Mem. Hassler exped, 72; artist, U. S. Fish Commission; asst. paleontologist, U. S. Geol. Surv. Boston Soc. Nat. Hist. Conchology; travels; cetaceans.
- Blake, Dr. J(ohn) C(harles)**, Hahnemann Medical College, Chicago, Ill. *Physiological chemistry*. Ottumwa, Iowa, May 31, 73. B.S., Colorado, 01; Ph.D, Yale, 03. Research assoc. in physical chem, Mass. Inst. Tech, 03-05; asst. physicist. Bur. Standards, 05-06; prof. gen. chem, Tex. Col, 06-13; *head, dept. chem, Hahnemann Med. Col*, 13-, *dean*, 21- Chem. Soc. Colloidal solutions; crystal structure.
- Blake, Dr. Joseph A(ugustus)**, Tarrytown, N. Y. *Surgery*. San Francisco, Calif, Aug. 31, 64. A.B, Yale, 85, Ph.B, 86, hon. A.M, 09; M.D, Columbia, 89. Asst. demonstrator anat, Columbia, 91-00, instr. surg, 00-03, prof, 03-13; consulting surgeon, Roosevelt, St. Luke's and Lincoln Hospitals and Clinic for Functional Reeducation, Tarrytown, N. Y. Ass. Anat; Surg. Ass; Soc. Clin. Surg; Am. Med. Ass; N. Y. Surg. Soc; N. Y. Acad. Med; fel. N. Y. Acad. Anatomy of the thorax and brain.
- Blake, Prof. Maurice A(din)**, New Brunswick, N. J. *Horticulture*. Millis, Mass, Dec. 1, 82. B.S., Mass. Col, 04. Asst. horticulturist, R. I. Col. and Exp. Sta, 04-05; instr. hort, Mass. Col, 05-06; horticulturist, N. J. Exp. Sta, 06-18, *prof. hort, New Jersey*, 14- State supt. farm demonstration, N. J, 18- A.A; Soc. Hort. Sci; N. J. Hort. Soc. (pres, 20). Peach growing.
- Blake, Dr. S(idney) F(ay)**, U. S. Department of Agriculture, Washington, D. C. *Botany*. Stoughton, Mass, Aug. 31, 92. A.B, Harvard, 12, A.M, 13, Ph.D, 17. Asst, Gray Herbarium, Harvard, 16-17; *asst. botanist, bur. plant indust, U. S. Dept. Agr*, 17- New Eng. Bot. Club; Wash. Acad; Wash. Biol. Soc. Taxonomy of phanerogams, especially Compositae.

- Blaker, Prof. Ernest**, 23 Mt. View Ave, Akron, Ohio. *Physics*. Newtown, Pa, Sept. 14, 70. B.S. Kansas, 93; Ph.D. Cornell, 01. Asst. physics, Cornell, 98-01, instr, 01-03, asst. prof, 03-17, prof, 17-20; with development dept, *B. F. Goodrich Co*, 19-20, *manager temperature measurement and heat control*, 20- In charge airplane div. and meteorol. at Cornell, 17-18. A.A.; Physical Soc. Spectrophotometric radiation from carbon at different temperatures; absorption of carbon; atmospheric conduction between high tension transmission wires.
- Blakeslee, Prof. A(lbert) F(rancis)**, Carnegie Station, Cold Spring Harbor, L. I., N. Y. **Botany*. Geneseo, N. Y., Nov. 9, 74. A.B. Wesleyan, 96; A.M. Harvard, 00, Ph.D. 04. Asst. bot. Harvard, 99-00, instr, Radeliffe, 00-02, teaching fellow, Harvard, 01-03, collector in Venezuela for cryptogamic herbarium, Harvard, 03; investigator in Europe for Carnegie Institution, 04-06; instr. bot. Harvard, 06-07; prof. and director, summer sch. of agr. Conn. Col, 07-14, prof. bot. and genetics, 14-15; *res. investigator plant genetics, sta. for exp. evolution, Carnegie Institution*, 12-13, 15- A.A. (sec'y, G, 16, v. pres, 18); Soc. Nat. (v. pres, 16); Bot. Soc.; Phytopath. Soc.; Soc. Exp. Biol.; Eugenics Research Ass.; Torrey Bot. Club; New Eng. Bot. Club; Conn. Bot. Soc. Genetics; sexual reproduction in mucors; trees in winter; pigmentation criteria for laying in poultry; inheritance in jimson weed.
- Blanchard, Prof. Arthur A(lphonzo)**, Massachusetts Institute of Technology, Cambridge, Mass. **Chemistry*. Boston, Mass, May 4, 76. B.S. Mass. Inst. Tech, 98, fellow, 00-02; Ph.D. Leipzig, 02. Asst. theoret. chem, Mass. Inst. Tech, 98-00; instr. N. H. Col, 02-03; *inorg. chem, Mass. Inst. Tech*, 03-08, asst. prof, 08-13, *assoc. prof*, 13- A.A.; Chem. Soc.; Am. Acad.; Forestry Ass. Synthetic and analytical chemistry; migration ratios; decomposition of ammonium nitrite; viscosity of solutions in relation to the constitution of dissolved substances.
- Blanchard, Prof. A(rthur) H(orace)**, University of Michigan, Ann Arbor, Mich. *Highway engineering*. Providence, R. I., Feb. 10, 77. C. E. Brown, 99; A.M. Columbia, 02. Instr. civil eng. and math. Brown, 99-01, 02-03, asst. prof. civil eng, 03-06, *assoc. prof*, 06-11; *prof. highway eng*, Columbia, 11-17; *Michigan*, 19-20, *highway eng. and highway transport*, 20- Draftsman, Am. Bridge Co, summers, 01, 02; deputy engineer, R. I. State Board Pub. Roads, 03-09; consulting engineer, U. S. Office of Pub. Roads, 10-12; Board of Water Supply, N. Y. City, 12-17; N. Y. State Highway Commission, 12; N. Y. State Dept. Efficiency and Econ, 13-15; Mich. State Highway Dept, 19-; ed.-in-chief, 'Am. Highway Engineer's Handbook,' 14-; 'Am. Highway Transport Handbook,' 20-; chief, bur. pub. works, Educ. Commission, A.E.F, 19; mem. Council Nat. Defense, 19; v. chairman, Fed. Highway Council, 19- A.A. (sec'y, D, 12-17); Civil Eng; Chem. Soc.; Soc. Test Mat; Road Ass. (pres, 18); Nat. Highway Traffic Ass. (pres, 18-); Nat. Highways Ass; Soc. Munic. Improv; Int. Ass. Test. Mat; Can. Inst. Eng; Soc. des Ing. civils de France; Ass. Int. Perm. des Cong. de la Route. Highway engineering and highway transport.
- Blanchard, Dr. Frank Nelson**, University of Michigan, Ann Arbor, Mich. *Zoology*. Stoneham, Mass, Dec. 19, 88. A.B. Tufts, 13; fellow, Michigan, 16-18, Ph.D. 19. Instr. zool. and geol. Mass. Col, 13-16; aid, div. reptiles, U. S. Nat. Museum, 18-19; *instr. zool, Michigan*, 19- A.A.; Ecol. Soc.; Soc. Ichthyol. and Herp. Zoogeography; herpetology; distribution, life history and economic relation of reptiles.
- Blanchard, Dr. Julian**, 463 West St, New York, N. Y. *Physics*. Hertford, N. C, Nov. 10, 85. A.B. Trinity (N. C), 05; A.M. Columbia, 09, Ph.D. 17. Instr. applied math, Trinity (N. C), 05-06; asst. physics, Columbia, 06-09; prof. eng. Trinity (N.C), 09-12; research asst, Columbia, 12-15; physicist, research lab, Eastman Kodak Co, 15-17; *research engineer, West. Elec. Co*, 17- Optical Soc. Ionization of gases; retinal sensibility; diameter of the pupil; thermionic vacuum tubes.
- Blanchard, Dr. Phyllis**, Epping, N. H. *Psychology*. Epping, March 14, 95. A.B. N. H. Col, 17; Ph.D. Clark, 19. Instr. N. H. Col, 16-17; research asst. to Pres. G. Stanley Hall, 19-20; *psychologist, N. Y. State Reformatory for Women*, 20- Social psychology; abnormal psychology and therapy.
- Blanchard, Dr. R(alph) C(arpenter)**, 54 W. 40th St, New York, N. Y. *Geology*. Newport, Ind, Dec. 4, 82. B.S. Rose, 05; Ph.D. Columbia, 13; Munich. Managing director, Old York Trust Co, London, 09-14. Min. Eng; fel. Royal Geol. Soc.
- Blanchard, Prof. W(illiam) M(artin)**, Greencastle, Ind. *Chemistry*. Perquimans Co, N. C, Aug. 25, 74. A.B. Randolph-Macon, 94, A.M. 97; Ph.D. Hopkins, 00. Instr. Randolph-Macon Acad, 94-96, Randolph-Macon, 96-97; Rose, 00-01; *prof. chem, DePauw*, 01- A.A.; Chem. Soc.; Ind. Acad.; Chem. Gesell. Parabromorthosulphobenzoic and its derivatives; equivalent weight of sodium; teaching of chemistry in secondary schools.
- Blankinship, Prof. J(oseph) W(illiam)**, 2525 Hilgard Ave, Berkeley, Calif. *Botany*. Glasgow, Ill, Feb. 23, 62. A.B. Drury, 89; California, 90-92; A.B. Harvard, 94, A.M. 96, Ph.D. 98; Berlin, 07-08. Prof. science, Hesperian Col, Woodland, Calif, 92-93; asst. bot. Harvard, 94-98; prof, Mont. Col, and botanist, Exp. Sta, 98-05; *consulting plant pathologist indust. injury to veg*, 06- Asst. nat. hist, Drury, 86-88. A.A.; Bot. Soc.; Int. Ass. Bot. Ecology; economic botany; smoke injury to vegetation.
- Blasdale, Dr. W(alter) C(harles)**, 2514 College Ave, Berkeley, Calif. *Chemistry, Botany*. Jericho, N. Y. Jan. 10, 71. B.S. California, 92, Ph.D. 00. Instr. chem, California, 95-03, asst. prof. 03-19, *prof*, 19- A.A.; Chem. Soc. Analytical chemistry; equilibrium in salt solutions.
- Blatchley, W(illis) S(tanley)**, 1558 Park Ave, Indianapolis, Ind; or Duenedin, Fla. (Nov. to April). *Geology, Entomology*. North Madison. Conn, Oct. 6, 59. A.B. Indiana, 87, A.M. 91. Instr. science, high sch, Terre Haute, 87-94; state geologist, Ind, 94-11. Asst. Ark. Geol. Surv, 89; mem. Scovell science exped. to

- Mex, 91; asst. U. S. Fish Commission, 90-93. Fel. Ind. Acad. (pres, 03). Orthoptera and Coleoptera of eastern United States and Canada.
- Blatherwick, Dr. N(orman) R(ober) t**, Memorial Laboratory and Clinic, Santa Barbara, Calif. *Physiological chemistry*. Rock Valley, Iowa, Feb. 19, 87. B.S., Grinnell, 09; M.S., Illinois, 12; Currier fellow, Yale, 12-14, Ph.D., 14. Asst. chem, Illinois, 10-11; asst. chemist, Montefiore Home and Hosp, N. Y. City, 14-15; physiological chemist, bur. animal indust, U. S. Dept. Agr, 15-20; *biochemist, Mem. Lab. and Clinic, Santa Barbara, Calif*, 20- Physi. Soc.; Soc. Biol. Chem.; Chem. Soc. Water drinking; foods in relation to composition of urine; parathyroidectomy; experimental nephritis; milk secretion.
- Bleile, Prof. A(lbert) M(artin)**, Ohio State University, Columbus, Ohio. *Physiology*. Columbus, June 26, 55. Starling Med. Col, 73-76; Paris, Leipzig and Vienna, 76-79. Lecturer exp. physiol, Starling Med. Col, 80-91; *prof. physiol, Ohio State*, 91- A.A.; Micros. Soc. (pres, 00). Blood sugar; inversion of cane-sugar by gastric juice; cause of death by electric shock; urine in epilepsy; changes in heart after vagus section; detection and recognition of bloods; innervation of lungs; chemistry of respiration; synthesis of proteins by enzymes.
- Bleininger, A(lbert) V(ictor)**, Bureau of Standards, Washington, D. C. **Chemistry*. Polling, Germany, July 9, 73. B.S., Ohio State, 01. Shop experience, clay industries, 89-96; instr. ceramics, Ohio State, 01-05, asst. prof, 05-06, assoc. prof, 06-07; asst. prof, Illinois, 07-10, prof. and director, dept. ceramics, 10-12; in charge, clay products laboratories, technol. branch, U. S. Geol. Surv, 08-10; *chief, ceramics products div, Bur. Standards*, 12- Asst., Ohio Geol. Surv, 00-04; in charge ceramic investigations, Ill. Geol. Surv, 08-; lecturer ceramics, Chicago, 12; Franklin Inst, 17; deputy dist. chief, Fuel Ad, 18; chairman, ceramics committee, Nat. Research Council. Assoc. ed, 'Jour. Indust. and Eng. Chem,' 12-16. A.A.; Ceramic Soc. (pres, 08, mem. committee on publications and ed, 'Trans'); Chem. Soc. (asst. ed, 'Chem. Abstracts,' 08); Soc. Test. Mat; Wash. Acad. Technology of clay, glass and cement silicates; manufacture of optical glass; special porcelains and refractories.
- Blessing, Prof. G(eorge) F(rederick)**, Swarthmore, Pa. *Engineering*. Carrollton, Ky, July 2, 75. B.M.E., Kentucky, 97, M.E., 05; Ph.D., Hanover, 06; Cornell, 06-08. Prof. mech. eng, Nevada, 99-05; designer and research worker, Platt Iron Works, 05-06; Gen. Elec. Co, Lynn, Mass, 06; asst. prof. machine design, Cornell, 06-08; *prof. mech. eng. and in charge, eng. dept, Swarthmore*, 08- Lecturer machine design, Cornell, summers, 07, 08; plant facilities engineer, ordnance dept, U.S.A., 18; indust. relation staff, John D. Rockefeller, 20-21. Mech. Eng; Eng. Educ; Ass. Prof. Descriptive geometry; multistage turbine pumps; drawing.
- Blichfeldt, Dr. Hans Frederik**, Stanford University, Calif.. **Mathematics*. Denmark, Jan. 9, 73. A.B., Stanford, 96, A.M., 97; Ph.D., Leipzig, 98. Instr. math, Stanford, 98-01, asst. prof, 01-06, assoc. prof, 06-13, *prof*, 13- Draftsman, Eng. Dept, City and Co. of Whatcom, Wash, 92-94. Nat. Acad; A.A.; Math. Soc. (v. pres, 12); Math. Ass. Continuous groups; linear homogeneous substitution groups; geometry of numbers.
- Bliss, Dr. M(orris) J(oslin)**, Bozeman, Mont. *Biochemistry*. Lincoln, Nebr, April 21, 89. B.S., Nebraska, 12, A.M., 13; Ph.D., Minnesota, 15. Asst. agr. biochem, Minnesota, 13-15; *asst. chemist, food research lab, U. S. Dept. Agr*, 15-16; *Mont. Exp. Sta*, 16- Second lieut, Sanit. C, 18. A.A.; Chem. Soc. Proteins and nitrogen compounds of wheat and flour; humin from proteins.
- Bliss, Prof. A(ndrew) Richard, Jr**, Emory University, Atlanta, Ga. *Pharmacology, Chemistry*. New York, N. Y., Nov. 10, 87. Ph.G., N. Y. Col. Pharmacy, 07; Ph.C, Columbia, 07, Phar.D., 08; B.S., Howard Col, 10, A.M., 12; M.D., Birmingham Med. Col, 13. Asst. micros, Columbia, 06-08; prof. pharmacol, chem. and bacter, Alabama, 08-09; pharmacol. and chem, Birmingham Med. Col, 09-15, dean, sch. pharmacy, 10-15; *prof. biochem. and pharmacol. grad. sch. med, Alabama*, 12-15; *pharmacol, Emory*, 15- A.A.; Agr. Chem. (assoc. referee on alkaloids); Chem. Soc. (v. pres, Ala. sect); Pharmaceut. Ass. (v. chairman, scientific sect); Columbia Biochem. Ass. (assoc. ed, 'Bul'). Qualitative analysis; alkaloids.
- Bliss, Dr. Charles B(emis)**, McIndoe Falls, Vt. *Psychology*. Triangle, N. Y., Jan. 23, 68. A.B., Yale, 90, Ph.D., 93; B.D., Hartford, 03. Asst, psychol. lab, Yale, 93-94; prof. exp. psychol, N. Y. Univ, 94-98; *Congregational clergyman*. A.A.; Psychol. Ass; fel. N. Y. Acad. Reaction-time and attention.
- Bliss, Prof. Collins P**, New York University, New York, N. Y. *Mechanical engineering*. Carlisle, Pa, April 28, 66. A.B., Princeton, 88, A.M., 91; Ph.B., Columbia, 91; Cornell, 97. Draftsman and engineer, various iron works, 91-97; instr. *mech. eng, N. Y. Univ*, 97-00, asst. prof, 00-02, *prof*, 02- A.A.; Mech. Eng; Eng. Educ; Aeronaut. Soc. Strength of materials.
- Bliss, Prof. Gilbert Ames**, University of Chicago, Chicago, Ill. **Mathematics*. Chicago, May 9, 76. B.S., Chicago, 97, M.S., 98, Ph.D., 00; Göttingen, 02-03. Instr. math, Minnesota, 00-02; assoc, Chicago, 03-04; asst. prof, Missouri, 04-05; Princeton, 05-08; assoc. prof, Chicago, 08-13, *prof*, 13- Lecturer math, Princeton, 09; Harvard, 11; scientific expert, range firing sect, U.S.A., 18. Assoc. ed, 'Annals of Math,' 06-08. Nat. Acad; A.A.; Math. Soc. (v. pres, 11, counselor, 07-09, 16-18, chairman, Chicago sect, 17-19, assoc. ed, 'Trans,' 08-16); Math. Verein; Circolo Mat. di Palermo. Differential equations; calculus of variations; theory of functions of lines with an application to ballistics.
- Bliss, Dr. Malcolm A**, 301 Humboldt Building, St. Louis, Mo. *Medicine*. Warsaw, Ill, July 2, 63. M.D., Chicago Med. Col, 90. *Practising physician*. Instr. psychiat, Washington (St. Louis). A.A.; Neur. Ass; Am. Med. Ass. Influence of nasal and aural conditions on the fifth nerve supply.

- Bliss, Mary Campbell, 18 Allen St, Newburyport, Mass. *Botany*. Newburyport, April 19, 77. A.B. Wellesley, 99, fellow. 02-04, A.M., 04. Teacher, high sch, Newburyport, Mass, 00-01; asst. bot, Wellesley, 04-05, instr, 05-15, asst. prof, 15- A.A.; Ass. Prof.; Bot. Soc. Plant morphology; the vessel in seed plants.
- Bliss, Prof. William J(ulian) A(lbert), 1026 N. Calvert St, Baltimore, Md. **Physics*. Washington, D. C. Jan. 22, 67. A.B. Harvard, 88; certificate in elec. eng. Hopkins, 90, Ph.D, 94. Asst. elec. eng, Hopkins, 91, lecturer physics, 94, lab. asst, 95-98, assoc, 98-01, collegiate prof, 01- Physical Soc. Flocculation; forces on submerged particles.
- Blizzard, Prof. A(lpheus) W(esley), New York University, New York, N. Y. *Biology*. Baltimore, Ohio, May 23, 84. B.S. Ohio (Athens). 13; A.M. Cornell, 16. Prof. biol, Jamestown, 13-15; instr, Iowa State, 16-17; N. Y. Univ, 17- Bot. Soc. Botany; zoology; cytology; fungi; development of agarics.
- Blocher, Prof. John Milton, 311 Front St, Berea, Ohio. *Chemistry*. Gettysburg, Pa, Feb. 24, 91. B.S. Pennsylvania Col, 13; Ph.D, Hopkins, 16. Asst, Hopkins, 16-17; prof. chem, Baldwin, 17- Chem. Soc. Physical and colloidal chemistry.
- Block, D(avid) Julian, 3520 Rokeby St, Edgewater, Chicago, Ill. *Chemistry*. Fort Wayne, Ind, Aug. 13, 74. Heidelberg, 90-95; Armour, 10-13. Supt, Am. Metallizing Co, 07-08; director, research lab, Applegren and Block, 08-10; D. Julian Block, 16- A.A.; Chem. Soc. Industrial chemistry; adhesives; starch; gums; dextrans; synthetic chemistry; dyes; formaldehyde manufacture.
- Blodgett, Dr. F(orest) M(ilo), 217 Bryant Ave, Ithaca, N. Y. *Plant pathology*. Brocton, N. Y. July 15, 85. B.S.A. Cornell, 10, fellow, 10-14, Ph.D, 14. Assoc. botanist, N. Y. Exp. Sta, 13-; asst. prof. plant path, Cornell. A.A.; Phytopath. Soc. Hop mildew control; dusting and spraying apples; perithecia of *Sphaerotheca humili*.
- Blodgett, Prof. Frederick H(arvey), State Normal Training School, Danbury, Conn. *Botany*. Rockford, Ill, Sept. 12, 72. B.S. Rutgers, 97, M.S., 99; Columbia, 01; Hopkins, 06-10; Ph.D, 10. Asst. botanist, N. Y. Exp. Sta, Geneva, 00; asst. curator bot, Field Museum Nat. Hist, 01; asst. state plant pathologist, Md. Col, 01-06; asst. bot, Hopkins, 06-10; acting prof, biol. and geol, Roanoke, 10-12; plant pathologist, Tex. Exp. Sta, 12-16, pathologist, exten. service, Tex. Col, 16-19; prof. biol. sciences, State Nor. Training Sch, Danbury, Conn, 19- A.A.; Bot. Soc.; Ecol. Soc.; Phytopath. Soc.; Torrey Bot. Club; N. J. Micros. Soc. (sec'y, 96, 97). Plant diseases; vegetative reproduction; plant geography of Maryland; physiological conditions of seed germination; morphology and physiology of angiosperms.
- Bloede, Victor G(ustav), Victor G. Bloede Co, Baltimore, Md. *Chemistry*. Dresden, Saxony, March 14, 49. Grad. Cooper Union, 67, hon. Ch.E, 20. Pres. and gen. manager, Victor G. Bloede Co. Lecturer applied chem, Cooper Union. Medal, Franklin Inst; Cooper Inst. Chem. Soc; Soc. Chem. Indust; N. Y. Chemists Club. Compounds and derivatives of starch.
- Bloodgood, Dr. Joseph Colt, 904 N. Charles St, Baltimore, Md. *Surgery, Surgical pathology*. Milwaukee, Wis, Nov. 1, 67. B.S. Wisconsin, 88; M.D. Pennsylvania, 91. Res. surgeon, Hopkins Hosp, 93-99, assoc. surg, Hopkins Hosp, and assoc. prof, Hopkins, 99- Asst. ed, 'Jour. Cancer Research.' A.A.; Ass. Path. and Bact.; Col. Surg; fel. Surg. Ass; Soc. Clin. Surg; Ass. Cancer Research; Soc. Cancer Control; Am. Med. Ass; S. Surg. and Gynec. Soc; Md. Med. and Chirurg. Faculty. Tumors; cancer.
- Bloomfield, Dr. Arthur L(eonard), Johns Hopkins Hospital, Baltimore, Md. *Medicine*. Baltimore, May 30, 88. A.B. Hopkins, 07, M.D, 11. Asst. instr. and later assoc. med, Hopkins, 11-, res. physician, Hopkins Hosp, 20- Soc. Clin. Invest. Clinical and experimental medicine; bacteriology of infection.
- Bloor, Prof. W(alter) R(ay), University of California, Berkeley, Calif. **Biological chemistry*. Ingersoll, Ont, July 2, 77. M.A. Queen's (Can), 02; grad, Ont. Nor. Col, 03; A.M. Harvard, 08, Ph.D, 11. Instr. chem, Wash. State, 03-05. asst. prof, 05-07; asst. biol. chem, Harvard Med. Sch, 08-10; assoc, Washington (St. Louis), 10-14, assoc. prof, 14; asst. prof, Harvard, 14-18, prof, California, 18- Chem. Soc; Soc. Biol. Chem; Soc. Exp. Biol; Physiol. Soc; Soc. de Chim. biol. de France. Clay; carbohydrate esters; saccharin in urine; fat in blood and milk; fat absorption and metabolism; phosphatids in blood; phosphate distribution in blood.
- Blue, Surg. Gen. Rupert, U. S. Public Health Service, Washington, D. C. *Hygiene*. Richmond Co, N. C, May 30, 67. Virginia, 89-90; M.D. Maryland, 92, Sc.D, 08; grad, London Sch. Trop. Med, 10; D.P.H. Michigan, 13; Sc.D. Wisconsin, 13. Asst. surgeon, U. S. Pub. Health Service, 93, past asst. surgeon, 97, surgeon, 09, surgeon gen, 12- Detailed to Genoa, Italy, cholera and plague prev. work, 99-00; to S. Am. to investigate epidemic diseases, 10; provisional pres, Int. Sanit. Bur. of Am. Republics, 12; mem. Permanent Int. Commission of Congresses on Hygiene and Demography. Pub. Health Ass; Am. Med. Ass; Ass. Mil. Surg; Col. Surg; Nat. Committee for Mental Hygiene; hon. mem. Calif. Acad; Royal Inst. Pub. Health; fel. London Soc. Trop. Med. Epidemiology; bubonic plague.
- Blum, Dr. Theodor, 140 W. 57th St, New York, N. Y. *Oral surgery*. Vienna, Austria, Sept. 25, 83. Gymnasium, Austria; D.D.S. Pennsylvania, 09, M.D, 11; Vienna, 12. Director oral surg. and dentistry, N. Y. Throat, Nose and Lung Hosp. A.A.; Nat. Dental Ass; Am. Med. Ass; N. Y. Acad. Med. Conductive anesthesia.
- Blum, Dr. William, Bureau of Standards, Washington, D. C. *Chemistry*. Philadelphia, Pa, Dec. 28, 81. B.S. Pennsylvania, 03, Ph.D, 08. Instr. chem, Utah, 03-09; asst. chemist, Bur. Standards, 09-18, chemist, 18- A.A.; Chem. Soc; Electrochem. Soc; N. Y. Chemists Club; hon. mem. Electro-Platers Ass. Atomic weight of cadmium; complex inorganic acids; electro-deposition; electrotyping; electroplating.

- Blumberg, Prof. Henry**, University of Illinois, Urbana, Ill. **Mathematics*. Zhagory, Russia, May 13, 86. A.B, Columbia, 07, A.M, 08, fellow, 09-10; Paris and Zürich, 10-12; Ph.D, Göttingen, 12. Instr. *math*, Nebraska, 13-14, asst. prof, 14-18; assoc, *Illinois*, 18-19, *asst. prof*, 19- Asst. *math*, Columbia, summer, 07; assoc. ed, 'Annals of Math,' 16-; 'Am. Math. Monthly,' 19- A.A.; Math. Soc; Math. Ass. Algebraic properties of linear homogeneous differential expressions; general function theory; point sets.
- Blumenthal, Dr. Philip L(ee)**, 122 Eagle St, Buffalo, N. Y. *Chemistry*. Owensboro, Ky, June 9, 89. B.S, Kentucky, 09; A.M, Yale, 11, Ph.D, 12; Berlin, 12-13. Asst. chem, Yale, 10-12; asst. chemist, Iowa Exp. Sta, 13-15; research chemist, Ky. Exp. Sta, 15-19; junior partner, Babcock Testing Lab, 19-20; with *Lacteal Anal. Lab*, 21- With C. W. S, 19. A.A; Chem. Soc. (see'y, Lexington sect, 15); Agr. Chem; Ky. Acad. Inorganic, analytical and industrial chemistry; soils.
- Blumer, Dr. George**, 64 Trumbull St, New Haven, Conn. **Medicine, Pathology*. Darlington, England, March 16, 72. M.D, Cooper Med. Col, 91. Intern, City and Co. Hosp. San Francisco, 92-93; asst. surg, Hopkins Hosp, 93-94, med, 94-95, path, Hopkins, 95-96; director, Bender Hygienic Lab, 96-03; prof. path. and bacter, Albany Med. Col, 02-03; assoc. prof. path, Cooper Med. Col, 03-04; asst. med, med. dept, California, 05-06; John Slade Ely prof. theory and practise of med, Yale, 06-20, dean, med. faculty, 10-20. Pathologist, Albany Hosp, St. Peter's Hosp. and Child's Hosp; director, bur. of path. and bacter, N. Y. State Dept. of Health. A.A; Ass. Path. and Bact; Am. Physicians; Soc. Bact; Am. Acad. Med; Pub. Health Ass; Soc. Clin. Invest; N. Y. Acad. Med. Tuberculosis of aorta and of the stomach; typhoid fever; noma; malignant neoplasms; anthrax; thymus tod; thrombosis and embolism; tumor metastases in Douglas' pouch; carcinoma of the prostate; medical education.
- Blumer, Dr. G(eorge) Alder**, Butler Hospital, Providence, R. I. *Medicine*. Sunderland, England, May 25, 57. M.D, Pennsylvania, 79; L.R.C.P, L.R.C.S, Edinburgh, 84; hon. Litt.D, Brown, 05. Asst. physician, Utica State Hosp, 80-86, med. supt, 86-99; *physician-in-chief and supt, Butler Hosp*, 99- Adj. prof. insanity, Albany Med. Col, 93-99; see'y, R. I. Sch. of Design; ed, 'Am. Jour. Insanity.' Medico-Psychol. Ass. (pres, 03); New Eng. Soc. Psychiat. (pres, 17-); Boston Soc. Psychiat. and Neur. (pres, 04); hon. mem. British Medico-Psychol. Soc; Paris Soc. Med. Psychol; Soc. de Psychiat; Belgian Soc. Mental Med.
- Blumer, J(acob) C(orwin)**, Renwick, Iowa. *Forestry*. Engi, Switzerland, Dec. 4, 72. B.S.A, Iowa State, 01, 02; Michigan, 04-06. Mem. U. S. Forest Service, 01-05; asst. desert lab, Carnegie Institution, 07-08; asst. forester, Commission of Construction, Can, 13-16. Independent bot. explorations, 06-07, 08-13. A.A; Bot. Soc; Wash. Biol. Soc; Can. Forestry Ass. Botany; plant geography; plant collections; pine seeds; forests of Saskatchewan.
- Blunt, Prof. Katharine**, 1156 E. 56th St, Chicago, Ill. *Home economics*. Philadelphia, Pa, May 28, 76. A.B, Vassar, 98; Mass. Inst. Tech, 02-03; fellow, Chicago, 06-07, Ph.D, 07. Asst. chem, Vassar, 03-05; instr. dept. domestic science, Pratt Inst, 07-08; Vassar, 08-13; asst. prof. food chem. and home econ, *Chicago*, 13-18, *assoc. prof. and chairman, dept. home econ*, 18- Editor-in-chief, col. sect, Food Ad, 18. A.A; Chem. Soc; Home Econ. Ass. (ed. board, 'Jour. Home Econ'). Changes in fats in cooking; digestibility of fats; losses of iron in cooking vegetables; preserved eggs.
- Blunt, Col. S(tanhope) E(nglish)**, U. S. A, Springfield, Mass. *Ordnance, Artillery*. Boston, Mass, Sept. 29, 50. Grad, U. S. Mil. Acad, 72. Lieut, capt, major, lieut. col, *ordnance dept, U.S.A*, 72- Instr. *math, U. S. Mil. Acad*, 76-80, *ordnance and gunnery*, 78-80. A.A; Wash. Acad; many mil. societies. Gunnery.
- Boardman, Prof. Horace Prentiss**, University of Nevada, Reno, Nev. *Civil engineering*. Menasha, Wis, Jan. 21, 69. B.S, Wisconsin, 95, C.E, 11. Engineer, sanit. district of Chicago, 94-96; asst. engineer, Chicago and Alton R. R, 97-01; C. M. and St. Paul R. R, 01-04; designing engineer, 05; supt, Savage Constr. Co, 04-06; *prof. civil eng, Nevada*, 07- Civil Eng; Eng. Educ; Ass. Eng; West. Sec. Eng. Cement and concrete; wind pressures on roofs.
- Boas, Prof. Franz**, 230 Franklin Ave, Grantwood, N. J. **Anthropology*. Minden, Germany, July 9, 58. Heidelberg; Bonn; Ph.D, Kiel, 81; LL.D, Clark, 09; D.Sc, Oxford, 12. Asst. Royal Ethnol. Museum, Berlin, 85-86; Privatdocent, Berlin, 85-86; docent, Clark, 89-92; first asst, dept. anthrop, Columbia Expos, 92-94; asst. curator, Am. Museum Nat. Hist, 95-00, curator, 00-05; lecturer *anthrop, Columbia*, 96-99, *prof*, 99- Ed, 'Jour. Am. Folk-lore'; 'Pub. Jesup North Pacific Exped'; 'Columbia Univ. Contributions to Anthrop'; hon. philologist, Bur. Am. Ethnol, 01-19. Nat. Acad; A.A. (v. pres. 94, 07); Anthropol. Ass. (pres. 07, 08); fel. Ethnol. Soc. (v. pres, ed, 'Pub'); Philos. Soc; cor. mem. Antiq. and Numis. Soc; Am. Acad; fel. N. Y. Acad; hon. fel. Anthropol. Inst. Gt. Britain and Ireland; cor. mem. Anthropol. Societies of Washington, Berlin, Brussels, Florence. Paris, Rome, Stockholm and Moscow; Frankfort Gesell. für Orient. Sprachen; Royal Prussian Acad; hon. mem. Vienna Anthropol. Gesell; Paris Soc. des Américanistes. Anthropology of Arctic America and of the North Pacific coast; anthropometry; North American linguistics.
- Bock, Prof. Joseph C(arl)**, Marquette School of Medicine, Milwaukee, Wis. *Physiological chemistry*. Vienna, Austria, June 18, 84. Chem. Eng, Polytech, Vienna, 09; Ph.D, Cornell, 17. Chemist, Swift and Co, 09-11; instr, physiol. chem, Mich. Agr. Col, 11-12; research chemist, nutrition lab, Carnegie Institution, 12-13; instr. chem, med. col, Cornell, 13-18; *prof. physiol. chem, Marquette*, 18- Soc. Biol. Chem. Urine analysis.
- Boeck, Dr. William C(harles)**, Hygienic Laboratory, U. S. Public Health Service, Washington, D. C. *Zoology*. Olivia, Minn, Feb. 18, 94. B.S, Carleton, 15; A.M, California, 16, fellow,

- 17-18, Ph.D, 18. Teaching fellow, California, 15-17; research fellow, sch. hygiene and pub. health, Hopkins, 19-20; *asst. zoologist, U. S. Pub. Health Service*, 20- A.A.; Soc. Zool; Soc. Exp. Biol. Protozoology; Giardia; relation of pathogenic Protozoa to soil pollution.
- Boehm, Prof. W(alter) M(artinus)**, 33 Fairview Ave, Highland Park, Philadelphia, Pa. *Physics*. Ft. Dodge, Iowa, Nov. 11, 77. B.S, Iowa, 02; Ph.D, Pennsylvania, 10. Instr. *physics*, Utah, 04-05; adj. prof, Cornell (Iowa), 05-07; *instr. Pennsylvania*, 07- A.A.; assoc. mem. Physical Soc; Davenport Acad. Sound; open ends of organ pipes; method of measuring intensity of sound.
- Boerker, Dr. Richard H(ans) D(ouai)**, Mt. Tremper, N. Y. *Forestry*. Brooklyn, N. Y., Oct. 19, 87. A.B, Dartmouth, 09; M.S, Michigan, 11; Ph.D, Nebraska, 15. Forest asst. and examiner, U. S. Forest Service, 11-17; arboriculturist, Dept. Parks, N. Y. City, 17-18; *consulting forester*, 17- Collaborator, 'Bot. Abstracts.' A.A; Forestry Ass; Am. Geog. Soc; Bot. Soc; Ecol. Soc; Torrey Bot. Club; Can. Forestry Ass. National forests; forest production and ecology; silviculture.
- Boeshore, Irwin**, University of Pennsylvania, Philadelphia, Pa. *Botany*. Lickdale, Pa, Nov. 12, 83. B.S, Pennsylvania, 15. 'Asst. bot, Pennsylvania, 13-16, *instr*, 16- A.A. Morphology; histology.
- Bogert, Prof. L(otta) Jean**, Kansas State Agricultural College, Manhattan, Kans. *Biochemistry*. Scotland, S. Dak, June 17, 88. A.B, Cornell, 10; Ph.D, Yale, 16. Instr. chem, Simmons, 10-11; Mt. Holyoke, 11-12; asst. path. chem, Yale, 16-18, *instr. exp. med*, 18-19; *prof. food econ. and nutrition*, Kansas State, 19- A.A; Soc. Biol. Chem. Human nutrition; blood volume; uric acid in urine and blood; excretion of phosphates, calcium and magnesium; pellagra.
- Bogert, Prof. Marston T(aylor)**, Columbia University, New York, N. Y. **Chemistry*. Flushing, N. Y, April 18, 08. A.B, Columbia, 90, fellow, Ph.B, 94; LL.D, Clark, 09. Asst. *org. chem*, Columbia, 94-97, tutor, 97, *instr*, 97-01, adj. prof, 01-04, *prof*, 04-, head of dept, 10-11. Mem. Conservation Conf, Wash, 08; chairman, Am. Commission on Org. Chem. Nomenclature, 12; lecturer *org. chem*, N. Y. Univ, 19-20. Nichols medal, Chem. Soc, 03. Int. Cong. Applied Chem, London, 09. Organizer and chairman, div. chem. and chem. tech, Nat. Research Council, 16-17, mem. exec. board, 17-18; col, C. W. S., 18-19; various other war positions. Nat. Acad; A.A. (mem. gen. committee, 01, 16); Chem. Soc. (librarian, 98-99, v. chairman, N. Y. sect, 00-01, v. pres. and chairman, N. Y. sect, 01-02, delegate, Council of N. Y. Sci. Alliance, 99-02, mem. board of editors, 03-, chairman, sect. *org. chem*, 05, pres, 07, 08, director, 14); Soc. Chem. Indust. (v. pres, 02-04, pres, 12); Am. Acad; Philos. Soc; N. Y. State Sci. Teachers Ass; N. Y. Chemists Club (sec'y, 98-01, pres, 08); London Chem. Soc; Chem. Gesell; Soc. chim. de France (pres, Am. sect, 20-). Synthetic organic chemistry.
- Boggs, Prof. Gilbert H(illhouse)**, Georgia School of Technology, Atlanta, Ga. *Chemistry*. Memphis, Tenn, Oct. 2, 75. B.S, Georgia, 96; Harrison fellow, Pennsylvania, 99-01, Ph.D, 01. Instr. *chem*, Maine, 01-03; instr, asst. prof. and later *assoc. prof*, Ga. Tech, 03- A.A; Chem. Soc. Separation of vanadic acid from metals; molybdenum in endlicheite.
- Boggs, Dr. L(ucinda) Pearl**, 811 W. Illinois St, Urbana, Ill. *Psychology, Education*. Hayes, Ill, Nov. 18, 74. A.B, Illinois, 94; Ph.D, Halle, 00; hon. fellow, Cornell, 02. Instr, high sch, Oakland, Ill, 94-95; preceptress and instr. Greek and Latin, Rice Col. Inst, 95-97; instr. psychol. and supervisor primary training, Wash. State Nor. Sch, 00-02; instr. psychol. and educ, West. Col. for Women, Oxford, Ohio, 06-07; prof. educ, Woman's Univ, Nanking, China, 10-12. Sec'y, Clark Univ. Conference on Child Welfare, 09. A.A; West. Philos. Ass. Attention and feeling; psychology of interest and its application to education; psychology of learning; nurture of children.
- Boggs, Dr. Thomas R(ichmond)**, 21 W. Chase St, Baltimore, Md. *Internal medicine*. Memphis, Tenn, Oct. 2, 75. B.S, Georgia, 96, 96-97; Pennsylvania, 97-98; M.D, Hopkins, 01; Tübingen, 03. Asst. res. physician, Hopkins Hosp, 01-11; assoc. med, Hopkins, 08-11, *assoc. prof*, 11-14, *clin. med*, 14- Am. Physicians; Soc. Clin. Invest; Am. Med. Ass. Laboratory diagnostic methods; medical chemistry; clinical observations.
- Bogue, R(obert) H(erman)**, Mellon Institute, Pittsburgh, Pa. *Chemistry*. Boston, Mass, Sept. 27, 89. B.S, Tufts, 12; M.S, Mass. Col, 15; Ph.D, Pittsburgh, 20. Instr. chem, Mass. Col, 12-15; asst. prof, Mont. Col, 15-17; *fellow*, Mellon Inst, 17- Chem. Soc. Adsorption of ions by soils; glues and gelatins.
- Bohannon, Prof. R(osser) D(aniel)**, 1857 Indianola Ave, Columbus, Ohio. *Mathematics*. Matthews C. H, Va, April 20, 55. B.S, C.E, E.M, Virginia, 76; Cambridge, 80-82; Göttingen, 82-83. Prof. math, Emory and Henry, 78-80; acting prof, Virginia, 83-84, asst. prof. math. and physics, 84-87; *prof. math. and astron*, Ohio State, 87-95, *math*, 95- A.A; Math. Soc; Eng. Educ.
- Bohart, Dr. G(eorge) S(hambaugh)**, 3626 Park Place, N. W, Washington, D. C. *Chemistry*. Elvira, Iowa, Oct. 14, 83. A.B, Stanford, 11, Ph.D, 15. Instr. *org. and inorg. chem*, Stanford, 11-16; *org. and physical chemist*, color lab, bur. chem, U. S. Dept. Agr, 16-18; *research chemist*, Nat. Canners Ass, 19- Reactions between potassium amid and metallic salts; absorption of chlorin by charcoal; canned food.
- Boldt, Prof. Hermann J(ohannes)**, 616 Madison Ave, New York, N. Y. *Medicine*. Near Berlin, Germany, June 24, 56. M.D, N. Y. Univ, 79. Asst. *gynec*, Univ, and Bellevue Hosp. Med. Col, 80-82; instr, N. Y. Post-Grad. Med. Sch, 82-90, *prof*, 90- Consulting gynecologist, Post-Grad, St. Vincent's, Beth Israel, and Union Hospitals, and Stuyvesant Polyclinic. Medal, Paris Expos, 00. Hon. mem. Gynec. Soc; Col. Surg; S. Surg. and Gynec. Soc; German Med. Soc. (past pres); N. Y. Obstet. Soc. (past pres); N. Y. Acad. Med; Int. Gynec. Soc; Royal Soc. Med. Gynecological pathology; action of drugs on animals.

Bolles, Dr. M(yrick) N(athaniel), American Smelting and Refining Company, Monterey, Mex. *Metalurgy*. Winneshiek Co, Iowa, 77. B.S, S. Dak. Col, 98; Ph.D, Columbia, 03. Instr. mech. and physics, S. Dak. Sch. Mines, 98-00; tutor metal, Columbia, 03-05. Chemist, Golden Reward Cons. Gold Mining and Milling Co, 00-01. Chem. Soc; Min. Eng. Metallographic constitution of metallic sulphids; significance of copper oxid in alloys of copper, sulphur and bismuth; temperature limits of technical operations; alloy steels as influenced by the vanadium group.

Bolley, Prof. Henry L, Agricultural College, N. Dak. **Botany, Bacteriology*. Holman, Ind, Feb. 1, 65. B.S, Purdue, 88, M.S, 89. Instr. biol, Purdue, 89-90; *prof. bot. and zool, N. Dak. Col. and botanist, Exp. Sta, 90-*, dean, *div. biol, 08-* In charge, office of exp. sta. lab, Columbian Expos, 93; state seed commissioner, 09- A.A; Bot. Soc; Soc. Prom. Agr. Sci; Soc. Agron; Phytopath. Soc; Bot. Cent. States. Bacteriology of milk, water and soil; phytopathology, including smuts of cereal grains; seed and soil-infesting fungi parasitic upon cropping plants; breeding for disease resistance.

Bolton, Dr. B(enjamin) Meade, Sioux City, Iowa. **Bacteriology*. Richmond, Va, April 7, 57. M.D, Virginia, 79; South Carolina, 82-83; Heidelberg, 83-84; Göttingen, 84-86; Berlin, 86. Asst. and later fellow by courtesy and assoc. bacter, Hopkins, 86-88, 91-93; prof. hygiene and bacter, South Carolina, 88-89; director, lab. of bacter, Hoagland Lab, Brooklyn, 89-91; pathologist, Ohio Hosp. for Epileptics, 93; director, lab. of hygiene, Bur. of Health, Phila., 93-95; prof. path. and bacter, Missouri, 95-96; path, Marion-Sims-Beaumont Col. of Med, St. Louis, 01-04; expert, bur. animal indust, U. S. Dept. Agr, 04-20; *pathologist, New Samaritan Hosp, 20-* Director, Virchow Lab, St. Louis, 19- Emer. mem. Am. Physicians; Am. Med. Ass; St. Louis Acad. Behavior of bacteria in water; action of metal and metallic salts and of electricity on the growth of bacteria; antitoxin in the blood of horses; occurrence of tetanus toxin in the blood of infected horses; bacteriolytic power of the blood serum of hogs.

Bolton, Prof. Frederick E(lmer), University of Washington, Seattle, Wash. *Education, Psychology*. Tomah, Wis, May 9, 66. B.S, Wisconsin, 93, M.S, 96; Leipzig, 96-97; hon. fellow, Clark, 97-98, Ph.D, 98. Prof. psychol. and pedag, State Nor. Sch, Milwaukee, 98-00; head, *dept. educ, Iowa, 01-12; Washington (Seattle), 12-13, dean, 13-* Teacher, rural schools, 85-87; principal schools, Tunnel City, Wis, 87-88; high sch, Fairchild, Wis, 90-91; Park Sch, Kaukauna, Wis; state inst. conductor, Wis, 93-00; lecturer pedag, summer sch, Wisconsin, 99; chairman, committee to revise sch. laws of Iowa, 07-09; prof. educ, Chicago, summer, 12. A.A; Psychol. Ass; Soc. Col. Teachers Educ. (sec'y, 04-10); Soc. Sci. Educ; West. Philos. Ass; Wis. State Teachers' Ass. (pres, nor. dept, 99), and Child Study Soc. (sec'y and treas, 99); Iowa State Teachers' Ass. and Child Study Soc. (pres, 00-). Genetic psychology and science of education; dramatic instinct; genetic study of mo-

ality applied to problems in education; individual differences; adolescence.

Bolton, Reginald Pelham, The Bolton Building, E. 19th St, New York, N. Y. *Mechanical engineering*. London, England, Oct. 5, 56. Private instruction. Apprenticeship, England, 73-78; asst. engineer, Edgemore Iron Works, 79; manager, Appleby Brothers Eng. Works, England, 85; *consulting and expert engineer, 85-* Designer equipment, Bowling Green offices, Grand Central Station, Ansonia Hotel, N. Y. City, etc. Telford gold medal and Telford premium, Civil Eng, 01. A.A; Mech. Eng; Civil Eng; Heat. and Vent. Eng. (pres, 12); hon. mem. N. Y. Hist. Soc; Am. Scenic Soc. (v. pres. and trustee); assoc. mem. British Inst. Civil Eng. Hydroelectric and steam economics; adaptation of mechanical apparatus to needs of modern buildings; piping for high buildings; elevators; history.

Bolton, Prof. Thaddeus L(incoln), Temple University, Philadelphia, Pa. **Psychology, Philosophy*. Sonora, Ill, July 27, 65. A.B, Michigan, 89; Ph.D, Clark, 94. Teacher, nor. sch, Worcester, Mass, 93-96; San Jose, Calif, 96-97; *prof. philos. and educ, Washington (Seattle), 97-98;* asst. prof. psychol, Nebraska, 99-04, prof. 04-10; director, training sch, Tempe, Ariz, 10-12, *prof. philos. and psychol, Montana, 12-17;* *psychol, Temple, 17-*; *lecturer, Phila. Sch. Occupational Therapy, 19-* Lecturer, univ. exten. soc, Pennsylvania. A.A; Psychol. Ass; West. Philos. Ass. Rhythm; growth of memory; fatigue; space sense of skin; reliability of the ergograph; relation between motor power and intelligence; social laws of personal conduct; genetic view of make-believe; efficacy of consciousness; relation of muscle sense to pressure sense; inheritance of special traits.

Boltwood, Dr. Bertram B(orden), Box 1038, Yale Station, New Haven, Conn. **Chemistry*. Amherst, Mass, July 27, 70. Ph.B, Yale, 92; Munich, 92-94; Leipzig, 96; Ph.D, Yale, 97; John Harling fellow, Manchester, 09-10. Lab. asst. chem, Sheffield Sci. Sch, Yale, 94-96, instr. physical chem, 96-00; research chemist, 00-06; asst. prof. physics, Yale, 06-10, *prof. radiochem, 10-*, *acting prof. chem. and director, Kent Chem. Lab, 18-* Nat. Acad; A.A; Chem. Soc; Physical Soc; Philos. Soc; Am. Acad. Organic and inorganic chlorides; radium and radioactivity.

Bolza, Prof. O(skar), University of Freiburg, Freiburg i. B, Germany. **Mathematics*. Bergzabern, Germany, May 12, 57. Berlin, 75-76; Heidelberg, 77; Strassburg, 78; Göttingen, 80, Ph.D, 86; Berlin, 81-82. Reader *math*, Hopkins, 88-89; assoc, Clark, 89-92; assoc. prof, Chicago, 93-94, prof, 94-10, *hon. prof, 10-* Nat. Acad; Math. Soc. (v. pres, 04); Math. Verein. Hyperelliptic functions; calculus of variations.

Bonardi, J(ohn) P(aul), Reno, Nev. *Chemistry*. Lebanon, N. H, Feb. 3, 93. B.S, N. H. Col, 15; E.Met, Colo. Sch. Mines, 20. Asst. chemist, W. Va. Exp. Sta, 15-16; junior chemist radioactivity, *Bur. Mines, 16-18, asst. chemist, 18-* Chem. Soc; Denver Teknik Club. Metallurgy; rare earths and metals; radioactivity; flotation; ore dressing.

- Bonquet, Dr. P (ierre) A (uguste)**, Lindsay, Calif. *Horticulture*. Near Ypres, Belgium. Grad, Ypres Col, 03; Ph.D, California, 15. Provincial lecturer hort, B. C, 12-13; director, lab. agr. research, Spreckels, Calif, 15-16; investigator sugar beet indust, S. Am, 16-17; metal. chemist, South. Pacific R. R, 18; *plant pathologist*, Tulare Co, Calif, 19- Chem. Soc. Plant pathology; curly leaf of sugar beets; June drop of oranges.
- Bond, Dr. Charles S**, Richmond, Ind. *Medicine*. Richmond, June 8, 56. M.D, Bellevue Med. Col, 83; M.S, Earlham, 87. *General practitioner*, 83- County coroner, 84-88; appointed mem. of Tuber. Congress, 08; mem. Int. Tuber. Cong, London, 01. Am. Physicians; Am. Med. Ass; Ind. Med. Soc (pres); Ind. Acad. Photomicrographic work in blood; bacteria and pathological specimens; tuberculosis; excreta of chronic Bright's disease patients; blood corpuscles in health and disease.
- Bond, George M (eade)**, 69 Washington St, Hartford, Conn. *Engineering*. Newburyport, Mass, July 17, 52. M.E, Stevens, 80. Manager, standards and gauge dept, Pratt and Whitney Co, 80-02. Alumni trustee, Stevens, 95-98. A.A; (sec'y, D, 87); Mech. Eng. (v. pres, 09); Civil Eng; N. Y. Eng. and Transportation Clubs; Hartford Club; London Royal Societies Club. Standards for linear dimensions and for interchangeability of products of manufacture.
- Bond, Prof. Perry A (very)**, University of Iowa, Iowa City, Iowa. *Chemistry*. Storm Lake, Iowa, July 28, 78. B.S, Iowa, 01, M.S, 08, fellow, 08-09, Ph.D, 15. Instr. chem, Iowa, 08; Armour Inst, 08-11; prof, Iowa Teachers Col, 11-18; *asst. prof. inorg. chem*, Iowa, 18- A.A; Chem. Soc. (sec'y, Iowa sect, 15, pres, 17, councilor, 18). Nitroxylene sulphonic acids and oxidation products; non-aqueous solvents.
- Bondurant, Dr. Eugene D (uBose)**, 166 Conti St, Mobile, Ala. *Pathology*. Hale Co, Ala, Jan. 26, 62. Southern, 77-80; M.D, Virginia, 83; Heidelberg and Vienna, 90-91. Asst. physician, N. Y. City Insane Hosp, 85; Ala. Insane Hosp, 85-92, asst. supt, 92-97; prof. nervous diseases and path, Alabama, 97-15. A.A; Neur. Ass; Medico-Psychol. Ass; Am. Med. Ass. Neurology.
- Bonner, Prof. W (alter) D (aniel)**, 1278 E. 13th South St, Salt Lake City, Utah. *Chemistry*. Osceola, Nebr, Oct. 27, 78. B.S, Nebr. Wesleyan, 06; A.M, Princeton, 08; Ph.D, Toronto, 11. *Lecturer chem*, Queen's (Can), 09-11, asst. prof, 11-15; *prof*, Utah, 15- A.A; Chem. Soc; Utah Acad. (councilor, 19); Utah Soc. Eng. Oil shales and solid hydrocarbons.
- Bonnet, Dr. Frederic, Jr**, Atlas Powder Co, Landing, N. J. *Physical chemistry*. St. Louis, Mo, Feb. 28, 78. B.S, Washington (St. Louis), 99; M.S, Harvard, 02, Ph.D, 03. Instr. chem, Iowa, 03-04; Worcester, 04-09, asst. prof, 09-13, prof, 13-18; chief chemist, U. S. Ammonium Nitrate Plant, 18; *director*, *Forcite Exp. Lab*, Atlas Powder Co, 19- A.A; Chem. Soc. Hydrolytic equilibrium of dissolved chromium sulphate; compressibility of metals; the rare earths and ceramics.
- Bonns, Dr. W (alter) W (eidenfeld)**, Eli Lilly and Company, Indianapolis, Ind. *Botany*. Milwaukee, Wis, April 9, 77. B.S, Mass. Inst. Tech, 99; B.S.A, Cornell, 09; Lackland research fellow, Mo. Bot. Garden, 15-18, Ph.D, Washington (St. Louis), 18. Horticulturist, Maine Exp. Sta, 09-12; asst. prof. pomol, Citrus Exp. Sta, California, 12-15; *director*, *bot. research lab*, Eli Lilly and Co, 18- A.A; Bot. Soc; Phytopath. Soc; Ind. Acad. Plant physiology; mycology; fruit propagation; transpiration; enzyme action.
- Bonser, Prof. Frederick G (ordon)**, 525 West 120 St, New York, N. Y. *Psychology*. Tower Hill, Ill, June 14, 75. B.S, Illinois, 01, fellow, 01-02, M.S, 02; fellow, Teachers Col, Columbia, 05-06. Teacher, pub. schools, Ill, 97-98; Wash, 98-99; asst. psychol, Illinois, 01-02; prof. psychol. and educ, State Nor. Sch, Cheney, Wash, 02-05; State Nor. Sch, Macomb, Ill, 06-10; asst. prof. indust. arts and later *prof. educ*, Teachers Col, Columbia, 10- Teacher psychol, Illinois, summer, 01; instr. Teachers Col, Columbia, summer, 06. Psychol. Ass. Mental activity and the circulation of blood; influence of early companions; reasoning ability of children of intermediate grades; the elementary school curriculum.
- Bonsteel, Dr. Jay A (llan)**, U. S. Department of Agriculture, Washington, D. C. *Agriculture*, *Geology*. Huntington, W. Va, April 13, 73. B.S, Cornell, 96; Ph.D, Hopkins, 01. Asst. geol, Cornell, 95-98; asst. Md. Geol. Surv, 98-99; student asst, U. S. Weather Bur, 98-00; *scientist in charge*, U. S. Soil Surv, 00- Detailed as prof. soil investigations, Cornell, 03-05. Adaptation of crops to soils; agricultural economics.
- Booge, Dr. (James) Eliot**, E. I. duPont de Nemours and Co, Wilmington, Del. *Chemistry*. Sioux City, Iowa, April 27, 90. Ph.G, Iowa, 09, Ph.C, 10, A.B, 14; fellow, Columbia, 15-16, Ph.D, 16. Instr. chem, Iowa, 10-14; asst, Columbia, 14-15, instr, 16-17; *chemist*, E. I. duPont de Nemours and Co, 17- Chem. Soc.
- Book, Prof. W (illiam) F (rederick)**, Indiana University, Bloomington, Ind. *Psychology*. Princeton, Ind, 72. A.B, Indiana, 00; hon. fellow, Clark, 03-06, Ph.D, 06. *Prof. philos*, Montana, 06-12; *educ*, Indiana, 12- Lecturer psychol, Indiana, summer, 07, educ, 10. A.A; Psychol. Ass; Hygiene Ass. The psychology of skill; why pupils drop out of high school; rôle of teacher in economic learning; psychology of higher thought processes.
- Bookman, Dr. S (amuel)**, 48 E. 82d St, New York, N. Y. *Physiological chemistry*. New York, Dec. 11, 69. Columbia, 86-91; Ph.D, Berlin, 95. Chemist, N. J. Zinc and Iron Co, 95-96; *assoc. physiol. chem*, path. inst. N. Y. State Hosp, 96-02; *physiol. chemist*, Mt. Sinai Hosp, 04- A.A; Chem. Soc; Soc. Biol. Chem; Soc. Chem. Indust; Chem. Gesell. Pathological chemistry; normal and pathological metabolism; industrial biological chemistry.
- Booraem, John V (an) V (orst)**, 204 Lincoln Place, Brooklyn, N. Y. *Mechanical engineering*, *Chemistry*. Jersey City, N. J, Oct. 30, 38. M.E, Polytech, Karlsruhe, 59. Constructing engineer, 60-71; constructing engineer and supt, Decastro and Donner Sugar Ref. Co, 72-82; constructing engineer, Havemeyer and Elder, 82; consulting engineer, Board of Amer. Sugar

- Ref. Co, S2-98; *v. pres.*, *Am. Brick and Tile Co.*, 98- A.A.; Mech. Eng; Chem. Soc; Am. Geog. Soc. Calculation of energy stored in matter; washing raw sugars; treatment of sugar in solution with sulphurous acid; separation of solids of different specific gravity; pumping of certain semi-solids; balancing of bodies rotating at high speeds; measurement of internal energy developed in bodies under change by heat and pressure.
- Bocraem, Robert Elmer**, Ridgewood Bergen Co, Jersey City, N. J. *Mining engineering*. Jersey City, March 28, 56. E.M., Columbia, 78. Gen. manager, mining companies in western states, 79-81; *consulting engineer*, 91- Hon. librarian, U. S. commission, Paris Expos, 00. Min. Eng. Saving wasted products in silver milling; mechanical inventions for saving labor; silver mines in Colorado; gold placers in Oregon; gold deposits in Alaska; crude oil in southern California.
- Boord, Prof. Cecil E(rnest)**, Ohio State University, Columbus, Ohio. *Chemistry*. Veedersburg, Ind., June 29, 84. A.B., Wabash, 07; fellow, Ohio State, 07-09, A.M., 09, Ph.D., 12. *Asst. chem.*, Ohio State, 09-12, instr., 12-14, *asst. prof.*, 14- A.A.; Chem. Soc. Constitution of hydroxyazo compounds; spectrophotometric study of the rate of chemical reactions.
- Booth, Dr. Bradford A(llen)**, East End Trust Building, Pittsburgh, Pa. *Medicine*. Pittsburgh, 78. M.D., Pittsburgh, 00; Harvard. *Diagnostician*, Dept. Pub. Health, Pittsburgh, 02- Staff physician, W. Pa. and Allegheny Gen. Hospitals, 12-; consulting physician, Eye and Ear Hosp, 12-; instr. infectious diseases, Pittsburgh. A.A.; Am. Med. Ass; Am. Acad. Med.
- Booth, Dr. H(arold) S(immons)**, Western Reserve University, Cleveland, Ohio. *Chemistry*. Cleveland, Jan. 30, 91. A.B., Western Reserve, 15, A.M., 16; Sage fellow, Cornell, 17-18, Dupont fellow, 18-19, Ph.D., 19. *Instr. chem.*, Adelbert Col. and col. for women, Western Reserve, 19- Chem. Soc. (see'y-treas, Cornell sect, 17). Gas densities; atomic weights; inorganic trinitrids; electrochemistry.
- Booth, Miss Mary A(nn)**, 60 Dartmouth St, Springfield, Mass. *Microscopy*, *Photomicrography*. Longmeadow, Mass, Sept. 9, 43. Diplomas and medals, New Orleans Expos; La. Purchase Expos, 04; Panama-Pacific Expos, 15. A.A.; Micros. Soc; N. Y. Micros. Soc; cor. mem. Brooklyn Inst; fel. Royal Micros. Soc; fel. Royal Photog. Soc.
- Boothby, Prof. Walter M(eredith)**, Mayo Clinic, Rochester, Minn. *Physiology*. Boston, Mass, July 28, 80. A.B., Harvard, 01, A.M., 07, M.D., 06. *Asst. prof. med.*, Mayo Foundation, Minnesota, and head, sect. clin. metabolism, Mayo Clinic. *Physiol. Soc*; *Soc. Clin. Invest*; Col. Surg. Respiration; metabolism.
- Boothroyd, Prof. S(amuel) L(atimer)**, Cornell University, Ithaca, N. Y. *Astronomy*. Loveland, Colo., Aug. 10, 74. B.S., Colo. Agr. Col, 93, M.S., 04; Chicago, 94-95; Cornell, 04-07. Prof. math. and astron, Mount Morris, 95-97; asst. Lowell Observatory, 97-99; assoc. prof. physics and eng, Colo. Agr. Col, 02-04; instr. civil eng, Cornell, 04-08, asst. prof. geod. and topog. eng, 08-12; assoc. prof. math. and astron, Washington (Seattle), 12-17, astron, 17-21; *prof. astron. and geod.*, Cornell, 21- Investigator irrig. in Colo, summer, 04; asst. surveyor, Alaskan Boundary Commission, summers, 05-09. A.A.; Eng. Educ; Pacific Astron. Soc. Double star measures; theories of cosmic evolution; spectroscopic binaries.
- Borden, Dr. R(aymond) F(ranklin)**, Brown University, Providence, R. I. *Mathematics*. Portsmouth, R. I., Aug. 2, 92. Ph.B., Brown, 14, A.M., 15; Ph.D., Illinois, 18. *Asst. math.*, Illinois, 15-18, *instr.*, 18-20; Brown, 20- Mixed equations.
- Borger, Prof. Robert Lacey**, Athens, Ohio. *Mathematics*. Amherst, Va. A.B., Florida; A.M., Chicago, Ph.D., 07. Prof. math, Florida, 96-04; instr., Missouri, 05-07; assoc., Illinois, 09-16; *prof.*, Ohio (Athens), 16- Math. Soc; Math. Ass. Theory of groups; functions of a real variable.
- Boring, Prof. Alice M(iddleton)**, Wellesley College, Wellesley, Mass. *Zoology*. Philadelphia, Pa, Feb. 22, 83. A.B., Bryn Mawr, 04, A.M., 05, fellow, 06-07, Ph.D., 10; fellow, Pennsylvania, 05-06; Würzburg and Naples Zool. Sta, 08-09. Instr. zool, Vassar, 07-08; Maine, 09-11, asst. prof., 11-13, assoc. prof., 13-18; asst. biol, Peking Union Med. Col, 18-20; *asst. prof. zool.*, Wellesley, 20- A.A.; Soc. Nat; Soc. Zool. Cytology; regeneration.
- Boring, Prof. Edwin G(arrigues)**, Clark University, Worcester, Mass. **Psychology*. Philadelphia, Pa, Oct. 23, 86. M.E., Cornell, 08, A.M., 12, Ph.D., 14. *Asst. psychol.*, Cornell, 11-13, instr., 13-18; capt, psychol. service, 18-19; *prof. exp. psychol.*, Clark 19- *Asst. psychol.*, Govt. Hosp. for the Insane, Washington, D. C, 12. A.A.; Psychol. Ass. Theoretical psychology; cutaneous and organic sensations; psychophysics.
- Boring, Mrs. Edwin G. (Dr. Lucy Day)**, 11 Oberlin St. Worcester, Mass. *Psychology*. Framingham, Mass, Aug. 27, 86. A.B., Mount Holyoke, 08; Ph.D., Cornell, 12. *Asst. psychol.*, Mt. Holyoke, 08-09; Cornell, 10; Vassar, 13-14; instr., Wells, 14-15; *hon. fellow*, Clark, 19- A.A.; Psychol. Ass. Comparative psychology; vision.
- Borrowman, Dr. George**, Chemists Club, New York, N. Y. *Chemistry*. Stillwater, Minn, June 4, 80. B.S., Minnesota, 05; A.M., Nebraska, 07, Ph.D., 16. Instr. chem, Minnesota, 04-05; prof. tech. and indust. chem, Nebraska, 05-18; *research chemist*, J. E. Teeple, 18- Chem. Soc; N. Y. Chemists Club. Geology; ore and water analysis; concrete; clays; water softening; borromite.
- Böse, Dr. Emil**, Calle del Centenario 43, Mexico D. F., Mexico. *Geology*. Hamburg, Germany, June 8, 68. Berlin, 88-89; Ph.D., Munich, 93. Geologist, Mex. Geol. Surv, 98-03, chief geologist, 03-15; geologist, bur. econ. geol, Texas, 15-17; *consulting petroleum geologist*, 17- Vienna Geol. Gesell. Paleontology; tectonics; earthquakes.
- Boss, Prof. Andrew**, University Farm, St. Paul, Minn. *Agronomy*. Wabasha Co, Minn, June 3, 67. Minnesota. *Asst. agriculturist*, col. agr,

- Minnesota**, 94-02, assoc. prof. agr, 02-05, agr. and animal husbandry, 05-10, *prof. agr*, 10-, v. director, Exp. Sta, 18. A.A.; Agron. Soc.; Farm Management Ass. Crop rotation; farm management.
- Boss, Benjamin**, Dudley Observatory, Albany, N. Y. **Astronomy*. Albany, Jan. 9, 80. A.B, Harvard, 01. Asst, Dudley Observatory, 01-05; U. S. Naval Observatory, 05-06, in charge, U. S. Naval Observatory, Tutuila, Samoa, 06-08; sec'y, dept. meridian astronomy, Carnegie Institution, 08-12, acting director, 12-15, *director*, 15-; *director*, Dudley Observatory, Albany, N. Y., 12- Mem. total solar eclipse exped, 08; ed, 'Astron. Jour,' 12- Astron. Soc. (treas). Observations of Newcomb's fundamental stars at Tutuila, Samoa; the proper motions of stars.
- Bostwick, Dr. Arthur E(lmore)**, Public Library, St. Louis, Mo. *Physics*. Litchfield, Conn, March 8, 60. A.B, Yale, 81, Ph.D, 83, fellow, 81-84. Proctor and instr, Yale, 83-84; instr, high sch, Montclair, 84-86; asst. ed, 'The Forum,' 90-92; assoc. ed, 'Standard Diet,' 92-95; *science ed*, 'Literary Digest,' 94-; librarian, N. Y. Free Circ. Library, 95-99; Brooklyn Pub. Library, 99-01; chief, circ. dept, N. Y. Pub. Library, 01-09; *librarian*, St. Louis Pub. Library, 09- Annual summary of progress in physics, 'Appleton's Annual Cyclopedic.' Library Ass. (pres, 07); Library Inst. (pres, 09); Conn. Acad; St. Louis Acad. Influence of light on conductivity of metals; absorption spectra of liquids.
- Boswell, Prof. Foster P(artridge)**, Hobart College, Geneva, N. Y. *Psychology*. Rochester, N. Y, Feb. 14, 79. A.B, Hobart, 01; A.M, Harvard, 02-, Ph.D, 04. Asst. philos, Harvard, 03-04; psychol, Wisconsin, 04-05; Missouri, 05-06; voluntary asst, Berlin, 07; *asst. prof. psychol*, Hobart, 08- A.A.; Psychol. Ass. Psychology and physiology of vision; after-images and contrast phenomena; action of various stimuli on Protozoa.
- Boswell, Prof. M(aitland) C(rease)**, University of Toronto, Toronto, Can. *Chemistry*. Cannington, Ont, May 24, 79. B.A.Sc, Toronto, 02, Ph.D, 07; A.M, Harvard, 06. Asst. analyst, Toronto, 02-03; asst. chem, Cornell, 03-04; demonstrator, Toronto, 06-08, lecturer, 08-12, *prof*, 12- A.A.; Chem. Soc; Soc. Chem. Indust; Can. Inst. Organic compounds; mechanism of reactions; gas reactions in plants.
- Bosworth, Alfred W(illson)**, 36 Avalon Road, W. Roxbury, Mass. *Biochemistry*. Warren, R. I, Feb. 1, 79. B.S, R. I. Col, 99; Yale; A.M, Harvard, 13. Asst. chem, R. I. Exp. Sta, 99-04; expert, U. S. Dept. Agr, 04-05; asst. and assoc. chemist, N. Y. Exp. Sta, Geneva, 05-16; *director*, research laboratories, Boston Floating Hosp, 16-; *research fellow pedit*, Harvard Med. Sch, 17- Asst. biol. chem, Harvard Med. Sch, 12-13. A.A.; Chem. Soc. Milk; infant metabolism.
- Bosworth, Dr. R(owland) S(herwood)**, Vermont Ave, White Plains, N. Y. *Chemistry*. Providence, R. I, Sept. 11, 87. A.B, Yale, 08, A.M, 09, Ph.D, 11. Chem. Soc. Analytical and physical chemistry; determination of silver; reaction velocity.
- Bottomley, Dr. John T(aylor)**, 165 Beacon St, Boston, Mass. *Surgery*. Lee, Mass, Sept. 24, 69. A.B, Col. Holy Cross, 89, LL.D, 16; M.D, Harvard, 94. *Surgeon-in-chief*, Carney Hosp, Boston, 11- Assoc. surg, Harvard Med. Sch. Ass. Surg; Soc. Clin. Surg; Col. Surg.
- Bouchard, Prof. Georges**, Ecole d'Agriculture, Sainte-Anne-de-la-Pocatière, Que, Can. *Plant pathology*, *Entomology*. St. Philippe de Néri, Que, April 22, 89. B.A. Prof. Ecole d'Agr, Que, 14-19, official agronomist, 19- Can. Phytopath. Soc; Que. Protection Plants Soc. (director). Potato diseases.
- Boudreau, Dr. Frank G(eorge)**, Ohio State Department of Health, Columbus, Ohio. *Medicine*. New Glasgow, Que, July 18, 86. M.D, C.M, McGill, 10. Intern, Royal Victoria Hosp, Montreal, 10; pathologist, Charity Hosp, Cleveland, 11; *epidemiologist*, Ohio State Board of Health, 11-, *director*, div. communicable diseases, 13- Instr. pub. health and sanit. and asst. physical diagnosis, Ohio State, 15-16; assoc. ed, 'Ohio Pub. Health Jour,' 13-16. A.A.; Am. Med. Ass; Pub. Health Ass; Columbus Acad. Med. Epidemiology; acute poliomyelitis; typhoid fever; pathology.
- Bouton, Dr. Charles L(eonard)**, 9 Avon St, Cambridge, Mass. **Mathematics*. St. Louis, Mo, April 25, 69. M.S, Washington (St. Louis), 91; A.M, Harvard, 96; Ph.D, Leipzig, 98. Instr. math. and physics, Smith Acad, St. Louis, 91-94; *math*, Washington (St. Louis), 93-94; Harvard, 98-04, asst. prof, 04-14, *assoc. prof*, 14- A.A.; Math. Soc. (asst. ed, 'Bul,' 00-02, 'Trans,' 02-10); Am. Acad; Math. Verein. Lie's theory of continuous groups.
- Boutroux, Prof. Pierre**, Collège de France, Paris, France. *Mathematics*. Paris, France, Dec. 6, 80. Sc.D, Paris, 03. Asst. prof. math, Montpellier, 06-10; *prof*, Poitiers, 10-13; Princeton. 13-20; *hist. of science*, Col. de France, 20- Grand prize, Paris Acad, 12. Math. Soc; Soc. math. de France. Theory of functions and differential equations.
- Boutwell, J(ohn) M(ason)**, National Copper Bank, Salt Lake City, Utah. *Geology*. St. Louis, Mo, May 1, 74. Amherst, 93-94; A.B, Harvard, 97, B.S, 98, M.S, 99, 99-00. Asst. physiog, Harvard, 97-00; asst. geologist, U. S. Geol. Surv, 00-04, geologist, 04-08; *consulting mining geologist*, 08- Asst. physiog, summer sch, Harvard, 96-98; field asst, U. S. Geol. Surv, 98-99. A.A.; Geol. Soc; Econ. Geol; Seismol. Soc; Min. Eng; Min. and Metal. Soc; Wash. Acad; Soc. Geog. de Lima. Geographical bibliography; physiographic and geologic studies in New England, Dakota, Utah and California; ore deposits in Utah, California, Arizona, Mexico and Peru; geology of ore deposits.
- Boutwell, Prof. P(aul) W(inslow)**, University of Wisconsin, Madison, Wis. *Biological chemistry*. Lyndeborough, N. H, Feb. 6, 88. B.S, Beloit, 10; A.M, Wisconsin, 12, Ph.D, 16. Asst. chem, Wisconsin, 12-16; instr, Del. Col, 16-17; *agr. chem*, Wisconsin, 17-18, *asst. prof*, 18- A.A.; Chem. Soc. Vitamins; phytic acid of the wheat kernel.
- Bovaïrd, Dr. David**, 32 E. 64th St, New York, N. Y. *Medicine*. Coulterville, Pa, Sept. 28, 67.

- A.B, Princeton, 89; M.D, Columbia, 92. Tutor med, *Columbia*, 01-08, assoc, 08-10, *asst. prof. clin. med.*, 10- Visiting physician, Seaside Hosp, N. Y., 99-13; N. Y. City Hospitals for Children, Randall's Island, 02-05; assoc. and visiting physician, Presb. Hosp, N. Y., 03- Officier de l'Instruction Pub, 19. A.A; Am. Med. Ass; N. Y. Path. Soc; N. Y. Acad. Med. Splenomegaly; tuberculosis in children; trichinosis in man; pernicious anemia.
- Bovard, Prof. John F(reeman)**, University of Oregon, Eugene, Oregon. *Zoology*. Los Angeles, Calif, 81. B.S, California, 03, M.S, 06, Ph.D, 17. Instr. zool, *Oregon*, 03-08, *asst. prof. biol.* 08-10, *prof. zool.* 10-, *dean sch. physical educ.* Asst. histol. and embryol, California, 03; research asst, San Diego Marine Biol. Lab, 03, 04, 05; investigator, U. S. Bur. Fisheries, 10; *prof. zool*, Washington (Seattle), summers, 17, 18. A.A; West. Soc. Nat. (v. pres, 16, pres, 17). Nervous system and locomotion in invertebrates.
- Bovard, Dr. W(illiam) M(iller)**, 4422 Dexter St, Roxborough, Philadelphia, Pa. *Physical chemistry*. Philadelphia, April 23, 92. B.S, Pennsylvania, 13; M.S, Princeton, 15, Sc.D, 17. Chem. engineer and supt, Taylor Logan Co, 17; chief chemist, Emerson Lab, Springfield, Mass, 19; *manager, tech. service, Package Paper and Supply Corp*, 20- In charge paper development, C.W.S, U.S.A, 18. Chem. Soc; Ass. Pulp and Paper Indust. Chemical engineering; electrochemistry of silver; paper making.
- Bovie, Dr. W(illiam) T**, Harvard Medical School, Boston, Mass. *Biophysics*. Augusta, Mich, Sept. 11, 82. A.B, Michigan, 08; fellow, Missouri, 08-10, A.M, 10; Ph.D, Harvard, 14. Asst. biol, Albion, 02-04; *prof. geol. and biol.* Antioch, 06-07; *research fellow, Cancer Commission, Harvard*, 14-, *instr. bacter.* *Harvard Med. Sch.*, *asst. prof. biophysics*, *Harvard*, 20- A.A; Soc. Nat; Bot. Soc; Physiol. Soc; Physical Soc; Soc. Cancer Research; Chem. Soc; Soc. Trop. Med; Am. Acad. Biological effects of rays.
- Böving, Dr. Adam G(iede)**, U. S. National Museum, Washington, D. C. *Entomology*. Säby, Denmark, July 31, 69. A.B, Copenhagen, 89, M.S, 94, Ph.D, 06; Berlin, Paris, Vimereux, London, Cambridge, 08; London, Holland, Vienna, 09. Asst. curator, entom. div, zool. museum, Copenhagen, 02-14; *expert, bur. entom.* U. S. Dept. Agr, 13- Mem. govt. exped. to Iceland, 08. A.A; Entom. Soc; Wash. Biol. Soc; Wash. Entom. Soc; Copenhagen Entom. Soc; Copenhagen Nat. Hist. Soc; Stockholm Entom. Soc. Insect morphology; immature stages of insects, especially Coleopterous larvae.
- Bowden, Prof. Joseph**, 24 Clifton Place, Brooklyn, N. Y. *Mathematics*. St. Day, England, Feb. 10, 69. A.B, Yale, 91, Ph.D, 97. Asst. math, Sheffield Sci. Sch, Yale, 92-93, tutor, Yale, 93-97; *asst. prof. math, Adelphi*, 98-99, *prof.* 99- Math. Soc; Math. Ass; Brooklyn Inst. (pres, math. dept, 01-03, 07-16). Elements of the theory of integers; electromagnetic theory of light; elementary theory of numbers.
- Bowditch, Charles P(ickering)**, 111 Devonshire St, Boston, Mass. *Archeology*. Boston, Sept.
- 30, 42. A.B, Harvard, 63, A.M, 66. Mem. faculty, Peabody Museum, Harvard. A.A; Archeol. Inst; Antiq. Soc; Anthrop. Ass; fel. Ethnol. Soc; Am. Acad. (pres, 17-19); Am. Geol. Soc; New Eng. Hist. General Soc; Boston Soc. Nat. Hist; Int. Soc. Americanists; Paris Soc. des Américanistes. Mexican and Maya codices and inscriptions; Maya numeration, calendar and astronomy.
- Bowen, Charles F**, 26 Broadway, New York, N. Y. *Geology*. Idaho, 71. A.M, Wisconsin, 03. *Geologist*, U. S. Geol. Surv, 10-19; *Standard Oil Co*, 19- Geol. Soc. Oil geology.
- Bowen, Prof. John T(empleton)**, 14 Marlborough St, Boston, Mass. *Dermatology*. Boston, July 8, 57. A.B, Harvard, 79, M.D, 84. Instr. dermat, *Harvard*, 96-02, *asst. prof.* 02-07, Edward Wigglesworth *prof.* 07-12, *emer. prof.* 12- Physician diseases of the skin, Mass. Gen. Hosp, 08-14; consulting physician, 14- Dermat. Ass; Boston Soc. Med. Improv.
- Bowen, Prof. N(orman) L(evi)**, Queen's University, Kingston, Ont, Can. *Geology*. Kingston, Can, June 21, 87. M.A, Queen's (Can), 07, B.Sc, 09; 1851 Exhibition scholar, 10-11; Ph.D, Mass. Inst. Tech, 12. Geol. field investigator, Ont. Bur. Mines, 07-10; Can. Geol. Surv, 11-12; *asst. petrologist, geophys. lab, Carnegie Institution*, 12-19; *prof. miner, Queen's (Can)*, 19- A.A; Geol. Soc; Wash. Geol. Soc. Geology of Ontario and British Columbia; experimental petrology and mineralogy.
- Bowers, Dr. W(illiam) G(ray)**, 1001 12th St, Greeley, Colo. *Chemistry*. Near Franklin, W. Va, June 16, 79. B.S, Ohio Wesleyan, 05; A.M, Indiana, 11; Ph.D, Ohio State, 19. Teacher, pub. schools, W. Va, 95-99; *asst. biol.* Ohio Wesleyan, 05; principal, high sch, Aspen, Colo, 06-07; Leesburg, Ohio, 07-08; teacher chem, State Nor. and Indust. Sch, N. Dak, 08-18; *prof. food and sanit. chem, N. Dak. Col.*, and *state food chemist*, 18- Teacher science, State Nor. Sch, Muncie, Ind, summer, 08; v. pres, State Nor. and Indust. Sch, N. Dak. Chem. Soc; N. Dak. Soc. Adv. Sci. Food chemistry; nutrition; soy beans in the human diet; fruit extract analysis; storage batteries.
- Bowes, Dr. Orlando Curtin**, 220 Frazier St, State College, Pa. *Animal nutrition*. B.S, Pa. State, 09; A.M, Columbia, 14, Ph.D, 16; M.D.V, McKillip Vet. Col, 18. A.A; Chem. Soc. Milk secretion.
- Bowie, E(dward) H(all)**, U. S. Weather Bureau, Washington, D. C. *Meteorology*. Annapolis Junction, Md, March 29, 74. M.S, St. John's (Md). Asst. observer and *supervising forecaster*, U. S. Weather Bur, 91- Major, Sig. C, A.E.F, 17-18. Meteorol. Soc; fel. Royal Meteorol. Soc. Weather forecasting; storms of the United States and West Indies.
- Bowie, Dr. William**, U. S. Coast and Geodetic Survey, Washington, D. C. *Geodesy*. Annapolis Junction, Md, May 6, 72. B.S, Trinity (Conn), 93, hon. A.M, 07, Sc.D, 19; C.E, Lehigh, 95. Recorder and aid, U. S. Coast and Geod. Surv, 95-98, *asst.* 99-09, inspector geod. and chief, computing div, 09-15, *chief, div. geod.* 15-, *hydrographic and geodetic engineer*, 17- In

- charge practical astron. and geod. surveying, Columbia, summers, 12-17; delegate, Int. Geod. Ass. Conf, Hamburg, 12, U. S. delegate, permanent commission, 16; Int. Research Council, Brussels, 19; Pan-Pacific Sci. Conf, Honolulu, 20; pres, geodet. sect, Int. Geophys. Union, 19-; chairman, Geophys. Union, 19, geodet. sect, 19-; mem. div. of physical science, foreign and govt. relations, Nat. Research Council. Major, corps engineers, 18-19. A.A.; Geol. Soc; Ass. Geog; Astron. Soc; Am. Geog. Soc; Civil Eng; Wash. Philos. Soc. (v. pres, 16); Wash. Soc. Eng; Wash. Acad. Astronomy applied to coast and geodetic surveys; base line measurements; triangulation; precise leveling; gravity; isostasy; figure of earth.
- Bowles, F(rancis) T(iffany)**, 148 Marlborough St, Boston, Mass. *Naval architecture*. Springfield, Mass, Oct. 7, 58. Grad, U. S. Naval Acad, 79; Royal Naval Col, England, 79-82. Asst. naval constructor, U.S.N., 81-88, naval constructor, 88-01, chief constructor, 01-03; pres, Fore River Ship Building Co, 03-15; asst. gen. manager, U. S. Shipping Board Emergency Fleet Corps, 17-19. Naval Archit. and Marine Eng. (past pres); Am. Acad; London Inst. Naval Archit.
- Bowles, Oliver, R. F. D. 2**, Alexandria, Va. *Mineralogy, Geology*. Ontario, Can, Jan. 10, 77. B.A., Toronto, 07, fellow, 07-08, M.A., 08. Instr. petrog, Michigan, 08-09; geol. and miner, Minnesota, 09-14; quarry technologist, *Bur. Mines*, 14-17, *mineral technologist*, 17- A.A.; Min. and Metal. Eng. Structural and ornamental stones of Minnesota; quarrying of marble, sandstone, cement materials and slate.
- Bowman, Prof. Albert E(lijah)**, University of Wyoming, Laramie, Wyo. *Agriculture*. West Weber, Utah. B.S, Utah Col. Asst. agronomist, Utah Col, 11-13; asst. state leader farm management, *Wyoming*, 13-14, *director, exten. service, agr. col*, 14- Soc. Agron; Farm Management Ass; Ass. West. Agr. Colleges. Farm surveys.
- Bowman, Prof. H(oward) H(iestand) M(innich)**, Toledo University, Toledo, Ohio. *Biology*. Lancaster, Pa, Nov. 3, 86. Ph.B., Franklin and Marshall, 13, M.S., 14; Ph.D., Pennsylvania, 17. Instr. bot, Franklin and Marshall, 14-15; asst. prof, Pennsylvania, 15-17; prof. *biol*, Heidelberg (Ohio), 17-18; *prof. and head of dept*, Toledo, 19- Research assoc, sta. for exp. evolution and dept. marine biol, Carnegie Institution; with M. C, 18-19. A.A.; Bot. Soc; Ecol. Soc. Physiological botany; mangroves; seagrasses; botanical ecology of the Tortugas.
- Bowman, Dr. Isaiah**, American Geographical Society, Broadway at 156th St, New York, N. Y. **Geography*. Waterloo, Can, Dec. 26, 78. B.S., Harvard, 05; Ph.D., Yale, 09. Instr. geog, State Nor. Col, Ypsilanti, Mich, 02-03; asst. physiog, Harvard, 04-05; instr. geog, Yale, 05-09, asst. prof, 09-15; *director and ed*, '*Am. Geog. Soc.*', 15- Leader, Yale exped. to S. Am, 07; geographer and geologist, Yale exped. to Peru, 11; leader, Am. Geog. Soc. exped. to Cent. Andes, 13; chief territorial adviser, Am. Commission to Negotiate Peace, 19. Gold medal, Paris Geog. Soc, 17. Ass. Geog; Am. Acad; Explorers Club (sec'y, 17); cor. mem. Am. Hispan. Soc; Geog. Societies of Stockholm, Vienna and London. Physiography; regional geography; regional geography of South America.
- Bown, Dr. Ralph**, 195 Broadway, New York, N. Y. *Physics*. Fairport, N. Y, Feb. 22, 91. M.E., Cornell, 13, M.M.E., 15, Ph.D., 17. Instr. physics, Cornell, 13-17; *engineer, Am. Telephone and Telegraph Co*, 19- Capt, Sig. C, 17-19. Physical Soc. Development and use of vacuum tubes or audions.
- Bownocker, Prof. J(ohn) A(dams)**, 185 15th Ave, Columbus, Ohio. *Geology*. St. Paul, Ohio, March 11, 65. B.S., Ohio State, 89, Sc.D., 97; fellow, Chicago, 92-94; Yale, 94-95. Principal, high sch, Martins Ferry, Ohio, 89-92; asst. geol, *Ohio State*, 95-98, asst. prof, 98-99, assoc. prof. inorg. geol, 99-01, *prof*, 01-18, *geol*, 18- Curator, museum, Ohio State, 00-17; asst. geologist, Ohio Geol. Surv, 92; N. J. Geol. Surv, 93; asst. geologist, Ohio, 00-06, state geologist, 06-A.A.; Geol. Soc; Nat. Gas Ass; Ohio Acad. Drainage modifications in Ohio; the oil and gas, salt and coal of Ohio; building stones of Ohio; economic geology of non-metals; moulding sands.
- Boyce, Dr. J(ohn) S(haw)**, New Post Office Building, Portland, Oregon. *Forestry*. Belfast, Ireland, Nov. 9, 89. B.S., Nebraska, 11, M.F., 12; Ph.D., Stanford, 17. Forest asst, U. S. Forest Service, 11-12; scientific asst. and asst. pathologist, bur. plant indust, *U. S. Dept. Agr*, 13-20, *pathologist, office forest path*, 20- A.A.; Phytopath. Soc; Soc. Am. Foresters. Pathology of forest trees.
- Boyd, Prof. James E(llsworth)**, Ohio State University, Columbus, Ohio. *Mechanics, Physics*. Near Stovortown, Ohio, Nov. 6, 63. B.S., Ohio State, 91; M.S., Cornell, 96. Asst. physics, *Ohio State*, 91-95, asst. prof, 96-01, assoc. prof. math, 01-06, *prof. mech*, 06- Asst. to judges in elec, Columbian Expos, 93; asst, Bur. Standards, summer, 17. A.A.; Eng. Educ; Mech. Eng. Alternating currents; resistance of the human body; timing shutters; water jets; acceleration apparatus; flow in pipes; reinforced concrete; secondary stresses in bridges; elasticity of porcelain; struts.
- Boyd, Prof. Mark F(rederick)**, University of Texas, Galveston, Tex. *Medicine*. St. Paul, Minn, May 21, 89. M.D., Iowa, 11, M.S., 13; Folsom fellow, Harvard, 13-14; C.P.H., Harvard and Mass. Inst. Tech, 14. Assoc. prof. bacter, Nevada, 14-15; prev. med, Iowa, 15-17; *prof. bacter. and prev. med*, Texas, 17- Mem. State Board of Health, Nev, 14-15; epidemiologist, Iowa, 15-17; visiting bacteriologist, Sealy Hosp, 17- A.A.; Am. Med. Ass; Pub. Health Ass; Soc. Bact; Soc. Trop. Med. Epidemiology of typhoid fever and leprosy; trichomonas infection; pathology of rabies; *Fasciola hepatica*; practical preventive medicine.
- Boyd, Dean Paul P(rentice)**, University of Kentucky, Lexington, Ky. *Mathematics*. Cameron, W. Va, Feb. 26, 77. A.B., Oberlin, 98; A.M., Cornell, 05, fellow, 05-06, Ph.D., 11. *Prof. math. and astron*, Park, 03-04; *math*, Hanover, 06-12; *Kentucky*, 12-, *head of dept*, 13-, *dean, col. arts and sciences*, 17- Acting pres, Kentucky, 17. A.A.; Math. Ass; Math. Soc; Ky.

- Acad. (mem. exec. committee, 14, treas, 16-18, (v. pres, 18-20, pres, 20). Geometric transformations.
- Boyden, Prof. Edward A (Ilen)**, 61 Clark St, Newton Center, Mass. *Embryology*. Bridgewater, Mass, March 20, 86. A.B, Harvard, 09, A.M, 11, Ph.D, 16; Freiburg, 11-12. Asst. zool, Harvard, 08-11, teaching fellow histol. and embryol, *Harvard Med. Sch.*, 12-16, instr. comp. anat, 16-19, asst. prof, 19- A.A; Ass. Anat; Soc. Zool. Vestigial gill filaments in Sauropsida; anatomy of five-day chick; cloacal fenestra in bird embryos.
- Boyer, Charles S (umner)**, 6140 Columbia Ave, Philadelphia, Pa. *Botany*. Philadelphia, Sept. 23, 56. A.B, Brown, 79, A.M, 85. A.A; Bot. Soc; Micros. Soc; Phila. Acad. (recorder, biol. and micros. sect, 00-); Royal Micros. Soc. Diatomaceae.
- Boyle, Prof. A (lbert) C (larence), Jr**, University of Wyoming, Laramie, Wyo. *Mining engineering, Geology*. Salt Lake Co, Utah, March, 80. A.B, Utah, 02, B.S, 06; Cornell, 05-06; A.M, Columbia, 10, Ph.D, 13. Instr. physics, Utah, 97-01, mech. arts, 00-07; asst. instr. geol, Columbia, 07-10; prof. mining eng. and geol, *Wyoming*, 10-16, mining metal. and econ. geol, 16- Instr. miner. and petrog, Columbia, summer, 13; consulting geologist, U. P. Ry. Co, 18-20, geologist, 20-; state assayer, Wyo, 10- Min. and Metal. Eng; Eng. Educ; Am. Geog. Soc. Metallurgy; preparation of thin sections of rocks, minerals and ores; forced cupellation; extraction of K_2O from leucite.
- Boyle, Prof. R (obert) W (illiam)**, University of Alberta, Edmonton, Can. *Physics*. Carbonear, Newfoundland, Oct. 2, 83. St. John's (Newfoundland); B.Sc, McGill, 05, M.Sc, 06, Ph.D, 09; 1851 Science Research scholar, 09. Demonstrator physics, McGill, 05-07, senior demonstrator and special lecturer math, 07-09; research radioactivity, Manchester, 09-11; lecturer, physics, McGill, 11, asst. prof, 12; prof, *Alberta*, 12- Research, antisubmarine div, British Admiralty Board Inventions and Research, England, 16-19. Physical Soc. Properties of matter; adsorption; solution; volatilization of radioactive emanations.
- Boylston, A (rthur) C (larence)**, 3600 N. Second St, St. Louis, Mo. *Chemistry*. Milton, Mass, June 23, 82. A.B, Harvard, 03, A.M, 06. Austin teaching fellow, Harvard, 06-08; chemist and supt, *Mallinckrodt Chem. Works*, 08- A.A; Chem. Soc. (chairman, St. Louis sect, 17, 18); Chem. Eng. Physical chemistry; pharmacology.
- Boynton, Dr. H (enry) C (ook)**, 935 Carteret Ave, Trenton, N. J. *Metallurgy*. Willsborough, N. Y, April 16, 74. A.B, Harvard, 00, Austin fellow, 00-03, M.S, 01, Sc.D, 04; Carnegie research scholar, British Iron and Steel Inst, 05-06, 07-08. Asst. to dean of grad. sch, Harvard, 94-96, instr. metal. and metallog, 03-06; metallurgist, *J. A. Roebling's Sons Co*, 06- Min. Eng; Soc. Test. Mat; British Iron and Steel Inst. Metallography; a definite hardness for the microconstituents of iron and steel; high strength wire for aeroplane stays, balloon cables and mine anchors.
- Boynton, Prof. W (illiam) P (ingry)**, 267 11th Ave, E, Eugene, Oregon. **Physics*. Weathersfield, Vt, Oct. 28, 67. A.B, Dartmouth, 90, A.M, 93; fellow, Clark, 95-97, Ph.D, 97. Asst. physics, Dartmouth, 88-90; prof, South. California, 90-93; asst, Dartmouth, 93-94; instr, California, 97-01; asst. prof, *Oregon*, 03-06, prof, 06- A.A; Physical Soc. The high frequency induction coil; thermodynamic potentials; measurement of high oscillatory potentials.
- Bozell, Prof. Harold Veatch**, 429 Edgewood Ave, New Haven, Conn. *Electrical engineering*. Beloit, Kans, May 31, 86. B.S, Kansas, 08, E.E, 15. Asst. prof. elec. eng, Oklahoma, 08-09, assoc. prof, 09-11, prof, 11-16; asst. prof, *Yale*, 16- Ed, 'Elec. Ry. Jour,' 20- Elec. Eng; Eng. Educ; Illum. Eng. Soc.
- Bracken, Dr. H (enry) M (artyn)**, 1010 Fourth St, S. E, Minneapolis, Minn. *Medicine*. Nobles-town, Pa, Feb. 27, 54. M.D, Columbia, 77; L.R.C.S, Edinburgh, 79. Prof. mat. medica and therapeut, Minnesota, 88-07, prev. med, 07-09; sec'y and exec. officer, Minn. State Board of Health, 97-19; surgeon (reserve), district ten, *U. S. Pub. Health Service*, 19- A.A; Am. Med. Ass; Climat. Ass. Materia medica; therapeutics; smallpox; typhoid fever; tuberculosis; leprosy.
- Brackett, Dr. B (yron) B (riggs)**, South Dakota Agricultural College, Brookings, S. Dak. *Electrical engineering, Physics*. Ira, N. Y, Aug. 13, 65. A.B, Syracuse, 90, A.M, 93; Ph.D, Hopkins, 97. Teacher math, Dickinson Sem, Williamsport, 90-92; col. dept, Adelphi Acad, 92-93; student asst, elec. dept, Hopkins, 94-97; teacher elec. eng, Union, 97-98; physics, high sch. Washington, D. C, 98-00; engineer, Rowland Telegraph Co, 00-01; instr. elec. science, Rutgers, 01-03; prof. physics and elec. eng, Clarkson Mem. Sch. Tech, 03-09; elec. eng, *S. Dak. Col.*, 09- Inspector torpedo cable, eng. dept. U.S.A., 98; assoc. Naval Consulting Board. A.A; Elec. Eng; Eng. Educ; S. Dak. Eng. Soc. (v. pres). Magnetic stresses; laboratory methods and instruments.
- Brackett, Prof. F (rank) P (arkhurst)**, Claremont, Calif. *Astronomy*. Provincetown, Mass, June 16, 65. A.B, Dartmouth, 87, A.M, 90; hon. fellow, Clark, 02-03. Instr. math, *Pomona*, 88-90, prof, 90-, director, observatory, 08- Lecturer math, California, summer, 10; mem. astron. expd. to Algeria, 11; Smithsonian expd. to Calif, 13- A.A; Math. Soc; Astron. Soc; Pacific Astron. Soc; S. Calif. Acad; Royal Astron. Soc. Can. Comets and meteors; solar spectroscopy.
- Brackett, Dr. R (ichard) N (ewman)**, Clemson College, S. C. *Chemistry, Mineralogy*. Near Columbia, S. C, Sept. 14, 63. A.B, Davidson, 83; Ph.D, Hopkins, 87. Chemist, Ark. Geol. Surv, 87-91; asst. chemist, S. C. Exp. Sta, 91-07; assoc. prof. chem, *Clemson*, 91-10, prof. and director of dept, 10-; state chemist, *S. C.*, 10- A.A; Chem. Soc; Agr. Chem. (past pres). Ethers of benzoic sulphinid; preparation of orthosulphobenzoic acid; peridotite of Pike County, Ark; newtonite and rectorite; phosphoric acid in mixed fertilizers; lint in cottonseed meal.

- Bradbury, Dr. Robert H(art)**, 2100 Shunk St, Philadelphia, Pa. *Chemistry*. Philadelphia, Sept. 25, 70. Ph.D, Pennsylvania, 93. Asst. chemist, Cambria Iron Co, 90-91; chemist, S. P. Wetherill Paint Co, 91-92; prof. chem, Cent. Manual Training Sch, Phila, 93-07; *head, dept. science, South. High Sch, 07-* Lecturer physical chem, Pennsylvania, 94-95. Chem. Soc; Franklin Inst; Chem. Gesell. Inductive chemistry; molybdc and tungstic acids.
- Bradford, Prof. C(larence) G(rary)**, Oakland, Calif. *Psychology*. Pine Bluff, Ark, Sept. 15, 81. A.B, Arkansas, 11, Pd.M, 13; Ph.D, N. Y. Univ, 14. Supervisor, training sch, E. Cent. State Nor. Sch, Okla, 14-17, prof. psychol, 17-20. Psychol. Ass. Experimental psychology; habit formation; lough association tests.
- Bradford, Dr. Edward H(ickling)**, 133 Newbury St, Boston, Mass. *Surgery*. Boston, June 9, 48. A.B, Harvard, 69, M.D, 72. Surgeon, Children's Hosp, 80; Boston City Hosp, 83; instr. clin. surg, *Harvard Med. Sch, 85-93*, asst. prof. *orthop. surg, 93-04*, prof, 04-12, *emer. prof, 12-* Trustee, Mass. Hosp. Sch. for Crippled Children; Boston Ear and Eye Infirmary. Surg. Ass; Orthop. Ass; Am. Med. Ass; Am. Acad. Human deformities.
- Bradford, Prof. Robert H(enry)**, University of Utah, Salt Lake City, Utah. *Metallurgy*. Salt Lake City, Dec. 10, 71. B.S, Utah, 95; Chicago, summers, 95, 96; fellow, Columbia, 00-02, Ph.D, 02. Instr. physics, *Utah, 95-96*, miner. and metal, 96-98, asst. prof, 98-03, *prof. metal, 03-* Min. Eng. Reactions of the Ziervogel process and their temperature limits; effect of heat treatment on carbon steel; determinations of silver in hard lead.
- Bradley, Prof. C(harles) E(dward)**, Research Laboratories, United States Rubber Co, New York, N. Y. *Chemistry*. Galesburg, Ill, Feb. 22, 74. M.S, Pacific (Oregon), 99; Chicago, 01; California, 06. Prof. chem, Pacific (Oregon), 00-06; chemist, Oregon Exp. Sta, 06-10; research chemist, Rubber Regenerating Co, 11-13; chemist, Mishawaka Woolen Mfg. Co, 13-17; *director research laboratories, U. S. Rubber Co, 17-* A.A; Chem. Soc. Soils; waters; hops; the reaction of lime upon some Oregon soils; the composition of lime-sulphur spray mixture.
- Bradley, Charles S(chenck)**, 39 W. 38th St, New York, N. Y. *Electricity, Chemistry*. Victor, N. Y, April 12, 53. Special course in chem, Rochester. Elec. engineer, Edison Illuminating Co, 81-84; *practising electrician, 84-*; acting prof. chem. practise, Carnegie Tech. Schools, 06-09. A.A; Elec. Eng. Alternating current; transmission; motors; electrochemistry; fixation of nitrogen; extraction of copper from its ores.
- Bradley, Prof. H(arold) C(ornelius)**, University of Wisconsin, Madison, Wis. *Physiological chemistry*. Oakland, Calif, Nov. 25, 78. A.B, California, 00; Ph.D, Yale, 05. Asst. *physiol. chem, Yale, 04-05*, instr. med. sch, 05-06; asst. prof, *Wisconsin, 06-12*, assoc. prof, 13-17, *prof, 17-* A.A; Chem. Soc; Physiol. Soc; Soc. Biol. Chem. Physiological chemistry of Mollusca; copper and zinc in a marine mollusc; manganese in fresh-water mussels; human pancreatic juice; lipase; specific nature of hemoglobins; autolysis and atrophy.
- Bradley, Prof. Harry C(yrus)**, Massachusetts Institute of Technology, Cambridge, Mass. *Civil engineering, Descriptive geometry*. Plaistow, N. H, July 7, 71. B.S, Mass. Inst. Tech, 91. Fog signal experiments, U. S. Lighthouse Dept, 93-96; instr. *descriptive geom, Mass. Inst. Tech, 97-08*, asst. prof, 08-19, *assoc. prof, 19-* Expert irrig. investigations, U. S. Dept. Agr, 01. A.A; Math. Ass. Fog signals; irrigation; graphical methods.
- Bradley, Dr. J(ames) Chester**, Cornell University, Ithaca, N. Y. *Entomology*. West Chester, Pa, Feb. 11, 84. A.B, Cent. High Sch, Phila, 03; A.B, Cornell, 06, fellow, 09-10, Ph.D, 10; M.S, California, 07. Asst. entom, Cornell, 05-06; California, 06-07; *Cornell, 07-09*, asst. prof. syst. entom, 11-17, 18-20, *prof. entom, 20-*, *curator invert. zool, 19-* Ed, 'Entom. Student,' 00, ed. and manager, 01; special asst. entomologist, Ga, 09, 10; asst. prof. entom, California, 17-18. A.A; Soc. Nat; Entom. Soc. (sec'y-treas, 06-10); Am. Entom. Soc. (librarian, 03-05); Ecol. Soc; Pacific Coast Entom. Soc; Phila. Acad; London Entom. Soc; Soc. entom. de France; Entom. Gesell. Systematic hymenopterology; parasitic Hymenoptera; Evaniidae of the world; North American Siricoidea; wing venation of the Hymenoptera.
- Bradley, Dr. W(alter) M(inor)**, 520 Whitney Ave, New Haven, Conn. *Mineralogy*. New Haven, April 14, 73. Ph.B, Yale, 99, Ph.D, 08. Asst. miner, *Sheffield Sci. Sch, Yale, 04-09*, *instr. chem. and miner, 09-* A.A; Electrochem. Soc.
- Bradley, Prof. W(alter) P(arke)**, Woodbine, N. J. *Chemistry*. Lee, Mass, July 7, 62. A.B, Williams, 84; Ph.D, Göttingen, 89; Sc.D, Wesleyan, 14. Asst. chem, Williams, 86-88; instr, Wesleyan, 89-90, assoc. prof, 90-93, prof, 93-14; director, gen. laboratories, U. S. Rubber Co, 12-13, research chemist, 14-19; *pres, Bradstone Rubber Co, 19-* A.A; Chem. Soc. Organic chemistry; critical constants of liquids; theory of liquid air production; chemistry of low temperatures.
- Bradshaw, Dr. Hamilton**, 1101 Nottingham Road, Wilmington, Del. *Chemistry*. DeKalb, Ill, Dec. 31, 81. A.B, Beloit, 02; Ph.D, Hopkins, 05. Research chemist, east. lab, *E. I. duPont de Nemours and Co, 05-12*, asst. director, *exp. sta, 13-15*, *director, 16-* Chem. Soc; Electrochem. Soc; Soc. Chem. Indust; Franklin Inst.
- Bradshaw, Prof. John W(illiam)**, 1304 Cambridge St, Ann Arbor, Mich. *Mathematics*. Batavia, Ill, June 14, 78. A.B, Michigan, 00; A.M, Harvard, 02; Ph.D, Strasbourg, 04. Instr. *math, Michigan, 04-09*, asst. prof, 09-18, *assoc. prof, 18-* Registrar, Michigan, 06-08. A.A; Math. Soc; Math. Ass. Differential equations of physics; projective and descriptive geometry.
- Brady, William**, 7642 Marquette Ave, Chicago, Ill. *Chemistry*. B.S, Purdue, 87, 88-89. Chemist, Ill. Steel Co, 89-93; Purdue Exp. Sta, 93-94; *chief chemist and chem. engineer, Ill. Steel Co, 00-* Asst. ed, 'Chem. Abstracts,' A.A; Chem. Soc. (director, 13-16); Electrochem. Soc; Soc. Test. Mat.

- Bragg, Miss Laura M(ary)**, Charleston Museum, Charleston, S. C. *Botany*. Northbridge, Mass., Oct. 9, 81. Curator, *Charleston Museum*, 09-20, director, 20- Ecological Soc.; Torrey Bot. Club. Botany of South Carolina and coast region of southeastern United States exclusive of Florida.
- Braham, Dr. Joseph Marvin**, 3402 Macomb St., Washington, D. C. *Chemistry*. Artesian, S. Dak., Feb. 1, 91. B.S., Idaho, 14; M.S., Illinois, 15, Ph.D., 18. Asst. chem. Illinois, 15-16; assoc. chemist, Bur. Standards, 19; research chemist, War Dept., 19- Capt., research div., C. W. S. Physical chemistry; nitrogen fixation.
- Brainerd, Dr. Ezra**, Middlebury, Vt. *Botany*. St. Albans, Vt., Dec. 17, 44. A.B., Middlebury, 64, A.M., 67; B.D., Andover Theol. Sem., 68; LL.D., Vermont, 86; Ripon, 88; D.D., Howard, 01; Sc.D., Middlebury, 14. Tutor, *Middlebury*, 64-66, prof. rhetoric and English lit., 68-80, physics, 80-86, pres., 85-08, emer. prof., 08- Commissioner to draft a sch. law for Vt., 87. Geol. Soc.; New Eng. Bot. Club; Vt. Bot. Club (pres). Geology of the Champlain Valley; botany of Vermont.
- Brainin, Dr. Clement S.**, 31 Astor St., Newark, N. J. *Physics*. New York, N. Y., April 30, 87. A.B., Columbia, 08, Barnard fellow, 08-11, Ph.D., 17. *Physicist*, *Baker Platinum Works*, 17- Physical Soc. X-rays; physical metallurgy.
- Braisted, Rear Admiral William Clarence**, U.S.N., 3201 36th St., N. W., Washington, D. C. *Medicine*. Toledo, Ohio, Oct. 9, 64. Ph.B., Michigan, 83, LL.D., 17; M.D., Columbia, 86; Sc.D., Northwestern, 18; F.R.C.S., Edinburgh, 19. Private practise, 88-90; asst. surgeon, U. S. Navy, 90-93, passed asst. surgeon, 93-13, surgeon, 13, med. inspector, 13-14, surgeon gen. with rank of rear admiral, 14-20. Instr. surg., Naval Med. Sch.; representative, med. dept. in Japan during Russo-Japanese war; asst. chief, bur. med. and surg., 06-12, chief, 14-; fleet surgeon, Atlantic fleet, 12-14; pres., board of directors, Columbia Hosp. for Women; board of visitors, Govt. Hosp. for Insane; mem. central committee and war relief board, Am. Red Cross. Decorated by Emperor of Japan; Order of Bolivar, Venezuela. Col. Surg. (mem. board of governors); Am. Med. Ass. (pres, 19-20); Ass. Mil. Surg.
- Braley, Dr. S(ilas) A(lonzo)**, 710 Nevada St., Urbana, Ill. *Chemistry*. Cherokee, Iowa, Dec. 10, 89. A.B., Morningside, 13; M.S., Illinois, 15, Ph.D., 17. Instr. chem., Illinois, 17-19, assoc., 19-20, asst. prof., 20- A.A.; Chem. Soc. Heterogeneous equilibria between aqueous and metallic solutions; transference in amalgams and mixed salt solutions.
- Braman, Prof. Winfred Waite**, 200 W. Beaver Ave., State College, Pa. *Biochemistry*. Worcester, Mass., March 29, 74. B.S., Worcester, 97; M.S., Pa. State, 08. Asst. chem., Harvard, 97-00; chem. and physics, N. H. Col., 00-02; chem., Lowell Textile Sch., 02-03; asst. instr. and later asst. prof. animal nutrition, Pa. State, 03-A.A.; Chem. Soc. Animal nutrition; carbon balance.
- Bramble, Prof. Cha(rlie) S(linton)**, U. S. Naval Academy, Annapolis, Md. *Mathematics*. Centreville, Md., Aug. 17, 90. Ph.B., Dickinson, 12, A.M., 13; fellow, Hopkins, 16-17, Ph.D., 17. Instr. Montclair Acad., 12-13; lecturer math., Bryn Mawr, 15-16; instr., U. S. Naval Acad., 17-19, asst. prof., post-grad. sch., 19- Math. Soc.; Math. Ass. Geometry; finite groups.
- Branch, Prof. Gerald E(yre) K(irkwood)**, University of California, Berkeley, Calif. *Chemistry*. St. Kitts, W. I., April 16, 86. B.Sc., Liverpool, 11; M.Sc., Liverpool, 12; Ph.D., California, 15. Teaching fellow, org. chem., California, 12-13, asst., 13-15, instr., 15-18, asst. prof., 18- Organic chemistry; theory of polarity; free energy of formic acid.
- Brand, Charles J(ohn)**, 281 Union Arcade, Pittsburgh, Pa. *Botany*. Lac-qui-Parle Co., Minn., Oct. 24, 79. A.B., Minnesota, 02. Asst. curator, dept. bot., Field Museum Nat. Hist., 02-04; asst. physiologist, U. S. Dept. Agr., 04-06, physiologist, 07-13, chief, bur. markets, 13-19; v. pres. and gen. manager, Am. Fruit Growers, Inc., 19-, director various affiliated companies. Mem. Committee Southwest. Cotton Culture, 12-18; delegate, Pan-Am. Financial Conf., 15, 19; Pan-Am. Scientific Cong., 15-16; chairman committee cotton distribution, W. I. B. Wash. Acad.; Refrig. Eng. Agricultural economics; horticulture; business economics.
- Brand, Prof. Louis**, 266 Dorchester Ave., Cincinnati, Ohio. *Mathematics*. Cincinnati, Sept. 27, 85. Ch.E., Cincinnati, 07, E.E., 08, A.M., 09; Ph.D., Harvard, 19. Instr. math., Cincinnati, 07-09, asst. prof. and later assoc. prof., 11-19, prof., 19- Math. Soc. Linear equations with an infinite number of variables; integral equations; dynamics.
- Brandegee, Townshend Stith**, 2112 Addison St., Berkeley, Calif. *Botany*. Conn., 43. Ph.B., Yale, 70. Hon. curator herbarium, California. A.A.; Bot. Soc.; Calif. Acad. Flora of Mexico.
- Brandel, Prof. I(rvin) W(alter)**, 435 Foulds Ave., Alton, Ill. *Chemistry*. Sauk City, Wis., Sept. 25, 77. Ph.G., Wisconsin, 99, fellow, 99-02, B.S., 01, M.S., 02, Ph.D., 06. Instr. pharm., Wisconsin, 02-05; asst. prof., Washington (Seattle), 05-09; chemical engineer, 09-14; Midland Chem. Co., 14-17; gen. manager, Cons. Chem. Products Co., 17- Expert for sub-committee on volatile oils, U. S. Pharm. Revision Committee; assoc. ed., 'Midland Drug. and Pharm. Rev.' Chem. Soc.; Ass. Agr. Chem. (collaborator); Wis. Acad. Organic and plant chemistry; volatile oils; plant pigments; balance; percolation; coniferous oils; industrial application of various products of the northwest.
- Brandenburg, Prof. G(eorge) C(linton)**, Purdue University, Lafayette, Ind. *Psychology*. Volga, Iowa, Dec. 2, 78. Ph.B., Drake, 10; A.M., Colorado, 14; fellow, Wisconsin, 14-15, Ph.D., 15. Inst. educ. psychol., Purdue, 16-17, asst. prof., 17-18, assoc. prof., 18-20, prof., 20- Director, summer nor. sch., Winona Lake, Ind., 20- Applied psychology; child development; trade tests; correlation of mental traits.
- Brandes, Dr. Elmer Walker**, 3937 Legation St., N. W., Washington, D. C. *Plant pathology*. Washington, D. C., July 15, 91. B.S., Mich. Agr. Col., 13, M.S., 15; Ph.D., Michigan, 19. Plant pathologist, P. R. Exp. Sta., 15-16; instr. bot.,

- Michigan, 17-18; *sugar plant investigator, bur. plant indust., U. S. Dept. Agr.*, 19- Asst. Mich. Exp. Sta. A.A.; Phytopath. Soc. Diseases of tropical plants.
- Brann, Dr. Albert**, 220 Springdale Ave, East Orange, N. J. *Chemistry*. Kent, England, March 14, 86. A.B., Wisconsin, 14, A.M., 16, Ph.D., 18. Instr. chem, Wisconsin, 14-18; *research chemist, Westinghouse Lamp Co.*, 18- Chem. Soc.; Soc. Glass Technol.; Ceramic Soc. Inorganic and physical chemistry; chemicals used in incandescent lamps.
- Branner, Dr. J(ohn) C(asper)**, Stanford University, Calif. **Geology*. New Market, Tenn., July 4, 50. B.S., Cornell, 82; Ph.D., Indiana, 85; LL.D., Arkansas, 97; Maryville, 09; California, 15; Sc.D., Chicago, 16. Geologist, Imperial Geol. Surv., Brazil, 75-77; topographer, Pa. Geol. Surv., 83-85; prof. geol., Indiana, 85-91; *Stanford*, 91-15, v. pres, 99-13, pres, 13-15, *pres. emer.*, 15- State geologist, Ark, 87-93; assoc. ed., 'Jour. of Geol'; Hayden medal, Phila. Acad, 12. Nat. Acad.; A.A. (sec'y, E, 88-89, v. pres, 90, pres, Pacific div, 16); Soc. Nat.; Geol. Soc. (pres, 04, chairman, Cordilleran sect, 13); Seismol. Soc. (pres, 10-14); Min. Eng; Philos. Soc.; Wash. Acad; London Geol. Soc.; Soc. géol. de France; Soc. Belge de Géol.; Inst. Hist. di S. Paulo; Brazil Acad; Inst. Hist. Geog. do Brazil. Seismology; geology of California, Arkansas and Brazil.
- Brannon, Pres. M(elvin) A(mos)**, Beloit College, Beloit, Wis. *Botany*. Lowell, Ind, Sept. 11, 65. A.B., Wabash, 89, A.M., 90; Ph.D., Chicago, 11; LL.D., Whitman, 17. Teacher science, high sch., Fort Wayne, Ind, 90-94; prof. biol. and dean, med. col., North Dakota, 94-14; *pres*, Idaho, 14-17, *Beloit*, 17- A.A.; Soc. Nat.; Bot. Soc.; Bot. Cent. States; N. Dak. Acad. (pres, 10); Ind. Acad; Wis. Acad.
- Bransky, Dr. O(scar) Ellis**, Whiting, Ind. *Chemistry*. Baltimore, Md, Jan. 29, 86. A.B. Hopkins, 07, Ph.D., 10. Chemist, *Standard Oil Co. of Ind.*, 10-17, *asst supt.*, 17- Chem. Soc. Diffusion of crude oil through fuller's earth; refining of petroleum distillates.
- Branson, Prof. E(dwin) B(ayer)**, 301 S. Glenwood Ave, Columbia, Mo. *Geology*. Belleville, Kans, May 11, 77. A.B., A.M., Kansas, 03; fellow, Chicago, 03-05, Ph.D., 05. Instr. *geol.*, Oberlin, 05-07, asst. prof, 07-09, prof, 09-10; *prof. and chairman of dept, Missouri*, 10- A.A.; Paleont. Soc.; Geol. Soc. Devonian, Mississippian and Pennsylvanian stratigraphy; geology of Missouri; Paleozoic fishes; Triassic amphibians.
- Brant, Miss Laura**, Vassar College, Poughkeepsie, N. Y. *Physics*. R. I, 83. A.B., Brown, 08, A.M., 09. Asst. to Dr. Barus, Brown, 08-09; asst. *physics*, Smith, 09-12; Barnard, 12-17, lecturer, 17-19; *instr, Vassar*, 19- Asst. *physics*, Columbia, summers, 18-19. A.A.; assoc. Physical Soc. Magnetic susceptibility of paramagnetic salts in solution; the softening of cold glass-hard steel in twenty years.
- Brasefield, Prof. Stanley Eugene**, 224 Lawrence Ave, New Brunswick, N. J. *Mathematics*. Easton, Pa, Oct. 2, 73. C.E., Lafayette, 95, M.S., 98; fellow, Cornell, 11-13, Ph.D., 12. Draftsman, Md. Steel Co, 95-97; teacher math, E. Stroudsburg Nor. Sch, 97-01; instr, Mich. Agr. Col, 01-02; instr. and asst. prof, Lafayette, 02-12; asst. prof. and later *prof. applied math, Rutgers*, 13- Eng. Educ. Laplacian force fields; vital statistics of college and university professors.
- Bratton, Prof. W(alter) A(ndrew)**, 570 Boyer Ave, Walla Walla, Wash. *Mathematics*. Stamford, Vt, June 22, 74. A.B., Williams, 95; Berlin, 03-05. Instr. and later *prof. math, Whitman*, 95- A.A.; Math. Soc.; Math. Ass; Eng. Educ. Number theory; pedagogy of mathematics.
- Brauer, Dr. O(scar) L(eo)**, Orosi, Calif. *Chemistry*. Burney, Calif, June 9, 84. B.S., California, 10, M.S., 11, Ph.D., 15. Asst. chem, California, 10-14; teacher science, Union High Sch., Selma, Calif, 14-18; *principal, Union High Sch. Orosi, Calif*, 18- A.A.; Chem. Soc. Cinchona, alkaloids; soils.
- Braun, Dr. Annette F(rances)**, 2702 May St, Cincinnati, Ohio. *Entomology*. Cincinnati, Aug. 28, 84. A.B., Cincinnati, 06, A.M., 08, Ph.D., 11. Asst. zool., Cincinnati, 11-16. A.A.; Entom. Soc.; Ohio Acad. Zoology; evolution of structural colors; Microlepidoptera; venation.
- Braun, Dr. E(mma) Lucy**, 2702 May St, Cincinnati, Ohio. *Botany*. Cincinnati, April 19, 89. A.B., Cincinnati, 10, A.M., 12, Ph.D., 14. Asst. geol., *Cincinnati*, 10-13, *bot.*, 14-17, *instr.*, 17- Ecol. Soc. Plant ecology.
- Brautlecht, Prof. C(harles) A(ndrew)**, Orono, Maine. *Chemistry*. New Haven, Conn, Sept. 21, 81. Ph.B., Yale, 06, Ph.D., 12. Chemist, Conn. Exp. Sta, 06-09; asst. *chem.*, Sheffield Sci. Sch., Yale, 10-12; instr, Calif. Inst. Tech, 12-13; *prof.*, Florida State, 13-19; *Maine*, 19- A.A.; Chem. Soc. Proteins; organic iodine compounds; amino acids; hydantoins; thiotyrosin; pulp and paper chemistry.
- Bray, Prof. A(rchie) W(ilmore) L(eslie)**, 1650 S. 39th St, St. Louis, Mo. *Anatomy*. Sheffield, England, Aug. 7, 83. B.A., Cambridge, 09; A.M., Harvard, 18, Sheldon traveling fellow, 19. V. principal and science master, St. John's (Newfoundland), 09-11; tutor biol., Columbia Col. (B. G), 11-13; instr, Montana, 13-15, asst. prof, 14-17; Austin teaching fellow, Harvard, 17-19; *assoc. anat, Washington (St. Louis)*, 19- A.A. Protozoology; histology; cytology.
- Bray, Dr. W(illiam) C(rowell)**, University of California, Berkeley, Calif. **Chemistry*. Wingham, Ont, Sept. 2, 79. A.B., Toronto, 02, 1851 Exhibition scholar, 02-04; Ph.D., Leipzig, 05. Research assoc. physical chem, Mass. Inst. Tech, 05-10, asst. prof. physico-chem. research, 10-12; *chem, California*, 12-16, assoc. prof, 16-18, *prof.*, 18- With C. W. S, 18; assoc. director, fixed nitrogen research lab, 19. A.A.; Chem. Soc.; Electrochem. Soc.; Am. Acad. Chemical kinetics; the halogens; qualitative analysis; ionization.
- Bray, Prof. William (L)**, Syracuse University, Syracuse, N. Y. **Botany*. Burnside, Ill, Sept. 19, 65. Cornell, 89-91; A.B., Indiana, 93; A.M., Lake Forest, 94; Berlin, 96-07; Ph.D., Chicago,

98. Instr. bot, Lake Forest, 94-95, adj. prof. biol, 96; instr. bot, Texas, 97, adj. prof, 98-01, assoc. prof, 02-05, prof, 05-07; *Syracuse*, 07-, dean, grad. sch, 13-, acting dean, N. Y. State Col. Forestry, 11-12. Field asst, U. S. Biol. Surv, 99; collaborator, bur. forestry, U. S. Dept. Agr, 99-09. A.A.; Bot. Soc; Ecol. Soc. Phyto-geography, ecology and forest resources of Texas; mistletoe in Texas; development of vegetation in New York and in the Adirondacks.
- Brayton, Dr. A(lembert) W(inthrop)**, 330 Newton Claypool Building, Indianapolis, Ind. *Medicine, Zoology*. Avon, N. Y, March 31, 48. Cornell, 71-72; B.S, Butler, 78; M.D, Indiana, 79, hon. A.M, 84; hon. A.M, Purdue, 86. *Prof. chem, sch. med, Indiana*, 83-90, physiol, 90-94, path, 94-96, clin. med. and dermat, 96- Cor-ner, Marion Co, Ind; v. pres, sch. med, Indi-ana; ed, 'Ind. Jour. Med.' Fishes of the south-ern Allegheny region; birds of Indiana; mam-mals of Ohio.
- Breasted, Prof. James H(enry)**, 5615 University Ave, Chicago, Ill. *Archaeology, Oriental history*. Rockford, Ill, Aug, 27, 65. A.B, Northwestern, 83; Chicago Theol. Sem, 88-90, hon. B.D, 98; A.M, Yale, 91; A.M, Ph.D, Berlin, 94; hon. LL.D, California, 18. Asst. Egyptol, Chicago, 94-96, asst. director, *Haskell Oriental Museum*, 95-01, director, 01-, instr. Egyptol. and Semitic languages, 96-98, asst. prof, 98-02, assoc. prof, 02-05, prof. *Egyptol. and oriental hist*, 05-, chairman, dept. oriental languages and literatures, 15-, director, *Oriental Inst*, 19- Collector for Univ. of Chicago in Egypt, 94-95; collaborator on Egyptian lexicon, Royal Academies of Ger-many, 99-00; Thomas lecturer, Richmond, 97; director, Univ. of Chicago Egyptian exped. to Sudan, 05-07; Morse lecturer, Union Theol. Sem, 12; Earl lecturer, Pacific Sch. of Religion and California, 18; Hale lecturer, Nat. Acad, 19; collector for Univ. of Chicago in Europe and Egypt, 19-20, director, archeol. surv, *Oriental Inst*, 20. *Archeol. Inst; Oriental Soc.* (pres, 18); Philos. Soc; Inst. Social Sci; Am. Hist. Ass; Philos. Ass; Berlin Royal Acad. His-tory of Egypt and the ancient Egyptians; his-tory of the Near East and of the civilization of the eastern Mediterranean; the Egyptian lan-guage; origins of civilization.
- Breazeale, J(ames) F(rank)**, U. S. Department of Agriculture, Washington, D. C. *Biochem-istry*. Anderson, S. C, Dec. 11, 74. B.S, Clem-son, 96. *Biochemist, bur. plant indust, U. S. Dept. Agr*. Plant pysiology and nutrition; alkali in soils.
- Breckenridge, Prof. James Miller**, Vanderbilt University, Nashville, Tenn. *Chemistry*. A.B, Albion, 03; M.S, Wisconsin, 08, Ph.D, 10. In-dust. chemist, 10-12; prof. chem, Carroll, 12; Wabash, 17; asst. director, exp. sta, Hercules Powder Co, 17-19; director, sch. of chem, *Vand-erbilt*, 19- Chem. Soc; Soc. Chem. Indust. Organic and industrial chemistry; alumino-thermic alloys.
- Breckenridge, John E**, Woodbridge, N. J. *Chem-istry*. Palmer, Mass, May 4, 73. A.B, Yale, 96. Chief chemist, *Am. Agr. Chem. Co*, 96- A.A; Chem. Soc; Electrochem. Soc; Soc. Chem. In-dust. Fertilizer manufacture.
- Breckenridge, Prof. L(ester) P(aige)**, Yale Uni-versity, New Haven, Conn. *Mechanical engi-neering*. Meriden, Conn, May 17, 58. Ph.B, Yale, 81, hon. A.M, 09; D.Eng, Illinois, 10. With Water Power Co, Holyoke, Mass, 81-82; instr. mech. eng, Lehigh, 82-84; meeh. engineer with various companies, 84-86; instr. mech. eng, Lehigh, 86-91; prof, Mich. Agr. Col, 91-93; Illinois, 93-09, director, eng. exp. sta, 05-09; prof. mech. eng, Yale, 09- Consulting engineer, Lehigh Zinc and Iron Co, 86-91; director boiler trials, U. S. Geol. Surv. Coal Tests, World's Fair Sta, St. Louis, 04- Mech. Eng. (v. pres, 08-10); Eng. Educ; West. Soc. Eng; West. Ry. Club. Fuel economy; smokeless combustion; power production.
- Breed, Prof. Charles Blaney**, 6 Beacon St, Boston, Mass. *Civil engineering*. Lynn, Mass, Nov. 28, 75. B.S, Mass. Inst. Tech, 97. Asst. civil eng, *Mass. Inst. Tech*, 99-01, instr, 01-08, asst. prof, 08-10, assoc. prof, 10-14, prof, 14- Asst. engi-neer, Boston and Albany R. R, 96-97, 98; Chi-cago and West. Ind. R. R, 04; consulting engi-neer. Assoc. Civil Eng; Ry. Eng; Eng. Educ; New Eng. R. R. Club (past pres); Bos-ton Soc. Civil Eng. Surveying; geodesy; as-tronomy; railroad engineering; earthwork.
- Breed, Prof. Frederick S(tephen)**, 5476 Univer-sity Ave, Chicago, Ill. *Psychology*. Clarion Co, Pa, July 12, 76. A.B, Allegheny, 98; A.M, Harvard, 05, Ph.D, 09, traveling fellow, 09-10. Supt, pub. schools, Vandergrift, Pa, 01-04; principal, prep. sch, Allegheny, 05-07; asst. philos, Harvard, 08-10; asst. prof. educ. psychol, Michigan, 10-17; educ, Chicago, 17- Trustee, Allegheny, 17- A.A; Psychol. Ass; Soc. Col. Teachers Educ. Instincts and habits; educa-tional measuring instruments; instruction and class organization.
- Breed, Prof. Robert S(tanley)**, N. Y. Agricultural Experiment Station, Geneva, N. Y. *Bacteriol-ogy*. Brooklyn, Pa, Oct. 17, 77. B.S, Amherst, 98; M.S, Colorado, 99; Ph.D, Harvard, 02. Instr. biol, Colorado, 98-99; asst. zool, Harvard, 00-02; prof. biol. and geol, Allegheny, 02-13; bacteriologist, N. Y. Exp. Sta, Geneva, 13-; prof. dairy bacter, N. Y. State Col. Agr, Cornell, 20- A.A; Soc. Bact; Pub. Health Ass; Dairy Sci. Ass. General bacteriology; bacterial and cell content of milk; sanitary milk.
- Breese, Dr. B(urris) B(urr)**, University of Cin-cinnati, Cincinnati, Ohio. *Psychology*. Che-mung Co, N. Y, May 17, 68. A.B, Kansas, 96; A.B, Harvard, 97, A.M, 98; Ph.D, Columbia, 99. Prof. psychol. and ethics, Tennessee, 02-04; psychol, Cincinnati, 04- A.A; Psychol. Ass. Inhibition; binocular rivalry; motor activity and conscious activity.
- Breisacher, Dr. Leo**, D. Whitney Building, Detroit, Mich. *Medicine*. Detroit, Oct. 1, 66. Berlin, 88-91; M.D, Pennsylvania, 92. Demonstrator comp. physiol, Pennsylvania, 88-92, lecturer, 92-93, prof, 93-94; clin. gastro-enterol and later metabolism and dietetics, *Detroit Col. Med*, 04- Soc. Nat; Physiol. Soc. Physiology of thyroid gland; minimum albumen diet; physiology of sleep; physiology of the superior laryngeal nerve; metabolism; artificially prepared foods; gall-stones; diet in health and disease.

- Breitenbecher, Prof. J(oseph) K(umler)**, University of Oklahoma, Norman, Okla. *Zoology*. Jacksonboro, Ohio, Oct. 28, 84. A.B. Miami, 10; Ph.D., Chicago, 13. Research asst, desert lab, Carnegie Institution, 10-13; instr. biol, Western Reserve, 13-16, asst. prof, 16-20; *assoc. prof. zool, Oklahoma, 20-* A.A; Ecol. Soc. Genetics; animal behavior.
- Breithut, Dr. Frederick E(rnest)**, Calco Chemical Co, Bound Brook, N. J. *Chemistry*. New York, N. Y., Aug. 15, 80. B.S., Col. City of N. Y., 00; Sc.D., N. Y. Univ., 09. Instr. and *asst. prof. chem, Col. City of N. Y., 03-* Lecturer, Dept. Educ., N. Y. City; chemist, N. Y. State Factory Commission; mem. advisory council, Board of Health, and scientific staff, Bur. Munic. Research, N. Y. City; chairman, chem. group, W. T. B.; director, bur. conservation, Fed. Food Board; major, C.W.S., 18. A.A; Chem. Soc; Chem. Teachers Club. The partial vapor pressures of binary mixtures.
- Breitwieser, Prof. J(oseph) V(alentine)**, University of California, Berkeley, Calif. *Psychology*. Jasper, Ind., March 31, 84. A.B., Indiana, 07, A.M., 08; Ph.D., Columbia, 11. Asst. psychol., Indiana, 06-07, psychol. and philos., 07-08; psychol., Columbia, 08-10; asst. prof. psychol. and educ., Colo. Col., 10-11, prof., 11-19; *assoc. prof. educ, California, 19-* A.A; Psychol. Ass. Attention and movement; advertising; education; neuron theory; visual fusion; vocabulary tests.
- Breitzke, Charles F(rederick)**, Jersey City Water Works, Boonton, N. J. *Civil and sanitary engineering*. Newton Center, Mass., July 8, 84. B.S., Mass. Inst. Tech., 06. Asst. engineer, Board Water Supply, N. Y. City and to John M. Farley, 06; chemist, Hazen and Whipple, 07; bacteriologist, Jerome Park Exp. Sta., N. Y. City, 07; asst. engineer, Hering and Fuller, and N. Y. State Dept. Health, 07-10; Board Water Supply, N. Y. City, 10-12; Johnson and Fuller, 12-13; *sanit. engineer, bur. water, Jersey City, 13-* A.A; Civil. Eng; Water Works Ass; Ass. Eng. Societies; New Eng. Water Works Ass. Sanitation; water supply; sewage disposal.
- Brem, Dr. Walter (Vernon)**, 1210 Brockman Building, Los Angeles, Calif. *Medicine*. Charlotte, N. C., Nov. 5, 75. B.S., North Carolina, 96; M.D., Hopkins, 04. Med. house officer, Hopkins Hosp., 04-05; chief, med. service, Colon Hosp., C. Z., 07-11; prof. bacter. and path., dept. med., California (Los Angeles), 11-14; director, south. div., Calif. State Hygienic Lab., 13-16; major, M.C., 17-19. Certificate of honor, Am. Med. Ass., 11. Am. Med. Ass; Soc. Clin. Invest; Soc. Bact; Ass. Tuber; Pub. Health Ass; S. Calif. Med. Soc. (pres., 20). Internal medicine; malarial fever; amebiasis; tuberculosis; influenzal meningitis; vaccine treatment of typhoid bacillus carrier; syphilis of central nervous system; tetanus; paroxysmal hemoglobinuria; blood transfusion and grouping.
- Bremer, Dr. J(ohn) L(ewis)**, Harvard Medical School, Boston Mass. *Embryology*. New York, N. Y., Nov. 3, 74. A.B., Harvard, 96, M.D., 01; Oxford, 96-97. Asst. histol. and embryol., *Harvard Med. Sch.*, 02, instr., 02-06, demonstrator *histol*, 06-11, asst. prof., 12-14, *assoc. prof.*, 15- A.A; Ass. Anat; Am. Acad; Boston Soc. Nat. Hist; Boston Soc. Med. Sci. (sec'y, 08). Pulmonary arteries of vertebrates; lung of opossum; aberrant roots of cranial nerves; development of blood vessels; interrelations of fetal excretory organs and placenta.
- Breneman, Prof. A(ram) A(dam)**, 97 Water St., New York, N. Y. *Chemistry*. Lancaster, Pa., April 28, 47. B.S., Pa. State, 66, M.S., 71. Acting prof. chem., Pa. State, 68-69, prof., 69-72; asst. prof., Cornell, 75-79, prof. indust. chem., 79-82; *chem. expert, 82-* Chairman, jury on mineral waters, Columbian Expos., 93; La. Purchase Expos., 04; expert mem. Munic. Explosives Commission, N. Y. City, 06-10. Chem. Soc. (v. pres., 89-92, ed., 'Jour.', 84-93, chairman, N. Y. sect., 06); N. Y. Chemists Club; cor. mem. Phila. Acad. Water analysis and water supply; fixation of atmospheric nitrogen; industrial chemistry.
- Brenke, Prof. W(illiam) C(harles)**, University of Nebraska, Lincoln, Nebr. *Mathematics, Astronomy*. Berlin, Germany, April 12, 74. B.S., Illinois, 96, 97, M.S., 99; Ph.D., Harvard, 07. Instr. math., Illinois, 96-00, instr. math. and astron. and in charge of observatory, 00-03; *assoc. prof. math, Nebraska, 07-13, prof., 13-* A.A; Math. Soc; Math. Ass; Statist. Ass; Math. Verein; Circolo Mat. di Palermo. Some variable stars; infinite series.
- Brennan, Dr. Martin S(tanislaus)**, 6304 Minnesota Ave., St. Louis, Mo. *Astronomy, Geology*. St. Louis, July 23, 45. A.B., Christian Brothers, 65, A.M., 69, Sc.D., 00. *Pastor*, St. Thomas of Aquin Church, 84-92; *St. Lawrence's Church, and prof. astron. and geol, Kenrick Theol. Sem, St. Louis, 92-* A.A; Astron. Soc; Pacific Astron. Soc; St. Louis Acad; British Ass. Electricity.
- Brenneman, Prof. J(esse) L(aMar)**, Kansas State Agricultural College, Manhattan, Kans. *Electrical engineering*. Goshen, Ind., Aug. 26, 86. B.S., Chicago, 08; E.E., Wisconsin, 13. Teacher physics and physical geog, high sch., Deatur, Ill., 08-09; prof. physics and applied math, Westminster (Mo), 09-11; in testing dept., Gen. Elec. Co., Schenectady, N. Y., 13-14; prof. physics and elec. eng., New Mexico, 14-17; physics and automobile elec., Okla. Sch. Mines, 19-20; *asst. prof. elec. eng, Kansas State, 20-* A.A; Elec. Eng; Ass. Eng. Societies. Distribution of potential on high tension insulators.
- Brentzel, W(illiam) E(dward)**, Agricultural College, Fargo, N. Dak. *Plant pathology*. Kelso, Mo., March 27, 89. B.S., Missouri, 15, A.M., 17. Asst. bot., Missouri, 15-17; prof. biol., Western Md. Col., 17-18; *asst. pathologist, U. S. Dept. Agr., 18-* A.A; Bot. Soc; Phytopath. Soc. Crown rust of oats; flax diseases.
- Bretnall, Prof. G(eorge) H(erbert)**, State Normal School for Women, Farmville, Va. *Botany*. London, England, Feb. 12, 71. A.B., Cornell (Iowa), 96, A.M., 97; Chicago, 01-02, summers, 05, 06, 07, 10. Instr. science, Epworth Sem., 99-01; principal, Port Byron Acad., 02-03; *head, dept. biol, Monmouth, 03-11*; State Nor. Sch., Lacrosse, Wis., 11-18; *State Nor. Sch. for Women, Farmville, Va., 18-* A.A; Bot. Soc; Ecol. Soc.

- Bretz, Prof. J H(arlen)**, University of Chicago, Chicago, Ill. *Geology*. Ionia Co, Mich, Sept. 2, 82. A.B, Albion, 05; Ph.D, Chicago, 13. Instr. biol. and physiog, high sch, Flint, Mich, 05-07; physiog, Queen Anne High Sch, Seattle, Wash; *asst. prof. geol.*, Washington (Seattle), 13-14; *Chicago*, 15- A.A; fel. Geol. Soc. Tertiary and Quaternary geology of Washington and Oregon.
- Brewer, Dr. G(eorge) E(merson)**, 16 E. 64th St, New York, N. Y. *Surgery, Anatomy*. Westfield, N. Y., July 28, 61. A.B, Hamilton, 81, A.M, 84; M.D, Harvard, 85; LL.D, Hamilton, 16. Demonstrator anat, Columbia, 91-99, instr. surg, 99-03, lecturer clin. surg, 03, prof, 04-13, prof. surg. and surg. director, Presb. Hosp, 13-17. Consulting surgeon, Presb. Hosp; Woman's Hosp; St. Vincents; Manhattan Eye and Ear Infirmary; City Hosp; Perth Amboy Hosp; Muhlenberg Hosp, Plainfield, N. J. Fel. Surg. Ass; fel. Ass. Genito-Urinary Surg; fel. N. Y. Surg. Soc; fel. N. Y. Acad. Med; cor. mem. Ass. française d'Urol; Int. Surg. Soc. Surgical anatomy.
- Brewster, Prof. C(arl) M(ilton)**, 900 Campus Ave, Pullman, Wash. *Chemistry*. Chagrin Falls, Ohio, May 19, 81. A.B, Oberlin, 03; A.M, Harvard, 06, Parkman fellow, 08-09. Asst. chem, Harvard, 05-08; prof. chem. and physics, Mt. Union, 10-12; asst. prof. chem, Wash. State, 12-14, assoc. prof, 14-18, prof, 18- Chem. Soc. (pres, N. Intermountain sect). Organic condensations; derivation of phenols and naphthols.
- Brewster, Donald R(oss)**, J. W. Darling Lumber Co, Cincinnati, Ohio. *Forestry*. Minneapolis, Minn, April 6, 88. B.S, Minnesota, 10. Forest asst, U. S. Forest Service, 10-12, forest examiner, 12-20; *J. W. Darling Lumber Co*, 20- A.A; Soc. Foresters; Ecol. Soc. Silviculture; forest utilization and management; forest ecology; kiln drying and seasoning of wood.
- Brewster, E(dwin) T(enney)**, 8 Judson Road, Andover, Mass. *Biology*. Lawrence, Mass, Oct. 11, 66. A.B, Harvard, 90, A.M, 91. Instr. sciences, Wolfeboro, N. H, 90-92; *Phillips Acad*, 96-03, physics, 07-08, *geog*, 16- A.A; Boston Soc. Nat. Hist.
- Brewster, Dr. J(oseph) F(ergus)**, U. S. Department of Agriculture, Washington, D. C. *Chemistry*. Barksdale, Md, Aug. 24, 79. A.B, Del. Col, 98, A.M, 03; Ph.D, Berlin, 12. Instr. chem, Del. Col, 00-05; commercial chemist, 05-09; asst. chemist, N. C. Exp. Sta, 12-13; *org. chemist, bur. chem, U. S. Dept. Agr*, 14- Capt, S.C. and C.W.S., 18-19. Chem. Soc; Chem. Gesell. Enzymes; brucin; l-oxyprolin; kafrin; p-nitrotoluene.
- Brewster, Prof. R(ay) Q(uincy)**, University of Kansas, Lawrence, Kans. *Chemistry*. Guthrie, Okla, Nov. 27, 92. A.B, Ottawa (Kans), 14; fellow, Kansas, 14-15, A.M, 15; fellow, Chicago, 17-18, Ph.D, 19. Asst. instr. chem, Kansas, 15-17, *asst. prof*, 19- Chem. Soc. Organic chemistry; salophen; thiourea and thiazoles; organic halids.
- Breyer, Frank G(ottlob)**, Palmerton, Pa. *Chemistry, Physics*. Baltimore, Md, Dec. 21, 86. A.B, Hopkins, 08, A.M, 10. Research chemist, N. J. Zinc Co, Pa, 10-12, chief chemist, 12-17, chief research div, N. Y., 17- Chem. Soc. (chairman, Lehigh Valley sect, 18, counselor, 18, 19); Electrochem. Soc; Min. Eng; Soc. Test. Mat. (chairman, subcommittee, D1); Ceramic Soc; Faraday Soc. Analytical chemistry; paint; rubber; metals; chemical and metallurgical engineering patents.
- Bridge, Dr. Norman**, 718 W. Adams St, Los Angeles, Calif. *Pathology, Sociology*. Windsor, Vt, Dec. 30, 44. M.D, Northwestern, 68; M.D, Rush Med. Col, 78; hon. A.M, Lake Forest, 89; LL.D, Occidental, 20. Instr. med, Rush Med. Col, 74-84, prof, 84-00, *emer. prof*, 00- Mem. board of edue, Chicago, 81-84; board of election commissioners, 86-90. A.A; emer. mem. Am. Physicians; Am. Med. Ass; Climat. Ass; cor. mem. Wis. Acad.
- Bridges, Dr. Calvin B(lackman)**, 475 Grand Ave, Leonia, N. J. **Genetics*. Schuyler's Falls, N. Y., Jan. 11, 89. B.S, Columbia, 12, fellow, 15-16, Ph.D, 16; Cold Spring Harbor, 14. Private research asst. to Prof. T. H. Morgan, Columbia, 10-15; asst. to Prof. Morgan under grants from Carnegie Institution, 15-19, *mem. staff*, 19- Soc. Nat. The genetics of the fruit fly; chromosome theory of heredity and sex determination.
- Bridges, Prof. J(ames) W(infred)**, Ohio State University, Columbus, Ohio. *Psychology*. Cascumpee, P. E. Island, Sept. 14, 85. B.A, McGill, 11; A.M, Harvard, 12, fellow, 12-13, Ph.D, 15. Teacher, pub. schools, P. E. Island, 03-08; asst. psychol, Harvard, and intern, Psychopathic Hosp, Boston, 13-14; lecturer, Alberta, 14-15; instr, Ohio State, 15-17, *asst. prof*, 17- A.A; Psychol. Ass. Decision types and their mental correlates; point scale for measuring mental ability; intelligence and social status; abnormal psychology.
- Bridgman, Prof. B(enjamin) W(illiams)**, State Normal School, Eau Claire, Wis. *Physics*. Darlington, Wis, June 2, 72. Ph.B, Wisconsin, 06, A.M, 08. Instr. physics, Wisconsin, 06-08; *prof*, Westminster (Pa), 08-16; *State Nor. Sch, Eau Claire, Wis*, 16- Physical Soc. Melting points of tantalum and tungsten.
- Bridgman, Herbert L(awrence)**, 296 Washington St, Brooklyn, N. Y. *Geography*. Amherst, Mass, May 30, 44. A.B, Amherst, 66, A.M, 69; hon. A.M, 06, LL.D, 20. With 'Springfield Republican,' 65-70; New Eng. Assoc. Press, 70-73; 'N. Y. Tribune,' 73-77; Leslie's publications, 78-88; 'N. Y. Press,' 88-89; 'Brooklyn Standard Union,' 89- Lecturer, N. Y. pub. schools, 95-; in command Peary auxiliary 'Diana,' 99, 'Erik,' 01; U. S. mem. Int. Polar Commission, 06; Int. Polar Cong, 08, 13; hon. fel. Am. Museum Nat. Hist. Chevalier Order Leopold II, 08. Am. Alpine Club; Am. Geog. Soc; Brooklyn Inst. (pres, dept. geog, 06-); Phila. Geog. Soc.
- Bridgman, Dr. Olga (Louise)**, 498 Carl St, San Francisco, Calif. *Psychology*. Jackson, Mich, March 30, 86. A.B, Michigan, 08, M.D, 10; A.M, California, 14, fellow, 14-15, Ph.D, 15. Res. physician, State Sch. for Girls, Geneva, Ill, 10-12; asst. physician, Lincoln State Sch. for Feeble-Minded and Epileptics, 12-13; instr. psychol, California, 15-19, *asst. clin. prof. abnor. psychol*, 19- Abnormal psychology of childhood.

- Bridgman, Dr. Percy W(illiams)**, Jefferson Physical Laboratory, Cambridge, Mass. **Physics*. Cambridge, April 21, 82. A.B. Harvard, 04, A.M., 05, Ph.D., 08. Research fellow and asst. physics, *Harvard*, 08-13, asst. prof., 13-19, *prof.*, 19- Rumford medal, Am. Acad. Nat. Acad.; A.A.; Philos. Soc.; Physical. Soc.; Am. Acad.; Wash. Acad.; Soc. de Physique.
- Brierley, Prof. W(ilfrid) G(ordon)**, University Farm, St. Paul, Minn. *Horticulture*. Dover, N. H., Sept. 9, 85. B.S.A., Cornell, 06; M.S., Wash. State, 13. Instr. bot. and hort. Nat. Farm Sch., 17-08; *hort.*, Wash. State, 09-13; asst. prof., *Minnesota*, 13-17, *assoc. prof.*, 17- Soc. Hort. Sci.; Pomol. Soc. Fruit growing.
- Briggs, Arthur J(ames)**, 107 Victoria Place, Syracuse, N. Y. *Mechanical engineering*. Bristol, N. Y., Aug. 13, 72. Genesee Wesleyan Sem., 92-95; Cornell, 00. Designer and inventor, Am. Telescope and Biograph Co., 00-04; mech. engineer, Smith Premier Typewriter Co., 04-09, eng. manager, 09-11; *consulting engineer and inventor*, Remington Typewriter Co., 11- A.A.; Mech. Eng.; Syracuse Tech. Club (v. pres., 16). Moving pictures; typewriters; machine tools; sewing machines; letter handling devices.
- Briggs, C(lark) A(rthur)**, Bureau of Standards, Washington, D. C. *Physics*. Joplin, Mo., June 19, 83. B.S. (E.E.), Missouri, 07, A.M., 10. Asst. physics, Missouri, 08-10; lab. asst., *Bur. Standards*, 10-12, asst. physicist, 12-14, *assoc. physicist*, 14- Physical Soc.; Wash. Philos. Soc. Standardization of Ohm tube; railroad track scales; large scale construction.
- Briggs, Dr. Lyman J(ames)**, Bureau of Standards, Washington, D. C. **Physics*. Assyria, Mich., May 7, 74. B.S., Mich. Agr. Col., 93; M.S., Michigan, 95; Ph.D., Hopkins, 01. Physicist, bur. soils, U. S. Dept. Agr., 96-06, physicist in charge biophys. investigations, bur. plant indust., 07-19; *physicist and chief, div. eng. physics, Bur. Standards*, 20- A.A.; Physical Soc.; Ecol. Soc.; Wash. Philos. Soc. (sec'y, 06, pres., 16); Wash. Acad. (pres., 18). Physical properties of soils; finely divided solids and solutions; physical factors in plant transpiration and growth; apparatus for biophysical research; evaporation; acceleration of gravity at sea; gyroscopic stabilization; aerodynamics.
- Briggs, Prof. T(homas) R(oland)**, 120 Delaware Ave, Ithaca, N. Y. *Physical chemistry*. Huddersfield, England, Sept. 2, 87. A.B., Cornell, 09, Ph.D., 13. Instr. chem., Worcester, 12-14; *asst. prof. physical chem. and electrochem, Cornell*, 15- Chem. Soc. Colloid chemistry; electrochemistry.
- Brigham, Prof. Albert P(erry)**, Hamilton, N. Y. **Geology, Geography*. Perry, N. Y., June 12, 55. A.B., Colgate, 79, A.M., 82; A.M., *Harvard*, 92; Sc.D., Syracuse, 18. Clergyman, 82-91; *prof. geol. Colgate*, 92- Instr. geol., summer sch., *Harvard*, 95, 96, 00; prof. geol. and physical geog., summer sch., Cornell, 01-04; geol., summer sch., Wisconsin, 06; lecturer geog., Oxford, summer, 08, 14; chief examiner geog., col. ent. exam. board, 02-13; pres., Nat. Council Geog. Teachers, 18, 19. A.A.; Geol. Soc.; Ass. Geog. (sec'y, 04-13); Am. Geog. Soc. (pres., 14); N. Y. State Sci. Teachers Ass. (pres., 05). Physiography; glacial geology; anthropogeography.
- Brigham, Prof. Carl C(ampbell)**, Princeton University, Princeton, N. J. *Psychology*. Marlboro, Mass., May 4, 90. Litt.B., Princeton, 12, A.M., 13, Ph.D., 16. Instr. psychol., Princeton, 16-17; asst. to chief of rehabilitation, Fed. Board for Vocational Edue., 19-20; *asst. prof. psychol., Princeton*, 20- Adviser, Can. Mil. Hosp. Commission, 17; lieut., Tank C, 17-18. Psychol. Ass. Intelligence tests.
- Brigham, Dr. Reed O(shea)**, 1014 Cornwall Place, Ann Arbor, Mich. *Botany*. Toledo, Ohio, Dec. 20, 88. B.S., Ohio State, 12; M.S., Illinois, 14; Ph.D., Michigan, 16. Instr. bot., Cincinnati, 17-18. Instr. agr., Winona, summers, 13-18. A.A.; Bot. Soc. Plant physiology.
- Brigham, Dr. William T(ufts)**, Bishop Museum, Honolulu, Hawaii. *Anthropology, Ethnology*. Boston, Mass., May 24, 41. A.B., Harvard, 62, A.M., 65; hon. Sc.D., Columbia, 05. Instr. bot. and in charge of dept., *Harvard*, 68-69; curator, *Bishop Museum, Honolulu*, 90-96, director, 96-19, *emer. director*, 19- Twice Lowell lecturer. A.A.; Am. Acad.; Phila. Acad.; hon. fel. Anthropol. Inst. Gt. Britain and Ireland; cor. mem. Berlin Anthropol. Gesell.; cor. mem. Soc. Ital. d'Anthropol. Firenze; cor. mem. Royal Acad. Sci. St. Petersburg. Geology; botany; ancient Hawaiian worship; old Hawaiian Kapa.
- Brightman, Prof. Charles L(ewis)**, 852 Ackerman Ave, Syracuse, N. Y. *Physics*. Providence, R. I., Dec. 20, 83. Ph.B., A.M., Brown, 09; fellow, Clark, 13-15, Ph.D., 15. Asst. physics, Wesleyan, 09-10; instr., Mt. Holyoke, 10-13; DePauw, 15-16; *Syracuse*, 16-18, asst. prof., 18-20, *assoc. prof.*, 20- A.A. Recalescence of steel; thermoelastic relations of steel at high temperatures; indicator solutions.
- Brighton, Dr. Thomas B(ow)**, 219 K St, Salt Lake City, Utah. *Chemistry*. Salt Lake City, Jan. 17, 87. B.S., Utah, 13; M.S., California, 16. Ph.D., 17. Chemist, Utah Cons. Smelter Co. and Utah Copper Co., 05-07, 09-19; instr. chem., Utah, 12-14, *asst. prof.*, 17- A.A.; Chem. Soc.; Utah Soc. Eng. Physical chemistry.
- Brill, Dr. A(braham) A(rden)**, 1 W. 70th St, New York, N. Y. *Psychiatry*. Kanczuga, Austria, Oct. 12, 74. Ph.B., N. Y. Univ., 01; M.D., Columbia, 03. Asst. physician, Cent. Islip State Hosp., 03-08; Psychiat. Clinic, Zürich, 07-08; asst. mental diseases, Bellevue Hosp., 08-11; asst. visiting physician, Neur. Hosp., 09-11; chief neur. dept., Bronx Hosp., 12; asst. neur. and psychiat., Vanderbilt Clinic, 08-14; *lecturer abnormal psychol. and psychoanal., N. Y. Univ.*, 14- Chief, psychiat. clinic, Columbia, 13-14; adj. prof. psychiat., N. Y. Post-Grad. Med. Sch., 14-16. A.A.; Am. Med. Ass.; Psychoanal. Ass.; Psychopath. Ass.; Medico-Psychol. Ass.; N. Y. Psychoanal. Soc. (pres., 10-12); N. Y. Neur. Soc.; fel. N. Y. Acad. Med.; Int. Verein Med. Psychol. und Psychotherapie. Abnormal psychology; psychoanalysis; psychopathology of the only child; neurology; psychiatry.
- Brill, George M(ackenzie)**, Poughquag, N. Y. *Mechanical engineering*. Poughquag, March 24, 66. M.E., Cornell, 91, M.M.E., 05. Engineer of tests, Solvay Process Co., Syracuse, N. Y., 91-96,

- chief engineer, Detroit, Mich, 96-97; gen. engineer, Swift and Co, Chicago, Ill, 97-00; *consulting engineer*, 00-; Major, O.R.C, 17; chief, requirements sect, Emergency Fleet Corp, 18. Chairman, jury awards, Panama-Pacific Expos, 15. A.A.; Mech. Eng. (manager, 04-07, v. pres, 10-12); Elec. Eng.; Eng. Educ.; West. Soc. Eng.
- Brill, Prof. Harvey C(layton)**, Oxford, Ohio. *Chemistry*. Camden, Ohio, Dec. 29, 81. A.B, Miami, 08; Ph.D, Michigan, 11. Asst. prof. chem, Miami, 11-13; org. chemist, Bur. Science, P. I, 13-16, chief, div. org. chem, 16-18; *prof. chem. and head of dept, Miami*, 18- Mem. Board of Food and Drug Inspection, P. I, 14-17. Edible and other commercial oils; alcoholic and enzymic fermentation; medicinal plants of the Philippine Islands; synthetic drugs.
- Brill, Dr. N(athan) E(dwain)**, 48 W. 76th St, New York, N. Y. *Medicine, Biology*. New York, Jan, 13, 60. A.B, Col. City of N. Y, 77, A.M, 83. Lecturer med. juris, N. Y. Post-Grad. Med. Sch, 82, neuroanat. and neuropath, 83-84; *attending physician, Mt. Sinai Hosp, N. Y*, 93-; *prof. clin. med, Columbia*, 10- A.A.; Am. Physicians; Ass. Anat.; Neur. Ass; Am. Med. Ass; Ass. Tuber; Harvey Soc; N. Y. Acad. Med; N. Y. Path. Soc; N. Y. Neur. Soc; N. Y. Tuber. Ass. (sec'y); N. Y. Soc. Med. Juris. (pres, 90). Internal medicine.
- Brimhall, Dr. Dean R**, Provo, Utah. *Psychology*. Provo, Dec. 11, 86. A.B, Brigham Young, 13; A.M, Columbia, 16, Ph.D, 20. *Prof. psychol, Brigham Young*, 16- Asst. psychol, Columbia, 17-18. A.A. Inheritance of mental traits.
- Brimley, C(lement) S(amuel)**, Newberne Ave, cor. Tarboro St, Raleigh, N. C. *Zoology*. Great Linford, England, Dec. 18, 63. Bedford Co. Sch, England. *Asst. insect surr, N. C. Dept. Agr. Soc. Mammal; Soc. Ichthyol. and Herp; N. C. Acad. (pres, 13)*. Entomology and herpetology of North Carolina.
- Brink, Dr. Raymond W(oodward)**, University of Minnesota, Minneapolis, Minn. *Mathematics*. Newark, N. J, Jan. 4, 90. B.S, Kansas State, 08, B.S.E.E, 09; A.M, Harvard, 15, Ph.D, 16, traveling fellow, at Paris, 16-17. Instr. math, Idaho, 09-12; *Minnesota*, 12-13, 17-19, *assoc. prof*, 19- Lecturer math, Edinburgh, 19- Math. Soc; Edinburgh Math. Soc. Analysis.
- Brinsmade, Prof. Robert Bruce**, Ixmiquilpan, Hgo, Mex. *Mining engineering*. Elmira, N. Y, Aug. 27, 73. B.S, Washington (St. Louis), 95; E.M, Lehigh, 95. Prof. mining eng, N. Mex. Sch. Mines, 05-06; director, Wis. Mining Trade Sch, 07-08; prof. mining eng, West Virginia, 10-11; *consulting mining engineer*, 11- Mining exploration, Argentina, 01-02, Santo Domingo, 08-09. A.A.; Min. Eng; Eng. Educ; Coal Min. Inst; W. Va. Coal Min. Inst. Geology; milling; metallurgy; technical education; conservation; taxation.
- Brinton, Prof. Paul H(enry) M(aliet)-P(revost)**, University of Arizona, Tucson, Ariz. *Chemistry*. Richmond, Va, May 8, 82. B.S, Minnesota, 12, M.S, 13, Ph.D, 16. Commercial chemist, 02-07; instr. chem, Minnesota, 09-12; asst. prof, *Arizona*, 12-13, assoc. prof, 13-14, *prof. anal. chem*, 14- Capt, C.W.S. A.A; Chem. Soc; Chem.
- Gesell. Analytical and physical-inorganic chemistry; rare elements.
- Briscoe, Dr. C(harles) F(rancis)**, Agricultural College, Miss. *Bacteriology*. DePauw, Ind, Nov. 1, 68. A.B, Indiana, 99; A.M, Illinois, 07, Ph.D, 12. Teacher, pub. schools, 88-93; science and math, Ohio Valley Nor. Col, 96-97; principal, high sch, Hoopeston, Ill, 99-03; instr. *bacter*, Illinois, 05-12; *prof, Miss. Agr. College*, 12- A.A.; Soc. Bact. Tubercle bacilli and tuberculosis of farm animals; bacteriological effects of green manures; sero-diagnosis of pregnancy in mares.
- Bristol, Prof. Charles L(awrence)**, New York University, University Heights, New York, N. Y. *Zoology*. Ballston Spa, N. Y, Sept. 29, 59. B.S, N. Y. Univ, 83, M.S, 88; fellow, Clark, 91; fellow, Chicago, 92-93, Ph.D, 95. Instr. River-view Acad, Poughkeepsie, N. Y, 84-88; *prof. zool*, South Dakota, 88-91; N. Y. Univ, 94- Director, N. Y. Univ. zool. expeditions to Bermuda, 97-; assoc. director, Bermuda Biol. Lab. for Research, 04-07. A.A.; Soc. Nat; Soc. Zool; fel. N. Y. Acad. Metamerism in leeches; the marine fauna of Bermuda.
- Bristol, Dr. L(everett) D(ale)**, Augusta, Maine. *Public health*. Chicago, Ill, June 2, 80. B.S, Wesleyan, 03; M.D, Hopkins, 07; D.P.H, Harvard, 18. Instr. bacter. and path, Syracuse, 07-08; clin. asst. med, Minnesota, 08-12; asst. prof. bacter, Syracuse, 12-13, assoc. prof, 13-14; prof. bacter. and hygiene, North Dakota, and director, state pub. health laboratories, 14-16; asst. prev. med. and hygiene, Harvard, 17; *state commissioner of health, Maine*, 17- Prof. bacter. and pub. health, and dean, col. med, Tennessee, 19; director Anti-Tuber. Dispensary, St. Paul, 11-12. Soc. Bact; Ass. Path. and Bact; Pub. Health Ass; Ass. Tuber. Public health; amebic dysentery; tuberculosis; mediastinal tumors; cancer etiology; paratyphoid; wound diphtheria; scarlet fever; measles; rural sanitation.
- Bristol, Prof. W(illiam) H(enry)**, Waterbury, Conn. *Mathematics, Physics*. Waterbury, July 5, 59. M.E, Stevens, 84. Instr, manual dept, workingman's sch, Soc. for Ethical Culture, N. Y, 83-86; math, Stevens, 86-88, asst. prof, 88-99, prof, 99-06. Pres, Bristol Co, Waterbury, Conn. A.A.; Mech. Eng; Elec. Eng; Electrochem. Soc. Development of Bristol's recording instruments for pressure, temperature and electricity; recording pyrometer for temperature above 1000° F.
- Brittain, Prof. W(illiam) H(arold)**, Agricultural College, Truro, N. S. Can. *Entomology*. Fredericton, N. B, Sept. 30, 89. B.S.A, McGill, 11; M.S.A, Cornell, 20. Asst. biol, McGill, 11; provincial entomologist and plant pathologist, B. C, 12-14; *provincial entomologist, N. S*, and *prof. zool, Agr. Col, Truro*, 14- A.A. Fruit insects.
- Britton, Dr. Edgar C(lay)**, West Park Drive, Midland, Mich. *Chemistry*. Wabash, 11-14; A.B, Michigan, 15, Ph.D, 18. Teacher, pub. schools, Parke Co, Ind, 09-11; asst. gen. chem, Michigan, 15-18, instr. *org. chem*, 18-20; *research, Dow Chem. Co*, 20- Scientific asst, U. S. Pub. Health Service, summer, 17. Heterocyclic organic chemistry; the free radicle.

- Britton, Dr. N(athaniel) L(ord)**, New York Botanical Garden, Bronx, New York, N. Y. **Botany*. New Dorp, S. I, N. Y. Jan. 15, 59. E.M. Columbia, 79, Ph.D, 81, hon. ScD, 04; LL.D, Pittsburgh, 12. Asst. geol. Columbia, 79-87, instr. bot, 87-90; adj. prof, 90-91, prof, 91-96, emer. prof, 96-; director-in-chief, N. Y. Bot. Garden, 96- Botanist and asst. geologist, N. J. Geol. Surv, 80-90; field asst, U. S. Geol. Surv, 82; adviser in bot, Carnegie Institution, 02, biol. board, 08- Nat. Acad; A. A. (v. pres, 96); Bot. Soc. (pres, 98, v. pres, 07, pres, 20); Am. Inst; Torrey Bot. Club (ed, 88-97); fel. N. Y. Acad. (v. pres, 01, pres, 07); N. Y. Hort. Soc; N. Y. Micros. Soc; hon. mem. Phila. Col. Pharmacy; Staten Isl. Nat. Sci. Ass. (pres, 88-91); Wash. Biol. Soc. American systematic botany; North American flora (Crassulaceae, Cactaceae, Cyperaceae); flora of the West Indies, Bolivia and Paraguay.
- Britton, Mrs. N. L. (Elizabeth Gertrude)**, 2965 Decatur Ave, Bronx, New York, N. Y. **Botany*. New York, Jan. 9, 58. N. Y. City Nor. Col, 75. Critic teacher pedag, training dept, N. Y. City Nor. Col, 75-82, teacher bot, 82-85; hon. assoc. instr. and curator moss collections, N. Y. Bot. Garden. Bot. Soc; Torrey Bot. Club (ed, 'Bul,' 86-89). Anatomy and classification of mosses, especially of North America.
- Britton, Dr. W(ilton) E(verett)**, Agricultural Experiment Station, New Haven, Conn. *Entomology, Botany*. Marlboro, Mass, Sept. 18, 68. B.S, N. H. Col, 93; Cornell, 93-94; Ph.D, Yale, 03. Horticulturist, Conn. Exp. Sta, 94-01, entomologist, and state entomologist, 01- Lecturer entom, forest sch, Yale, 01-05; entomologist, State Board of Agr, 04. A.A; Ass. Econ. Entom. (pres, 09); Entom. Soc; Conn. Pomol. and Bot. Societies; Wash. Entom. Soc. Nutrition of plants; life histories of insects; methods of combating injurious species; insects of Connecticut; economic insects; flora of the North Haven (Conn) sand-plains.
- Broadhurst, Miss J(ean)**, Teachers College, New York, N. Y. *Bacteriology*. Stockton, N. J, Dec. 29, 73. B.S, Teachers Col, Columbia, 03, A.M, Columbia, 08; Ph.D, Cornell, 14. Teacher, N. J. State Nor. Sch, 03-06; instr. biol, Teachers Col, Columbia, 06-14, asst. prof, 14- A.A; Soc. Bact. (councilor); Torrey Bot. Club (assoc. ed).
- Brock, Prof. Henry M, S.J**, Woodstock College, Woodstock, Md. *Physics*. Boston, Mass, May 8, 76. A.B, Boston, 97; B.S, Mass. Inst. Tech, 00; Woodstock (Md), 03-05; Ore Seminary, England, 09-13. Prof. physics, Holy Cross, 05-09; Woodstock, 15- A.A; Physical Soc; Meteor. Soc. Methodology; scientific biography.
- Brock, Prof. R(eginald) W(alter)**, University of British Columbia, Vancouver, B. C, Can. *Geology*. Perth, Ont, Jan. 10, 74. Toronto, 90-92; M.A, Queen's (Can), 95; Heidelberg, 95, 00-01. Instr. miner. Sch. of Mining, Kingston, 96-97; geologist, Can. Geol. Surv, 97-08, director, 08-14; prof. geol. Sch. of Mining, 02-14; deputy commissioner mines, Can, 14-; dean, faculty applied science, British Columbia. Major, C. E. F, 15-19; consulting geologist, Egyptian E. F. Commissioner, Frank Landslide Inquiry, 03; Int. Geol. Cong. A.A. (v. pres, 09); Geol. Soc; Min. Eng; Min. and Metal. Soc; fel. Royal Soc. Can. (gen. sec'y); Can. Min. Inst. Economic geology.
- Brode, Prof. H(oward) S(tidham)**, Whitman College, Walla Walla, Wash. *Zoology*. Stark Co, Ill, Aug. 28, 66. Fellow, Chicago, 94-96, B.S, Ph.D, 96. Asst. zool, Illinois, 89-93; prof. biol, Whitman, 99- Instr. Woods Hole, 95; director Puget Sound Biol. Sta, 09-17. A.A; Ecol. Soc; Soc. Mammal; West. Soc. Nat. Morphology of annelids.
- Brödel, Prof. Max**, Johns Hopkins Medical School, Baltimore, Md. *Medical illustration*. Leipzig, Germany, June 8, 70. Acad. of Fine Arts, Leipzig, 85-90. Instr. art applied to med, Hopkins, 05-06, assoc. prof, 06- Ass. Anat; hon. mem. Md. Med. and Chirurg. Faculty. Embryology; methods of scientific illustration.
- Broderson, Dr. H(enry) J(ohn)**, 318 Cleveland Ave, Whiting, Ind. *Chemistry*. Minneapolis, Minn, Oct. 7, 83. A.B, Nebraska, 09; A.M, Kansas, 11; Ph.D, Cornell, 13. Instr. chem, Illinois, 13-17; chemist, Standard Oil Co. of Ind, 17- Petroleum products.
- Brodie, R(enton) K(irkwood)**, Proctor and Gamble Co, Ivorydale, Ohio. *Chemistry*. Portland, Oregon, Sept. 12, 87. B.S, Oregon Col, 08; Chicago, 10, M.S, 11. Instr. chem, Oregon Col, 09-12, asst. prof, 13-15, assoc. prof, 15-18; fellow, Mellon Inst, 18-20; chemist, Proctor and Gamble Co, 20- A.A; Chem. Soc. Oil; fat; soap; glycerin.
- Brokaw, Dr. Albert D(udley)**, 90 West St, New York, N. Y. *Geology*. Granville, Ill, Oct. 9, 80. B.S, Chicago, 08, fellow, 10-11, Ph.D, 13. Lecture asst. chem, Chicago, 08-10, asst, 11-12, instr. miner. and econ. geol, 12-13, asst. prof, 14-18, assoc. prof, 18-19; consulting geologist, 19- Chem. Soc. Solution of gold in the surface alteration of ore bodies; precipitation of gold; paraffin dirt of the gulf coast oil fields.
- Bronfenbrenner, Prof. J(acques) J(acob)**, 48 Francis St, Brookline, Mass. *Bacteriology*. Cherson, Russia, Nov. 21, 83. Imperial Univ, Odessa, 02-06; Pasteur Inst, Paris, 07-09; Ph.D, Columbia, 12; D.P.H, Harvard, 19. Asst, Pasteur Inst, Paris, 08-09; scholar, fellow and asst, Rockefeller Inst, 09-13; director, research and diagnostic laboratories, West. Pa. Hosp, Pittsburgh, 13-17; asst. prof. prev. med. and hygiene, Harvard, 17- A.A; Soc. Bact; Ass. Path. and Bact; Ass. Immunol; Soc. Exp. Biol; Ass. Tuber; Chem. Soc; Ass. Endocrinol; Columbia Biochem. Ass. (v. pres, 16). Immunity; anaphylaxis; serum ferments; food poisoning; identification of bacteria.
- Bronner, Dr. Augusta F(ox)**, 40 Court St, Boston, Mass. *Psychology*. Louisville, Ky, July 22, 81. B.S, Columbia, 06, A.M, 10, Ph.D, 14. Teacher English, Louisville Girls High Sch, 06-11; asst. educ, Teachers Col, Columbia, 11-13; clin. psychologist, Psychopathic Inst, Chicago, 13-17; assoc. director, Judge Baker Foundation, 17- Psychol. Ass; Psychopath. Ass. Juvenile delinquency; educational psychology; tests.
- Bronson, Prof. Howard L(ogan)**, Dalhousie University, Halifax, N. S, Can. *Physics*. Washington, Conn, July 12, 78. A.B, Yale, 00, Ph.D, 04. Instr. physics, Lehigh, 00-01; asst, Yale,

- 01-04; demonstrator, McGill, 04-07, lecturer, 07-09, asst. prof, 09-10; *Munro prof. Dalhousie*, 10- A.A.; Physical Soc; fel. Royal Soc. Can; N. S. Inst. (pres, 18-20). Radioactivity; high resistances; standard cells.
- Brooke, Will(iam) E(llisworth)**, University of Minnesota, Minneapolis, Minn. *Mathematics, Engineering*. Minier, Ill, Oct. 7, 70. B.C.E, Nebraska, 92, A.M, 96. Fellow and asst. math, Nebraska, 94-97; instr, high sch, Omaha, 97-01; *math. and mech, Minnesota*, 01-05, asst. prof. and prof, 05-12, *head prof*, 12- A.A.; Math. Soc; Eng. Educ; Math. Verein; Circolo Mat. di Palermo. Irrational integrals.
- Brookover, Prof. Cha(rie)s**, University of Louisville, Louisville, Ky. *Zoology*. Adams Co, Ohio, March 11, 70. B.Ped, Ohio (Athens), 94, M.S, 98; Columbia, 00-01; Chicago, 07-08, Ph.D, 10. Asst. prof. biol, Colo. Col, 98-01; *prof. nat. science*, Buchtel, 01-13; histol. and embryol, Arkansas, 13-17; *anat, histol. and embryol, Louisville*, 17- A.A.; Ass. Anat; Micros. Soc. (pres, 14); Ohio Acad. Human and comparative embryology; nasal apparatus of *Amia calva* and of teleosts.
- Brooks, Alfred H(ulse)**, U. S. Geological Survey, Washington, D. C. **Geology*. Ann Arbor, Mich, July 18, 71. Stuttgart, 89-90; Munich, 90-91; B.S, Harvard, 94; Paris, 97-98; Sc.D, Colgate, 20. Asst. geologist, *U. S. Geol. Surv.*, 94-01, geologist, 01-02, *geologist in charge, div. Alaskan mineral resources*, 03- Daly gold medal, Am. Geog. Soc, 13; Maltebrun gold medal, Soc. géog. de Paris, 13. Lieut. col, corps engineers, and chief geologist, A.E.F, 17-18. A.A; Geol. Soc; Min. Eng; Min. and Metal Soc; Ass. Geog; Explorers Club; Wash. Acad; Soc. Belge de Géol. Stratigraphic, economic and general geology; geography, geology and mineral resources of Alaska; military geology.
- Brooks, Allan**, Okanagan Landing, B. C. Can. *Ornithology*. Etawah, N. W. P, India, Feb. 15, 69. Mem. Ornith. Union; Soc. Mammal; Cooper Ornith Club; Wash. Biol. Soc; cor. mem. London Zool. Soc; British Ornith. Union; Bombay Nat. Hist. Soc. Mammalogy; fauna of British Columbia.
- Brooks, A(lonzo) B(eecher)**, U. S. Department of Agriculture, Washington, D. C. *Forestry*. French Creek, W. Va, May 6, 73. B.S.A, West Virginia, 12. Forester, W. Va. Geol. Surv, 10-11; W. Va. Exp. Sta, 13-16; *forest pathologist, bur. plant indust, U. S. Dept. Agr.*, 17- Ecol. Soc; Soc. Foresters. Forests of West Virginia; chestnut blight; white pine blister rust.
- Brooks, Prof. Ansel**, Brown University, Providence, R. I. *Mechanics*. Worcester, Mass, 76. Ph.B, Yale, 98, M.E, 01. Asst. mech. eng, Yale, 98-01; instr. *mech, Brown*, 03-04, asst. prof, 04-08, *assoc. prof*, 08- A.A; Mech. Eng. Aeronautics.
- Brooks, Dr. Benjamin T(albott)**, Chemists Club, 52 E. 41st St, New York, N. Y. *Chemistry*. Columbus, Ohio, Dec. 29, 85. A.B, Ohio State, 06; Ph.D, Göttingen, 12. Asst. chemist, Bur. Standards, 06-07; research chemist, Bur. Science, P. I, 07-11; fellow, Mellon Inst, 12-17; prof. chem. eng, Pittsburgh, 13-17; chief chemist, Commercial Research Co, 17-18, *consulting* chemist, 18- Chem. Soc; London Soc. Chem. Indust; London Inst. Petrol. Technol. Organic chemistry; petroleum; gasoline by cracking; essential oils.
- Brooks, Dr. Charles**, U. S. Department of Agriculture, Washington, D. C. *Plant pathology*. Salem, Ind, April 4, 72. A.B, Indiana, 04; A.M, Missouri, 05, Ph.D, 08. Instr. bot, N. H. Col, 05-06, prof. and botanist, Exp. Sta, 06-12; *pathologist, bur. plant indust, U. S. Dept. Agr.*, 12- Bot. Soc; Phytopath. Soc. (v. pres, 17); Wash. Bot. Soc. Fruit diseases, especially those of apples.
- Brooks, Dr. Charles E(dward)**, Gay Building, Madison, Wis. *Mathematics*. Baltimore, Md, Aug. 26, 79. A.B, Hopkins, 00, Ph.D, 04. Computer, Prudential Ins. Co, 04-05; actuary, South. Life Ins. Co, 06-09; instr. math. and insurance, Northwestern, 10-13; asst. prof, California, 15-17, insurance, 15-17; actuary, Carnegie Foundation Adv. Teaching and Teachers Ins. and Annuity Ass, 17-19; *consulting actuary*, 19- Lecturer, Hopkins, 09; consultant, Bur. War Risk Ins, 17. Medal, Panama-Pacific Expos, 15. Math. Soc; Econ. Ass; Inst. Actuaries. Economics of insurance.
- Brooks, Dr. Charles F(ranklin)**, U. S. Weather Bureau, Washington, D. C. *Meteorology, Climatology*. St. Paul, Minn, May 2, 91. A.B, Harvard, 11, A.M, 12; Ph.D, 14. Research asst, Blue Hill Observatory, 12-13; asst. physical geog. and meteorol, Harvard, 13-14; instr. geog, Yale, 15-18; *meteorologist, U. S. Weather Bur*, 18- Asst. office farm management, U. S. Dept. Agr, 14-18; asst. instr. meteorol, Sig. S, 18; assoc. ed, 'Monthly Weather Rev,' 18-19. A.A; fel. Meteor. Soc. (sec'y, 20); Ass. Geog. (v. pres, 20); Am. Geog. Soc; Seismol. Soc; Wash. Acad; Wash. Philos. Soc. Snowfall of the United States; seasonal work on farm crops; ocean temperatures in long-range forecasting; clouds.
- Brooks, Prof. Clyde**, University, Ala. *Physiology*. Paris, Mo, Aug. 30, 79. A.B, Missouri, 05; fellow, Chicago, 06-07, 08-09, Ph.D, 11, M.D, Rush Med. Col, 13. Asst. physiol, Missouri, 05; instr. physiol. and pharmacol, Washington (St. Louis), 07-08; asst. pharmacol. and exp. therapist, Chicago, 09-10; instr. physiol. and pharmacol, Pittsburgh, 10-11, asst. prof, 11-16; prof. and head, dept. physiol, physiol. chem. and pharmacol, Ohio State, 16-20; *prof. physiol. and physiol. chem. and dean, sch. med, Alabama*, 20- A.A; Physiol. Soc; Soc. Pharmacol; Am. Med. Ass; Ass. Prof. The circulation; blood pressure; physiology of central nervous system; experimental therapeutics.
- Brooks, Fred E(rnest)**, French Creek, W. Va. *Entomology, Mammalogy*. French Creek, June 8, 68. Pub. sch; Buckhannon Business Col. *Entomologist, deciduous-fruit insect investigations, bur. entom, U. S. Dept. Agr.* Assoc. entomologist, W. Va. Exp. Sta, 03-10; statist. agent for W. Va, bur. statist, U. S. Dept. Agr, 04-08; lecturer agr, farmers' institutes. A.A; Ass. Econ. Entom; Entom. Soc; Soc. Mammal; W. Va. Hort. Soc. (sec'y-treas, 02-09). Insect enemies of grapes and apples; feeding habits of mice, moles and shrews; boring insects of fruit trees; codling moth; nut attacking insects.

- Brooks, Dr. Harlow**, 47 W. Ninth St, New York, N. Y. *Pathology, Internal medicine*. Medo, Minn, March 31, 61. M.D, Michigan, 95; Freiburg, 98. *Prof. clin. med, Univ. and Bellevue Hosp. Med. Col.*, 08- Pathologist, N. Y. Zool. Park; visiting physician, N. Y. City Hosp. and Montefiore Hosp; consulting physician, Mem. Hosp; Beth Israel, and others. Col. M. R. C. A.A; Ass. Path. and Bact; Soc. Exp. Biol; Am. Physicians; Harvey Soc; N. Y. Path. Soc; N. Y. Zool. Soc; N. Y. Acad. Med. Pathological anatomy; internal medicine.
- Brooks, H(erbert) B(arton)**, Bureau of Standards, Washington, D. C. *Physics*. New Bremen, Ohio, Jan. 25, 69. M.E.(E.E), Ohio State, 03. Asst. physics, Ohio State, 00-02, elec. eng, 02-03; lab. asst, *Bur. Standards*, 03-05, asst. physicist, 05-10, assoc. physicist, 10-18, *physicist*, 18- Physical Soc; Elec. Eng. Precision electrical measurements; potentiometer; moving-coil galvanometers; ratio and phase angle of instrument transformers.
- Brooks, Dr. Herbert T(homas)**, 1100 Title Insurance Building, Los Angeles, Calif. *Medicine*. Walton, Tex, March 2, 82. A.B, Presbyterian (S. C.), 01; M.D, Tennessee, 06; Harvard Med. Sch, 10, 13; Vienna, 12, 14. Prof. path, Tennessee, 11-18, dean, col. med, 13-17; *assoc. prof. med, Southern California*, 18- Ass. Path. and Bact.
- Brooks, Pres. John P(ascal)**, Clarkson College of Technology, Potsdam, N. Y. *Civil engineering*. Kittery, Maine, Sept. 24, 61. B.S, Dartmouth, 85, M.S, 93, Sc.D, 15. Instr. civil eng, Lehigh, 90-97; prof, Kentucky, 97-06; assoc. prof, Illinois, 06-11; *pres, Clarkson Col. Tech*, 11- Assoc. mem. Civil Eng. Street railway location; the bearing power of earth; stresses in highway bridge trusses.
- Brooks, Prof. Morgan**, University of Illinois, Urbana, Ill. *Engineering*. Boston, Mass, March 12, 61. Ph.B, Brown, 81; M.E, Stevens, 83. Practising engineer, 83-98; *prof. elec. eng, Nebraska*, 98-01; *Illinois*, 01- Occasional lecturer, Minnesota, 93-98. Mech. Eng; Elec. Eng; Illum. Eng. Soc; Electrochem. Soc; West. Soc. Eng. Alternating currents and telephony; self-synchronizing of alternators; reactance coils.
- Brooks, Dr. S(umner) C(ushing)**, Hygienic Laboratory, Washington, D. C. *Physiology*. Sapporo, Japan, Aug. 17, 88. B.S, Mass. Col, 10; Ph.D, Harvard, 16. Biochemist, research inst, Nat. Dental Ass, 16; research fellow, Western Reserve, 17; tropical med, Harvard Med. Sch, 17-19; assoc. prof. physiol. and biochem, Bryn Mawr, 19-20; *biologist, hygienic lab, U. S. Pub. Health Service*, 20- A.A; Chem. Soc; Bot. Soc. Permeability of plant cells to electrolytes; uranium poisoning; biological effects of light; immunochemistry.
- Brooks, Dr. W(illiam) P(enn)**, Amherst, Mass. *Agronomy*. Norwell, Mass, Nov. 19, 51. B.S, Mass. Col, 75; Ph.D, Halle, 97; Nogaku Hakushi, Japan, 18. Prof. agr, Imp. Col. Agr, Sapporo, Japan, 77-89; *prof. agr, Mass. Col.*, and agriculturist, Hatch Exp. Sta, 89-05, acting pres. and director, 05-06, director and agriculturist, *Mass. Exp. Sta*, 06-18, *consulting agriculturist*, 18- Pres. ad. interim, Imp. Col. Agr, Japan, 80-83, 86-87. Awards, Columbian and Pan-Am. Expositions. A.A; Soc. Prom. Agr. Sci; Pub. Health Ass; Mass. Forestry Ass. Plant nutrition; agriculture; poultry.
- Brooks, Prof. William R(ober) t**, Smith Observatory, Geneva, N. Y. *Astronomy, Physics*. Maidstone, England, June 11, 44. English and Am. pub. and private schools; hon. A.M, Hobart, 91; Sc.D, Hamilton, 98. *Director*, Red House Observatory, Phelps, N. Y, 72-88; *Smith Observatory*, 88-, *prof. astron, Hobart*, 00-; *William Smith*, 08- Ten medals, Pacific Astron. Soc; ten Warner gold prizes; Lalande medal, Paris Acad; gold medal, La. Purchase Expos, 04; medal, Soc. Astron. de Mex. A.A; fel. Royal Astron. Soc. Comets (27 discovered); nebulae; solar, planetary and double star observations; celestial photography.
- Broomall, Henry L(ewis)**, 1302 Commonwealth Building, Philadelphia, Pa. *Anthropology*. Chester, Pa, April 12, 60. Swarthmore, 73-77. A.A; Anthropol. Ass; Del. Co. (Pa) Inst. Sci. (v. pres, 95-12); Phila. Acad. Linguistics; Spanish dialects; El Moro inscriptions; nautical English; grammar and phonetics in living Indo-European languages; psychological processes in acquisition and loss of the vernacular.
- Brossard, Prof. E(dgar) B(ernard)**, Logan, Utah. *Agriculture*. Oxford, Idaho, April 1, 89. B.S, Utah Col, 11; M.S, Minnesota, 17, Ph.D, 20. Instr. math, Utah Col, 09-10; farm management demonstrator for Utah, 14-16; *instr. farm management, Minnesota*, 18-19; *prof, Utah Col.*, and in charge farm management and farm economics investigations, *Exp. Sta*, 19- Farm Econ. Ass. Farm management; farm economics; farming in Utah.
- Brotherton, Wilber, Jr**, 1115 Ferdon Road, Ann Arbor, Mich. *Botany*. Detroit, Mich, March 1, 96. A.B, Michigan, 16, M.S, 17. *Asst. pathologist, office cotton, truck and forage crop disease investigations, bur. plant indust, U. S. Dept. Agr*, 18- Bot. Soc. Genetics; disease resistance in plants.
- Brown, Dr. Alfred J(erome)**, National Bank Building, Omaha, Neb. *Surgery*. New York, Aug. 27, 78. A.B, Yale, 99; M.D, Columbia, 03. Asst. anat, Columbia, 09-11, instr, 11-18; major, M.C, 18-19; *asst. prof. surg, col. med, Nebraska*, 19- Ass. Anat; Col. Surg; fel. N. Y. Acad. Med. Posterior cardinal-omphalomesenteric communications in adult mammals; perforated ulcer in typhoid fever; cephalic tetanus; localization of foreign bodies in body tissues.
- Brown, Bailey E(dgar)**, U. S. Department of Agriculture, Washington, D. C. *Chemistry*. Cookeville, Tenn, Nov. 10, 79. B.S, Ala. Polytech, 99, M.S, 00. Meat inspector, Birmingham, Ala, 00; chemist, Dimmick Cast Iron Pipe and Foundry Co, 00-01; *biochemist, U. S. Dept. Agr*, 01- Detailed by U. S. Dept. Agr, asst. prof. exp. agron, Pa. State, 07-11. Soc. Agron. Fertilizer requirements of soil types.
- Brown, Barnum**, American Museum of Natural History, New York, N. Y. *Vertebrate paleontology*. Carbondale, Kans, Feb. 12, 73. A.B, Kansas, 07. Asst. curator, dept. vert. paleont,

- Am. Muscum Nat. Hist.*, 97-11, *assoc. curator*, 11- Fossil hunting expeditions to various places in North and South Am, 97- Geol. Soc; Paleont. Soc; Kans. Acad. Economic geology; oil and gas; Pleistocene mammals; Cretaceous and Jurassic dinosaurs; Cretaceous birds.
- Brown, Baxter L(amont)**, Merchants-Laclede Building, St. Louis, Mo. *Civil engineering*. Rush, N. Y., June 20, 64. Pub. schools. Chief engineer, St. Louis Valley Railway, 01-05; *practising engineer*, 05- Civil Eng; St. Louis Eng. Club (pres, 19).
- Brown, Prof. Benjamin H.**, Walla Walla, Wash. *Physics*. Wis, 66. A.B, Ripon, 94, A.M, 96. *Prof. physics*, Whitman, 95- A.A; Physical Soc; Ass. Prof. Pulling loads.
- Brown, Dr. Calvin S(mith)**, University, Miss. *Geology, Archeology*. Obion Co, Tenn, Feb. 13, 66. B.S, Vanderbilt, 88, M.S, 91, Sc.D, 92; Ph.D, Colorado, 99; Paris and Leipzig, 94-95; Spain, Italy and Greece, 03-04. Instr. English, Vanderbilt, 95-96; comp. lit, Colorado, 98-00; acting prof. modern languages, Mississippi, 02; acting asst. prof. *Romance languages*, Missouri, 04-05; *prof*, Mississippi, 05- Collector of flora of Azores; archeologist, Miss. Geol. Surv. A.A; Anthropol. Ass; Soc. des Américanistes. Coal flora of Tracy City, Tenn; lignite of Mississippi; archeology of Mississippi.
- Brown, Charles Barto**, Frederick M. Ward Co, New Haven, Conn. *Civil engineering*. New Haven, Conn, Sept. 22, 73. Ph.B, Yale, 94, C.E, 96. Prof. railroad eng, Maine, 08-16, civil eng, 16-19; *salesman*, Frederick W. Ward Co, 19- A.A; Civil Eng; Eng. Educ; Soc. Test. Mat. Cement, concrete, brick and stone.
- Brown, Prof. Charles Carroll**, 803 Lincoln Ave, Valparaiso, Ind. *Civil engineering*. Austinburg, Ohio, Oct. 4, 56. Cornell, 74-75; C.E, Michigan, 79; hon. A.M, 13. Prof. civil eng, Rose, 83-86; Union, 86-93; city engineer, Indianapolis, 93-95; asst. city engineer, Omaha, 96-97; asst. ed, 'Munic. Eng. Magazine,' 97-99, ed.-in-chief, 00-17; *prof. civil eng, Valparaiso*, 17-, *dean, col. applied sciences*, 19- Consulting engineer, N. Y. State Board of Health, 87-93, and for many cities. Civil Eng; Soc. Munic. Improv. (past pres, sec'y, 13); Water Works Ass; Ind. Eng. Soc; Ill. Eng. Soc. Stream pollution; sewage disposal; sewerage; water supply; geodetic surveys; paving; effect of variations of rainfall on water powers; calcareous cements and their uses; water purification; irrigation; asphalt and concrete.
- Brown, Prof. Charles S(ummer)**, South Ave, Vanderbilt Campus, Nashville, Tenn. *Mechanical engineering*. East Hampton, Conn, Aug. 23, 60. Ph.B, Yale, 83, M.E, 88. Practising engineer, 84-88; instr. machine design and supt. workshops, Rose, 88-89, *prof. steam eng. and machine design*, 89-96; adj. *prof. mech. eng, Vanderbilt*, 96-98, *prof*, 98- Mech. Eng; Eng. Ass. of the South; Franklin Inst. Power plant economy; methods of heating by steam and hot water.
- Brown, Prof. Charles W(ilson)**, Brown University, Providence, R. I. *Geology, Geography*. Overton, Nebr, Aug. 11, 74. Boston, 96-97; Ph.B, Brown, 00, A.M, 01; Harvard, 03-04. Asst. geol, Brown, 00-01; principal, high sch, Warren, R. I, 01-03; instr. geol, Lehigh, 04-05; instr. *geol. and head of dept*, Brown, 05-06, asst. prof, 06-13, *assoc. prof*, 13- Field asst, U. S. Geol. Surv, 02-03, geol. aid, 04-08; asst. geol, summer sch, Harvard, 03; supt, Nat. Resources Surv. of R. I, 09- A.A; Geol. Soc; Am. Geog. Soc; Seismol. Soc; Harvard Travellers Club; Phila. Geog. Soc. Areal geology of Vermont, Maine and Rhode Island; geology of Penobscot Bay; the Jamaica earthquake; geography of Providence, R. I; graphite of Rhode Island; geology of Mt. Desert, Maine.
- Brown, Prof. D(enton) J(acobs)**, University of Nebraska, Lincoln, Nebr. *Chemistry*. Hampton, Pa, April 13, 82. A.B, Texas, 10; Ph.D, Chicago, 18. Instr. *chem*, Texas, 10-14; asst. prof, Tex. Col, 15-17; instr, Texas, 17-18; *assoc. prof, Nebraska*, 18- Chem. Soc. Electroanalysis; peroxids; oxidation and reduction.
- Brown, E(dgar)**, Lanham, Md. *Botany*. Farmington, N. Y., Sept. 25, 71. Ph.B, Union, 95. *Botanist in charge, seed lab, U. S. Dept. Agr*, 02- A.A; Wash. Acad. Seed testing.
- Brown, Prof. E(dgar) D(ewight)**, University of Minnesota, Minneapolis, Minn. *Pharmacology*. Albion, N. Y., April 4, 69. Ph.G, N. Y. Col. of Pharmacy, 98, Phar.D, 99; M.D, Western Reserve, 02. Demonstrator pharmacol. and mat. med, Western Reserve, 03-06, instr. pharmacol, 06-07; asst. prof. *mat. med. and pharmacol*, Minnesota, 07-09, *prof*, 09- A.A; Physiol. Soc; Soc. Pharmacol; Am. Med. Ass.
- Brown, Edward L(eroy)**, 3324 Zuni St, Denver, Colo. *Mathematics*. Columbus, Ohio, Oct. 29, 66. A.B, Capital Univ, Columbus, 86; Ohio State, 87-88; A.M, Cornell, 90. Teacher math, Clinton Liberal Inst, Ft. Plain, N. Y, 90-91; Halsey Col. Inst, N. Y, 91-92; instr. math. and astron, Lehigh, 92-94; *prof*, Capital Univ, 94-96; instr. math, Colorado, 97-98; head, dept. math, *North Side High Sch, Denver*, 98-00, *principal*, 00- Lecturer math, Texas-Colo. Chautauqua, summer, 98. Math. Soc; Colo. Math. Soc. (pres, 07-09). The ellipse.
- Brown, Prof. Ernest W(illiam)**, Yale University, New Haven, Conn. **Mathematics*. Hull, England, Nov. 29, 66. A.B, Cambridge, 87, A.M, 91, fellow, Christ's Col, 89-95, U.Sc, 97, hon. fellow, 12-; hon. Sc.D, Adelaide, 14. Instr. math, Haverford, 91-93, *prof. applied math*, 93-00, *math*, 00-07; *Yale*, 07- Assoc. ed, 'Jour. Astron,' 11- Medal, Royal Astron. Soc, and J. C. Adams prize, Cambridge, 07; Pontécoulant prize, Paris Acad. Sci, 10; Bruce gold medal, Pacific Astron. Soc, 20. A.A. (v. pres, 09-); Math. Soc. (ed, 'Trans,' 00-07, 'Bul,' 10-, v. pres, 04, pres, 14-16); Astron. Soc; Philos. Soc; Am. Acad; fel. Royal Soc; fel. Royal Astron. Soc; fel. London Math. Soc; fel. Cambridge Philos. Soc. Lunar theory; celestial mechanics; new lunar theory and tables; periodic orbits; Trojan group of asteroids; rotational motion of a fluid; evolution of nebulae and solar system.
- Brown, Prof. F(ay) C(luff)**, 330 Newark St, Washington, D. C. **Physics*. Washington, Ohio, Nov. 23, 81. A.B, Indiana, 04; A.M, Illinois, 06; fellow, Princeton, 07-08, Ph.D, 08.

- Instr. in charge physics, high sch., Decatur, Ill., 03-04; instr. physics, Illinois, 04-07; Iowa, 09-10, asst. prof., 10-13, assoc. prof., Iowa, 13-19; major, ordnance dept., U.S.A., 18-19; *scientific asst. to director, Bur. Standards*, 19- A.A.; Physical Soc.; Wash. Acad. Physical properties of selenium cells and selenium crystals; heats of solution of milk sugars; radioactivity and thermionics; electron theory; process of freezing; ballistics of airplane drop bombs.
- Brown, Dr. Forest B(uffen) H(arkness)**, Bishop Museum, Honolulu, Hawaii. *Botany*. Rushville, N. Y., Dec. 11, 73. A.B., Michigan, 02, M.S., 03; Ph.D., Yale, 18. Instr., Mich. Nor. Col., 98-00; curator, bot. garden, Michigan, 08-09; in charge bot. gardens and instr. plant anat., Ohio State, 11-16; research fellow, Yale, 18-19; *botanist, Bishop Museum, Honolulu*, 19- With Mich. Biol. Surv., 03-15. A.A.; Bot. Soc.; Ecol. Soc.; Mich. Acad.; Ohio Acad. Plant anatomy; ecology; Hawaiian woody plants.
- Brown, Prof. F(rank) E(merson)**, Iowa State College, Ames, Iowa. *Chemistry*. Cuba, Kans., Feb. 5, 82. B.S., Chicago, 13, Ph.D., 18. Teacher, pub. schools, Republic Co., Kans., 99-02; principal, Portis, 05-07; supt., Hill City, 07-09; Collinsville, Okla., 11-12; teacher *chem.*, junior col. and high sch., Fresno, Calif., 14; Cent. Y. M. C. A., Chicago, 14-16; asst. prof., *Iowa State*, 17-18, *assoc. prof.*, 18- Chem. Soc. (sec'y-treas., Ames sect., 18); Iowa Acad. Surface tension; methyl chloride; hydrogen concentration in soils; potassium chlorate; manganese salts.
- Brown, Frederick L(yons)**, 1107 Cleveland St., Evanston, Ill. *Astronomy, Physics*. Mexico City, Mex., Oct. 23, 90. A.B., Park, 14; A.M., Northwestern, 16. *Instr. astron.*, Northwestern, 16-17, *math.*, 19- With Sig. C., U.S.A., 17-19. Astron. Soc. Physical optics; the cluster N.G.C. 6633.
- Brown, G(eorge) H(erbert)**, Rutgers College, New Brunswick, N. J. *Ceramics*. Miamisburg, Ohio, May 18, 84. Cer.E., Ohio State, 08. Asst. ceramic chemist, Bur. Standards, 10-14, assoc., 14-16; *director, dept. ceramics, Rutgers*, 16- Ceramic engineer, Hydraulic Press Brick Co. A.A.; Ceramic Soc. (pres., 17); Chem. Soc. Porcelain; kaolins; refractories; structural clay products; enameled iron.
- Brown, Prof. G(eorge) L(incoln)**, Brookings, S. Dak. *Mathematics, Astronomy*. Bates Co., Mo., Jan. 25, 69. B.S., Missouri, 92, fellow, 92-93, M.S., 93; fellow, Chicago, 94-96, Ph.D., 00. Instr. *math.*, high sch., Rock Island, Ill., 96; *prof., S. Dak. Col.*, 97-, acting pres., 08, *dean of faculty*, 10-, acting pres., 14, 18-19. A.A.; Math. Soc. The linear transformation group of order 3×360 .
- Brown, Prof. Glenn V(inton)**, Bucknell University, Lewisburg, Pa. *Chemistry*. Baltimore, Md., June 7, 75. Ph.B., Dickinson, 98, A.M., 99; Hopkins, 98-99; Ph.D., Pennsylvania, 10. Instr. physics, Pennsylvania, 07-09; *prof.*, St. John's (Brooklyn, N. Y.), 10-11; Teachers Col. (H.M.S.), 11-12; *chem. eng., Bucknell*, 12- A.A.; Chem. Soc.; Ass. Prof.; N. Y. Chemists Club. Colorimetry; manganese; electrolysis.
- Brown, Harry B(ates)**, Agricultural College, Miss. *Botany*. Delphi, Ind., June 9, 76. A.B., Indiana, 06, A.M., 07. Instr. bot., Indiana, summer, 07; Cornell, 08-11; *prof., Miss. Agr. Col.*, 11-15, *plant breeding, Exp. Sta.*, 15-, *v. director*, 19- A.A.; Bot. Soc. Algal periodicity; mycology; development of Xylaria; development and poisonous properties of *Claviceps paspali*; anatomy of plant hybrids; heredity in cotton and corn.
- Brown, Harry Fletcher**, duPont Building, Wilmington, Del. *Chemistry*. Natick, Mass., July 10, 67. A.B., Harvard, 90, A.M., 92. Chief chemist, torpedo sta., bur. of ordnance, U. S. Navy Dept., 93-00; Int. Smokeless Powder and Chemical Co., 00-01, general supt., 01-15; chemical director, *E. I. duPont de Nemours and Co.*, 04-11, director, 11-15, *v. pres.*, 15- Soc. Chem. Indust.; Chem. Eng. Smokeless powder.
- Brown, Dr. H(arry) P(hilip)**, New York State College of Forestry, Syracuse, N. Y. *Botany*. W. Winfield, N. Y., March 29, 87. A.B., Cornell, 09, A.M., 10, Ph.D., 14. Xylotomist, U. S. Forest Service, 11; instr. bot., Cornell, 12-14; asst. prof. forest bot., N. Y. State Col. Forestry, Syracuse, 15-17, *prof. wood technol.*, 18- A.A.; Bot. Soc. Dendro-technology; growth in forest trees; trees of New York State; medullary spots.
- Brown, Prof. James Greenlief**, 703 University Ave., Tucson, Ariz. *Botany*. St. Clair, Mich., Nov. 21, 80. B.S., Chicago, 16, M.S., 17. Teacher science, Cebu Nor. Sch., P. I., 04-07; instr. bot., Arizona, 09-15, asst. prof., 16-20, *prof. plant path.*, 20- Director, plant disease surv. of Ariz. A.A.; Ecol. Soc.; West. Soc. Nat. Experimental morphology and cytology.
- Brown, Dr. J(ames) Howard**, Rockefeller Institute, Princeton, N. J. *Bacteriology*. Jacksonville, Ill., May 18, 84. B.S., Ill. Col., 06; M.S., Illinois, 09; Ph.D., Harvard, 17. Austin teaching fellow and asst. comp. path., Harvard Med. Sch., 12-17; in charge sera production, *Rockefeller Inst. and Auxiliary Lab. No. 1, U.S.A. and N.*, 17-19, *assoc.*, 19- Animal pathology; blood transfusion; streptococci from milk-borne epidemics of tonsillitis; use of blood-agar for the study of streptococci.
- Brown, Dr. John W(esley)**, Cleveland Electric Metals Co., Cleveland, Ohio. *Industrial chemistry*. Rye, N. H., July 23, 77. B.S., Mass. Inst. Tech., 00; Ph.D., Heidelberg, 03. Asst. anal. chem., Mass. Inst. Tech., 00-01, instr. theoret. chem., 03-06; director, research lab., Nat. Carbon Co., 06-12; *pres., Cleveland Electro Metals Co.*, 12- Chem. Soc. (treas., N. E. sect., 04); Electrochem. Soc. Catalysis in sulphuric acid solution; rate of the decomposition of hydrogen peroxid complex compounds; partition coefficient of sulphurous and various other acids; investigation of dry cells, with special reference to ignition service; improvement of wet and dry primary cells and of carbon products for electrical uses; smelting of aluminum.
- Brown, Prof. Joseph G(rant)**, 1013 Ramona St., Palo Alto, Calif. *Physics*. Stillman Valley, Ill., Feb. 8, 69. A.B., Stanford, 01, A.M., 03. Instr. physics and chem., Ill. Nor. Univ., 94-98; *physics, Stanford*, 01-06, *asst. prof.*, 06- A.A.; assoc. Physical Soc.

- Brown, Prof. Julius Arthur**, American University, Beirut, Syria. *Astronomy*. New York, N. Y., May 8, 80. A.B., Dartmouth, 02, A.M., 04; Rhodes scholar, Oxford, 04-07, B.Sc., 06. Instr. physics, Dartmouth, 03-04; demonstrator, Oxford, 07; asst. prof., Dartmouth, 08-09; prof., Syrian Protestant Col., Beirut, Syria, 09-14; lecturer, Columbia, 15-17; prof. astron. and director, Observatory, Am. Univ., Beirut, Syria, 17- Research asst., Yerkes Observatory, 04. A.A.; Physical Soc. Conduction of electricity in gases; meteorology.
- Brown, Dr. Lawrason**, 104 Main St., Saranac Lake, N. Y. *Clinical medicine*. Baltimore, Md., Sept. 29, 71. A.B., Hopkins, 95, M.D., 00. Res. physician, Adirondack Cottage Sanitarium, 01-12. A.A.; Climat. Ass.; Ass. Tuber; Am. Physicians. Pulmonary tuberculosis; immunity from tuberculosis.
- Brown, Prof. Linwood A (rnold)**, 819 S. Limestone St., Lexington, Ky. *Chemistry*. Hawesville, Ky., Sept. 21, 81. Ph.D., Louisville Col. Pharmacy, 03; Ph.C., Michigan, 04. Asst. chem., Michigan, 04-05; asst. chemist, Canadian Copper Co., 05; Merck and Co., 05-06; asst. prof. pharmacy, N. Dak. Col., 06-08, prof., drug chemist, Exp. Sta., 06-09; chemist, drug div., Ky. Exp. Sta., 09- A.A.; Chem. Soc.; Pharmaceut. Ass.; Ky. Pharmaceut. Ass. Pharmacy; analytical chemistry.
- Brown, Lucius P (olk)**, Franklin, Tenn. *Chemistry*. Nashville, Tenn., Aug. 1, 67. Grad., Virginia, 89. Chemist, Tenn. Exp. Sta., 89-90; anal. chemist, Nashville, 93-15; state food commissioner and chemist, Tenn., 08-15; director, Bur. Food and Drugs, N. Y. City, 15-20. Capt., Sanit. C., 18-19. A.A.; Chem. Soc.; Tenn. Acad.; N. Y. Acad. Chemistry and geology of phosphates; food inspection; food supply.
- Brown, Dr. Mabel Mary**, Madbury Road, Durham, N. H. *Botany*. Belmont, Wis., March 17, 90. A.B., Wisconsin, 15, A.M., 16, fellow, 18-19, Ph.D., 19. Asst. bot., Wisconsin, 15-18; instr., Missouri, 19-20; asst. prof., N. H. Col., 20- A.A.; Bot. Soc.; Wis. Acad. Plant embryology.
- Brown, Dr. Mortimer Jay**, 706 Marsh-Strong Building, Los Angeles, Calif. *Chemistry*. Chester, Nebr., Dec. 25, 82. B.S., Nebraska, 05; Ph.D., Cornell, 11. Chief chemist, works manager and later asst. to tech. director, Niagara Electrochem. Co. and Roessler and Hasslacher Chem. Co., 11-19; v. pres. and executive, Pacific E and H Chem. Corp., 19- Chem. Soc.; Soc. Chem. Indust.; Electrochem. Soc. Electrolysis of fused salts; production of alkali metals; silver peroxynitrate; fixation of nitrogen; bleaching; fumigating.
- Brown, Nathan Clifford**, 218 Middle St., Portland, Maine. *Ornithology*. Portland, Oct. 13, 56. A.B., Bowdoin, 83. Fel. Ornith. Union; Nat. Ass. Audubon Societies; hon. mem. Maine Ornith. Soc.; Portland Soc. Nat. Hist. Distribution and habits of North American birds.
- Brown, Miss Nellie Adalesa**, U. S. Department of Agriculture, Washington, D. C. *Plant pathology*. Marine City, Mich., Feb. 21, 77. A.B., Michigan, 01. Teacher science, high sch., South Haven, Mich., 01-03; Delray and Miami, Fla., 03-05; scientific asst., sugar plant lab, bur. plant indust., U. S. Dept. Agr., 06-10, asst. pathologist, lab. plant path., 10- A.A.; Phytopath. Soc. Bacteriology; plant tumors; bacterial plant diseases.
- Brown, Prof. Nelson C (ourtlandt)**, N. Y. State College of Forestry, Syracuse, N. Y. *Forestry*. South Orange, N. J., March 1, 85. A.B., Yale, 06, M.F., 08. With U. S. Forest Service, 08-11; asst. prof. forestry, Iowa State, 11-12; prof. forest utilization, N. Y. State Col. Forestry, Syracuse, 12- A.A.; Soc. Foresters. Forest products.
- Brown, Prof. Oliver W**, Bloomington, Ind. *Electrochemistry*. Vermilion Grove, Ill., June 25, 73. B.S., Earlham, 95; A.M., Indiana, 96; Cornell, 97-99; hon. fellow, Wisconsin, 03-04. Demonstrator chem., Ind. Dental Col., and chemist, J. N. Hurty lab., Indianapolis, 96-97; asst. chem., Cornell, 98-99; instr. electrochem. and quant. anal., Indiana, 99-04, assoc. prof., 04- Chemist, Muncie Pulp Co., Ind., 99. Electrochem. Soc. Preparation of potassium perseleate; distribution of mercuric chloride between toluene and water; efficiency of the nickel-plating tank; electric smelting of zinc and molybdenum ores; life and capacity of lead storage batteries.
- Brown, Dr. Orville Harry**, 430 N. Central Ave., Phoenix, Ariz. *Pathology, Physiology*. Sabetha, Kans., July 18, 75. A.B., Kansas, 01; Ph.D., Chicago, 05; M.D., St. Louis, 05. Lab. asst. physiol., Kansas, 01-02; asst. instr., Chicago, 02-04; asst. prof. pharmacol., St. Louis, 04-07; physician-in-chief, Mo. State Sanatorium for Tuberculosis, 07-08, supt., 08-10; asst. prof. physiol., St. Louis, 10, med., 10-16; state supt. pub. health, Ariz., and field director for Ariz., U. S. Pub. Health Service, 18-19. Physiol. Soc.; Soc. Biol. Chem.; Ass. Tuber; Am. Med. Ass.; Royal Soc. Med. Effects of ions on enzymes; relative values of alkaloidal salts; tuberculosis; asthma.
- Brown, Prof. P (ercy) E (dgar)**, Iowa State College, Ames, Iowa. *Chemistry*. Woodbridge, N. J., Oct. 9, 85. B.S., Rutgers, 06, A.M., 09, Ph.D., 12. Asst. soil chem., Rutgers, 06-10; prof., Iowa State, 10, chief soil chem. and bacter., and assoc. in charge soil survey, Exp. Sta., 10- Expert, Nat. Research Council. Consulting ed., 'Soil Science.' A.A.; Chem. Soc.; Soc. Bact.; Soc. Agron. (councilor, 13); fel. Iowa Acad. Soil bacteriology and chemistry; soil fertility and management; soil survey.
- Brown, Dr. Philip King**, 909 Hyde St., San Francisco, Calif. *Medicine*. Napa, Calif., June 24, 69. A.B., Harvard, 90, M.D., 93. Assoc. prof. clin. med., California, 96-98, instr. animal path., vet. dept., 96-99; assoc. med. and instr. clin. path., Cooper Med. Col., 99-02; instr. clin. path., California, 02-08; prof. med., Polyclinic Post-Grad. Sch., 07-17. Visiting physician and consulting pathologist to various hospitals, San Francisco; founder and director, Arequipa Sanatorium, Manor Marin Co., Calif. Am. Physicians; Am. Med. Ass.; Climat. Ass.; Calif. Acad. Med. Blood conditions in leprosy and bone tuberculosis; pathology of the nervous system of animals; malarial fevers of the west coast of United States; intestinal parasites; muscular

irritability in eclampsia; goiter in man and animals on the Pacific slope.

- Brown, Dr. Ralph L(yman)**, Mellon Institute, Pittsburgh, Pa. *Chemistry*. Blair, Ill, July 23, 90. A.B., Missouri, 13; fellow, Chicago, 16-17, Ph.D., 17. Asst. chem., Missouri, 13-14; org. preparations, Chicago, 15-16; research chemist, Inland Steel Co, 15; *Koppers Co, Mellon Inst*, 16-17, in charge, research div, 19- Lieut. Lab. d'Etudes chim. de Guerre, Paris, 17-19. Chem. Soc. Molecular rearrangement; chemical warfare gases; coke oven by-products.
- Brown, Robert Marshall**, Rhode Island College of Education, Providence, R. I. *Geography, Geology*. Fisherville, Mass, March 11, 70. A.B., Brown, 93; A.M., Harvard, 02. Instr. sciences, high sch., Portsmouth, N. H., 94-98, principal, 98-00; instr. sciences, high sch., New Bedford, Mass., 02-03; *geog.*, Mass. State Nor. Sch., Worcester, 03-13; *prof.*, R. I. Col. Educ., Providence, 13-; *geol.*, R. I. Col., 19- A.A.; Ass. Geog. The Mississippi River; waterways.
- Brown, Prof. S. L(eroy)**, University Station, Austin, Tex. *Physics*. Indianapolis, Ind., Nov. 23, 81. A.B., Indiana, 05, A.M., 07; Whiting fellow, California, 07-09, Ph.D., 09. Asst. instr. *physics*, Purdue, 05-07; Lehigh, 09-11; *Texas*, 11-13, adj. prof., 13-17, *assoc. prof.*, 17- Head, div. wireless, U. S. A. Sch. Mil. Aeronaut, Texas, 17-18, pres. acad. board, U.S.A. Sch. Radio Operators, 18-19. A.A.; *assoc.* Physical Soc; Eng. Educ. Distributed capacity and inductance; oxid resistance thermometers; radiation pyrometers.
- Brown, Prof. Samuel B(oardman)**, University of West Virginia, Morgantown, W. Va. *Geology*. Preston Co, W. Va., March 5, 60. A.B., West Virginia, 83, A.M., 86. Teacher, prep. sch., Martinsburg, W. Va., 84-85; principal, Nor. Sch., Glenville, 85-90; *asst. geol.*, West Virginia, 90-92, *prof.*, 92- Two bronze medals, Columbian Expos., '93. A.A. Structural geology; coal strata; crops and soils.
- Brown, Dr. Samuel Horton**, 1901 Mt. Vernon St, Philadelphia, Pa. *Medicine*. Philadelphia, Nov. 16, 78. M.D., Pennsylvania, 99. Asst. ophthalmologist, Pa. Hosp.; ophthalmologist, Mt. Sinai Hosp; clin. asst., Wills Eye Hosp; *asst. ophthalm. surgeon*, Episcopal Hosp. Assoc. ed. and collaborator. 'Am. Year-Book Med. and Surg.' 04-05; 'Therapeut. Rev.' 04, 'Jour. Cutaneous Diseases,' 05-06; 'Am. Med.' 05; 'Annals of Ophthal.' 05-06; ed., seventh, eighth and ninth editions of 'Hughes' Manual of Practice of Med.' Am. Med. Ass; Acad. Ophthal. and Oto-Laryngol; Am. Acad. Med; Phila. Med. Club; Phila. Geog. Soc. Eczema; ophthalmology; medical sociology.
- Brown, Dr. Sanger, II**, 37 W. 54th St, New York, N. Y. *Psychiatry*. White Plains, N. Y., May 2, 84. M.D., Columbia, 07. Physician, Dixmont Hosp, Pa, 07-09; Shepard and Enoch Pratt Hosp, Towson, Md, 10-11; Manhattan State Hosp, Ward's Island, N. Y., 11-12; Bloomingdale Hosp, White Plains, 12-17; with M.C., U.S.A. 17-19. Am. Med. Ass; Medico-Psychol. Ass; Psychopath. Ass; N. Y. Neur. Soc. Ethnology and psychiatry; childhood delinquency.
- Brown, Prof. Stewardson**, 20 E. Penn St, Germantown, Philadelphia, Pa. *Botany*. Germantown, April 29, 67. Germantown Acad. *Conservator, bot. sect.*, Acad. Nat. Sciences, Phila, 95- Prof. bot., Pa. Hort. Soc. A.A; Bot. Soc; Am. Geog. Soc; Fern. Soc; Pa. Forestry Ass; Pa. Hort. Soc; Del. Valley Ornith. Club; Phila. Acad; Phila. Bot. Club; Torrey Bot. Club. Systematic botany; the flora of Philadelphia and vicinity; the Alpine flora of the Canadian Rocky Mountains.
- Brown, Prof. S(timson) J(oseph)**, U. S. N, Naval Department, Washington, D. C. *Astronomy*. Penn Yan, N. Y., Sept. 17, 54. Cornell, 71-72; grad, U. S. Naval Acad, 76. Midshipman, U. S. N., 76-77, *ensign*, 77-83, *prof. math*, 83-12, *astron. director*, U. S. Naval Observatory, 98-01, *instr. math*, U. S. Naval Acad, 01-06, *head*, dept. math. and mech, 06-10, *director*, 'Nautical Almanac.' A.A; Astron. Soc; Astron. Gesell. Observation of the 303 'Zusatz Sterne' of the 'Berliner Jahrbuch'; observation of the satellites of Saturn, Mars and Neptune.
- Brown, Prof. Theodore H(enry)**, 79 Taber Ave, Providence, R. I. *Mathematics*. Mystic, Conn., Oct. 5, 88. A.B., Yale, 10, A.M., 11, Ph.D., 13. Instr. math, Sheffield Sci. Sch., Yale, 13-15; *Brown*, 15-18, *asst. prof.*, 18-19, *nautical science*, 19- Math. Soc; Math. Ass; Astron. Soc. Applied mathematics; astronomy.
- Brown, Prof. Thomas B(enjamin)**, George Washington University, Washington, D. C. *Physics*. Bath, N. Y., April 4, 92. A.B., Cornell, 12, Ph.D., 16. Asst. instr. *physics*, Cornell, 12-13, *instr.*, 13-17; *asst. prof.*, George Washington, 17- Asst. physicist, Bur. Standards, summer, 18. Physical Soc; Wash. Philos. Soc. Cathode-fluorescence.
- Brown, Prof. Thomas C(lachar)**, R. F. D. 1, Fitchburg, Mass. *Geology*. Lunenburg, Mass, March 28, 82. A.B., Amherst, 04; A.M., Columbia, 05, Ph.D., 09. Asst. geol., Columbia, 05-07; *eng. bur.*, N. Y. City Board of Water Supply, 07-09; *asst. prof. geol.*, Middlebury, 09-11; Pa. State, 11-12; Bryn Mawr, 12-17; *lecturer*, Fitchburg High Sch, 18- Lecturer geol., Norwich, 09. A.A; Geol. Soc; Paleont. Soc; N. Y. Acad. Morphology and development of Paleozoic corals; economic geology of Vermont.
- Brown, Dr. Wade H(ampton)**, Rockefeller Institute, New York, N. Y. *Pathology*. Sparta, Ga, Oct. 18, 78. B.S., Nashville, 99; M.D., Hopkins, 07. Instr. path., Virginia, 07-08; Wisconsin, 08-10, *asst. prof.*, 10-11; *prof.*, North Carolina, 11-13; *assoc.*, Rockefeller Inst, 13-14, *assoc. mem.*, 14- A.A; Soc. Exp. Biol; Ass. Path. and Bact; Soc. Pharmacol; Soc. Exp. Path; Am. Physicians; Harvey Soc. Metabolism and pathology of blood pigments; toxicology of arsenicals; chemotherapy of trypanosome and spirochete infections.
- Brown, Dr. Warner**, University of California, Berkeley, Calif. *Psychology*. Greensboro, Ga, Feb. 9, 82. A.B., California, 04, A.M., 05; Ph.D., Columbia, 08. Asst. psychol., California, 04-06; philos., Columbia, 06-07, *psychol.*, 07-08; *instr.*, California, 08-13; *asst. prof.*, 13-20, *assoc. prof.*, 20- A.A; Psychol. Ass. Psychology of rhythm; the conception of the threshold; judgment; recognition; visual space; individual differences; learning.

- Brown, Prof. W(ilbur) V(incen)t**, Greencastle, Ind. *Astronomy*. Hope, N. J., March 27, 60 B.S., Stevens, 80, Ph.D., 89. Asst. prof. math and astron, *De Pauw*, 85-95, *prof. astron*, 94-96, *math. and astron. and director, observatory*, 96- Determination of longitude, Greencastle to St. Louis; effect on collimation of a tip in the object glass; personal equation with single and double line reticles; the oblique sections of the anchor ring; use of a classified cabinet of weather maps in improving weather forecasts.
- Brown, Prof. W(illiam) H(enry)**, Bureau of Science, Manila, P. I. *Botany*. Richmond, Va., Oct. 6, 84. B.S., Richmond, 06; fellow, Hopkins, 09-10, Ph.D., 10. Scientific asst., U. S. Fisheries Lab., Beaufort, N. C., 08; asst., Hopkins, 08-09; desert lab., Carnegie Institution, 10; instr., Mich. Agr. Col., and scientific asst., Exp. Sta., 10-11; *plant physiologist*, *Bur. Science*, P. I., 11-; *assoc. prof. bot.*, *Univ. Philippines*, 15-19, *prof. and chief of dept.*, 19-; *chief, div. investigation*, *Bur. Forestry*, P. I., 18- A.A.; Bot. Soc.; Ecol. Soc. Ecology; forest products; life history of dicotyledons; cytology of fungi; water relations and movements of plants.
- Brown, Dr. William S(tephen)**, Standard Underground Cable Co., Pittsburgh, Pa. *Electrical engineering*. Washington, D. C., Oct. 5, 91. E.E., Rensselaer, 13; Ph.D., Hopkins, 16. *Elec. engineer*, *Standard Underground Cable Co.*, 17- Elec. Eng. Corona in air at high potentials.
- Browne, Prof. Arthur Wesley**, Cornell University, Ithaca, N. Y. **Chemistry*. Brooklyn, N. Y., Nov. 24, 77. B.S., Wesleyan, 00, M.S., 01; Ph.D., Cornell, 03. Instr. chem., *Cornell*, 03-06, asst. prof., 06-10, *prof. inorg. and anal. chem.*, 10- A.A.; Chem. Soc. A thermostat sensitive to one thousandth of a degree; synthetic analysis in ternary systems; resistance of glass tubing to bursting pressure; hydronitric acid and the inorganic trinitrids; effect of mechanical vibration upon carbon dioxide; oxidation of hydrazin; electrolysis of potassium trinitrid; gas generators; the hydronitrogens and their derivatives; electrolysis of liquid ammonia solutions; nitridation; binary systems; hydrogen peroxide in nature; gravitation and inorganic evolution.
- Browne, Dr. C(harles) A(lbert)**, 80 South St., New York, N. Y. **Agricultural and sugar chemistry*. North Adams, Mass., Aug. 12, 70. A.B., Williams, 92, A.M., 96; Ph.D., Göttingen, 01. Asst. chemist in commercial lab., N. Y. City, 92-94; instr. chem., Pa. State, 95-96; asst. chemist, Pa. Exp. Sta., 96-02; chemist, La. Sugar Exp. Sta., 02-06; chief, sugar lab., bur. chem., U. S. Dept. Agr., 06-07; *chemist in charge*, *N. Y. Sugar Trade Lab.*, 07- U. S. delegate, Int. Cong. Applied Chem., Rome, 06; mem. Int. Commission Methods of Sugar Anal., A.A.; Chem. Soc. (asst. ed., 12-, chairman, sect. sugar chem., 20-); Wash. Acad.; N. Y. Chemists Club; cor. mem. Ass. chim. de Sucre et de Dist. de France. Chemistry of butter-fat, apples, cider and vinegar, sugar-cane and sugar, rice, carbohydrates; chemical composition and analysis of honey; polarimetry in sugar analysis; history of chemistry and alchemy.
- Browne, Dr. Louise McDanell**, 15 Clark St., Brooklyn, N. Y. *Physiological chemistry*. Gallatin Co., Ky., Feb. 16, 83. B.S., Nashville, 02; A.B., Stanford, 06; A.M., Columbia, 12; fellow, Baltimore Ass. Prom. Univ. Educ. of Women, Yale, 15-17, Ph.D., 17. Teacher, high sch., Georgia, 02-03; pub. sch., Calif., 03-05, high sch., 06-11; asst. prof. home econ., Wash. State, 12-13; Minnesota, 13-15; assoc. prof., Goucher, 17-18. A.A.; Home Econ. Ass. Carbohydrate metabolism.
- Browne, Prof. W(illiam) Hand, Jr.**, West Raleigh, N. C. *Electrical engineering*. Baltimore Co., Md., July 21, 68. A.B., Hopkins, 90, certificate in elec. eng., 92. Eng. work, 92-96; instr. elec. eng., Nebraska, 96-98; asst. prof., Illinois, 98-02; technical ed., 'Elec. Rev.', 02-08; *prof. physics and elec. eng.*, *N. C. Col.*, 08-18, *elec. eng.*, 18- Elec. Eng.; Eng. Educ.; Electrochem. Soc.; Illum. Eng. Soc.
- Browne, Prof. William W(ard)**, College of the City of New York, New York, N. Y. *Bacteriology*. Providence, R. I., Dec. 10, 84. A.B., Brown, 08, A.M., 09, Ph.D., 12. Instr. *bacter.*, *Col. City of N. Y.*, 12-17, *asst. prof.*, 17- Bacteriologist, various city health departments; N. Y. State Commission on Ventilation. A.A.; Soc. Nat.; Soc. Bact.; Pub. Health Ass.; Soc. Exp. Biol. Bacteria of intestinal tract, air, fish and fish products.
- Browning, Prof. Philip E(mbury)**, Yale University, New Haven, Conn. **Chemistry*. Rhinebeck, N. Y., Sept. 9, 66. A.B., Yale, 89, Ph.D., 92; Munich, 93-94; Paris and Delft, 13-14. Asst. chem., Yale, 89-93, instr., 94-98, *asst. prof.*, 98- Mem. Am. Commission Inorg. Chem. Nomenclature, 12; reviewer tech. literature on rarer elements, Foote Mineral Co. A.A.; Chem. Soc. Analytical chemistry of the rarer elements; separation of the cerium earths; estimation of vanadium, thallium, tellurium; extraction and separation of germanium, gallium, indium, etc.
- Browning, Prof. William**, 54 Lefferts Place, Brooklyn, N. Y. *Neurology, Anatomy*. Norwich, Conn., July 7, 55. Ph.B., Yale, 76; diploma in anat., Pennsylvania, 78; M.D., Leipzig, 81. Lecturer anat. and physiol. of nervous system, *L. I. Col. Hosp.*, 87-00, *prof. neurol.*, 01- Neurologist to 12 Brooklyn hospitals; ed., 'Neurographs.' Commissioner inebriety, N. Y. City, 13-18. A.A.; Neur. Ass.; Ass. Anat.; Ass. Med. Librarians (pres., 17-19). Encranial circulation; medical history and libraries.
- Brownlee, Dr. R(oy) H(utchison)**, Benedum-Trees Building, Pittsburgh, Pa. *Chemistry*. Alexis, Ill., Dec. 12, 76. A.B., Monmouth, 98; Hopkins, 98; Ph.D., Chicago, 06. Prof. nat. sciences, Occidental, 00-01; asst. chem., Chicago, 01-03; instr., Univ. of Chicago High Sch., 03-07; chemist and asst. supt., paraffine works, Standard Oil Co. of Ind., 07-12; fellow, Mellon Inst. and prof., Pittsburgh, 12-14; *pres.*, *R. H. Brownlee Lab.*, 14- Chem. Soc.; Electrochem. Soc. Technical processes for oil and gas; chemical welding and cutting of metals; petroleum refining.
- Brubaker, Prof. Albert P(hilson)**, 3426 Powelton Ave., Philadelphia, Pa. *Physiology*. Somerset, Pa., Aug. 12, 52. M.D., Jefferson Med. Col., 74. Prof. physiol., Pa. Col. Dental Surg., 85-09; adj. prof. physiol. and hygiene, *Jefferson Med. Col.*, 96-09, *prof. physiol. and med. juris*, 09- Lee-

- turer physiol. and hygiene, Drexel Inst., Phila., 92-14. Physiol. Soc; Philos. Soc; Phila. Col. Physicians. Electrophysiology.
- Bruce, Prof. Donald**, University of California, Berkeley, Calif. *Forestry*. Newtonville, Mass., July 23, 84. A.B., Yale, 06, M.F., 10. Forest asst., forest examiner and forest supervisor, U. S. Forest Service, 10-15; *prof. forestry, California*, 15- Soc. Foresters. Forest engineering.
- Bruce, Dr. E(verend) L(ester)**, 221 Wellington St., Ottawa, Can. *Geology*. Toledo, Ont., Aug. 3, 84. B.Sc., Queen's (Can.), 09, B.A., 11; A.M. Columbia, 12, Ph.D., 15. Chemist, Can. Copper Co., 10; asst. miner, Columbia, 11-14; geologist, Can. Geol. Surv., 14-20; Whitehall Petrol. Corp., London, 20; *prof. miner, Queen's (Can.)*, 20-Fel. Am. Geog. Soc; Can. Min. Inst; Ottawa Field Nat. Club. Mineralogy; economic geology; Pre-Cambrian geology.
- Bruce, Prof. Robert E(mest)**, Boston University, Boston, Mass. *Mathematics*. Stoneham, Mass., Oct. 14, 77. A.B., Boston, 01, A.M., 05, Ph.D., 12; A.M., Harvard, 11. *Instr. math.*, Pomona, 02-03; *Boston*, 03-05, asst. prof., 05-12, *prof.*, 12- A.A.; Astron. Soc. Modern geometry; astronomy; solar physics.
- Bruce, Dr. W(illiam) H(erschel)**, Denton, Tex. *Mathematics*. Troup Co., Ga., April 8, 56. A.B., Ala. Polytech., 83; Ph.D., Mercer; hon. A.M., Baylor; LL.D., Trinity. Principal, high sch., Blanco, Tex., 85-93; supt. schools, Marble Falls, 93-96; Athens, 96-99; pres., John Tarleton Col., Stephenville, 99-00; *prof. math., North Tex. State Nor. Col.*, 01-06, *pres.*, 06- *Instr. math.*, summer session, Texas, 97, 98, 00; *pres. Tex. State Teachers' Ass.*, 05-10; chairman, Tex. State Board of Examiners, 05. A.A.; fel. Tex. Acad. General geometry.
- Bruecken, Dr. Albert Joseph**, Marquette School of Medicine, Milwaukee, Wis. *Bacteriology*. Pittsburgh, Pa., Feb. 1, 82. M.D., Pittsburgh, 13. Res. pathologist and bacteriologist, Mercy Hosp., Pittsburgh, 13-14; demonstrator path. and bacter., Pittsburgh, 14-15; pathologist and bacteriologist, Mercy Hosp., 15-16; *Tuber. League Hosp.*, 16-18; *Mercy Hosp.*, 18-19; *prof. bacter., Marquette*, 19- Soc. Bact; Am. Med. Ass; Int. Ass. Med. Mus. Pathology; pneumococcus infections; vascular obstruction; hemolysis.
- Bruere, Dr. A(ndrew) Arthman**, 2145 Manee St., Montreal Annex, Can. *Toxicology, Hygiene*. Trinidad, W. I., Nov. 10, 64. M.D., Edinburgh, 90; Paris. *Lecturer med., McGill.* Director, clin. lab., Royal Victoria Hosp., Montreal. Ass. Path. and Bact. Sapotoxins; hydrogen selenid and tellurid; carbon monoxid; action of sapotoxins on the tissues.
- Brues, C(harles) T(homas)**, Bussey Institution, Forest Hills, Boston, Mass. **Zoology*. Wheeling, W. Va., June 20, 79. B.S., Texas, 01, fellow, 01-02, M.S., 02; fellow, Columbia, 02-03. Special field agent, U. S. Dept. Agr., 04-05; curator invert. zool., Milwaukee Pub. Museum, 05-09; *instr. econ. entom., Harvard*, 09-14, *asst. prof.*, 14- Ed., 'Psyche,' 10-; mem. div. med. zool., Nat. Research Council, 17-19. A.A.; Soc. Nat; Entom. Soc; Ass. Econ. Entom; Am. Acad; Wis. Nat. Hist. Soc. (see'y, 06-09, ed., 'Bul,' 07-10); Wis. Acad; Wash. Acad; Cambridge Entom. Club. Applied and medical entomology; relations of insects to microorganisms; embryology, ethnology and taxonomy of insects, especially of the Hymenoptera and Dip-tera; applied entomology; fossil Hymenoptera.
- Brumfield, Dr. W(illiam) A(ndrew)**, Blacksburg, Va. *Biology*. Pittsylvania Co., Va., May 26, 75. M.D., Virginia, 97. Field agent, Rockefeller Sanit. Commission, 09-14; *district health officer, Va. State Health Dept.*, 14- A.A.; Pub. Health Ass; Am. Med. Ass. Intestinal parasites and mosquitoes in Virginia.
- Brunel, Prof. R(oger) F(rederic)**, Bryn Mawr, Pa. *Chemistry*. Portland, Maine, Dec. 21, 81. A.B., Colby, 03; Ph.D., Hopkins, 06. Research asst. chem., Tufts, 06-07; *instr.*, Syracuse, 07-09, asst. prof., 09-12; *assoc., Bryn Mawr*, 12-14, *assoc. prof.*, 14-17, *prof.*, 17- A.A.; Chem. Soc; Franklin Inst; Soc. chim. de Paris. Organic chemistry; equilibrium in reversible reactions of organic compounds.
- Bruner, Dr. Frank G.**, Board of Education, Chicago, Ill. *Psychology*. Streator, Ill., March 28, 74. Fellow, A.B., Nebraska, 03; Ph.D., Columbia, 08, M.D., 12. Supt. schools, Dwight, Ill., 99-01; asst. psychol., Nebraska, 02-03; Columbia, 03-05; asst. director, dept. child-study, *pub. schools, Chicago*, 05-17, *director, special schools and special classes*, 17- Asst. supt., sect. psychometry and anthropometry, La. Purchase Expos., 04. A.A.; Psychol. Ass. Color range of adults; the hearing of primitive peoples; accuracy of reflex adjustments; child psychology; clinical psychology; tests.
- Bruner, Prof. H(enry) L(ane)**, Irvington, Indianapolis, Ind. *Zoology*. Knox Co., Ill., Jan. 10, 61. A.B., Abingdon, 80; Sheffield Sci. Sch., Yale, 80-81; Ph.D., Freiburg, 96. *Prof. nat. science*, Abingdon, 81-84; *Eureka*, 84-86; *biol. and geol.*, Drake, 91-92; *Butler*, 92- Asst., U. S. Fish Commission, summers, 81-84; Harrison fellow, Pennsylvania, 10-11; lecturer, Ind. Dental Col; *prof. zool.*, Indiana, summer, 20. A.A.; Soc. Zool; fel. Ind. Acad. (ed., 09, pres., 19). Heart of lungless salamanders; cephalic veins and sinuses of Reptilia; molting mechanism of Reptilia; a mechanism for raising blood pressure in the head of reptiles; Jacobson's organ and the respiratory mechanism of amphibians.
- Bruner, Prof. Lawrence**, University of Nebraska, Lincoln, Nebr. *Entomology, Ornithology*. Catsauqua, Pa., March 2, 56. B.S., Nebraska. Field agent, U. S. Dept. Agr., 80-88; entomologist, Nebr. Exp. Sta., 88-90; *instr. entom. Nebraska*, 90-95, *prof. entom. and ornith.*, 95-06, *head prof. entom.*, 06- Investigator locust plague, Argentine Rep., 97-98. A.A.; Entom. Soc. Locusts; life histories of insects; Nebraska birds; locusts of Paraguay and Argentina; Orthoptera of Trinidad; saltatorial Orthoptera of Brazil, British Guiana, East Bolivia, West Africa and Madagascar; Acrididae of Peru.
- Bruner, Stephen C(ole)**, Estacion Experimental Agronomica, Santiago de las Vegas, Cuba. *Botany*. Raleigh, N. C., Aug. 18, 91. B.S., N. C. Col., 12. Agent, office forest path., U. S. Dept. Agr., 12-14; asst. pathologist, *Cuba Exp. Sta.*, 15-18, pathologist, 18-19, *chief, dept. plant path. and entom.*, 19- A.A.; Phytopath. Soc; N. C. Acad. Plant pathology.

- Brunton, D(avid) W(illiam)**, 730 Symes Building, Denver, Colo. *Geology*. Agr. Ont, June 11, 49. Michigan, 75. *Consulting mining engineer*. Mem. Naval Consulting Board. Telford prize, 97. Min. and Metal. Eng. (v. pres, 97, pres, 09, 10); Civil Eng.; Mech. Eng.; Colo. Sci. Soc. (v. pres, 09); Royal Geog. Soc. Mine tunneling.
- Brush, Dr. Charles F(rancis)**, 3725 Euclid Ave, Cleveland, Ohio. **Physics*. Euclid, Ohio, March 17, 49. M.E., Michigan, 69, hon. M.S., 99; Ph.D., Western Reserve, 80, LL.D., 00; Kenyon, 03; Sc.D., Michigan, 12. Founder, Brush Elec. Co; elec. engineer and inventor. Pres. or director of various corporations; pres, Cleveland Chamber of Commerce; trustee of various colleges and schools. Chevalier Légion d'honneur, 81; Rumford medal, 99; Edison medal, Elec. Eng., 13. A.A.; Elec. Eng.; Mech. Eng.; Chem. Soc.; Philos. Soc.; Franklin Inst.; Am. Acad.; British Ass. Electricity; practical electric arc lighting; molecular physics; the light gases of the atmosphere; the ether.
- Brush, Dr. E(dward) N(athaniel)**, Towson, Md. *Psychiatry*. Glenwood, N. Y., April 23, 52. M.D., Buffalo, 74. Lecturer electro-therapeut, Buffalo, 77-79; asst. physician, State Hosp, Utica, N. Y., 78-80, senior asst. physician, 80-84; Pa. Hosp. for Insane, West. Phila., 84-91; supt. and chief physician, *Sheppard and Enoch Pratt Hosp.*, 91-20, emer. supt., 20-; prof. *psychiat.*, Col. *Physicians and Surg.*, Baltimore, 99-20, emer. prof., 20- Assoc. ed., 'Am. Jour. Insanity,' 78-84, managing ed., 97- Medico-Psychol. Ass. (pres, 15); Neur. Ass.; Md. Soc. Mental Hygiene (pres, 15); Md. Med. and Chirurg. Faculty (pres, 05); hon. mem. Medico-Psychol. Ass. Gt. Britain and Ireland; hon. mem. Soc. de Médec. mentale de Belgique; for. assoc. Soc. Médico-Psychol. de Paris.
- Bryan, Dr. G(eorge) S(mith)**, 803 State St, Madison, Wis. *Botany*. Charleston, S. C., May 2, 79. A.B., Furman, 00; fellow, Chicago, 12-14, Ph.D., 14. Instr. bot., *Wisconsin*, 14-17, asst. prof., 17- A.A.; Bot. Soc.; Wis. Acad. Morphology of the Bryophyta.
- Bryan, Miss Mary K(atherine)**, U. S. Department of Agriculture, Washington, D. C. *Plant pathology*. Prince George Co, Md, Feb. 13, 77. A.B., Stanford, 08. Scientific asst., lab. plant path., bur. plant indust., U. S. Dept. Agr., 09-18, asst. pathologist, 18- A.A.; Phytopath. Soc. Bacterial diseases of plants.
- Bryan, Dr. Thomas Joseph**, Calumet Baking Powder Co, 4100 Fillmore St, Chicago, Ill. *Chemistry*. Warwickshire, England, Sept. 26, 69. A.B., Colgate, 93, A.M., 95, Sc.D., 14; A.M., Göttingen, 99; Heidelberg, 00; Ph.D., Freiburg, 01. Asst. chem., Colgate, 93-95, 97-99; Wesleyan, 01-02; instr., Williams, 02-03; Illinois, 03-06; state analyst, Ill. State Food Commission, 06-14; chief chemist, *Calumet Baking Powder Co*, 14- Chem. Soc. (chairman, Chicago sect, 10, councilor, 16, 20, chairman, agr. and food div, 17, sec'y, 19); Agr. Chem.; Electrochem. Soc.; Soc. Milling and Baking Tech. Action of mustard oils on phenols; analysis of oils.
- Bryan, Prof. W(alker) E(dward)**, University of Arizona, Tucson, Ariz. *Botany*. Gadsden, Ala., Jan. 24, 85. B.S., Ala. Polytech, 11; M.S., Wisconsin, 15. Instr. science, Second Dist. Agr. Sch., 11-14; agron., Louisiana, 15-16; asst. prof. plant breeding, *Arizona*, 16-19, prof., 19-; asst. plant breeder, *Exp. Sta.*, 16- Bot. Soc. Heredity in wheat; relation of histological structures of alfalfa to drought resistance.
- Bryan, W(illiam) Alanson**, Museum of History, Science and Art, Los Angeles, Calif. *Zoology*. New Sharon, Iowa, Dec. 23, 75. B.S., Iowa State, 96. Asst. in charge museum, Iowa State, 93; lecturer museum methods, Minnesota, Indiana, Chicago, Purdue, Iowa State and Drake, 95-97; asst. curator, in charge dept. ornith., Field Museum Nat. Hist., 98-99; investigator fauna of Hawaiian Islands, U. S. Dept. Agr., 99; curator, Bishop Museum Ethnol. and Nat. Hist., Honolulu, Hawaii, 00-07; pres, *Pacific Sci. Inst.*, 08-; director, *Los Angeles Museum*, 21- Exped. to Big Stone Lake, 94; Polynesia, 09; prof. zool. and geol., Univ. of Hawaii 09-20. A.A.; mem. Ornith. Union; Ass. Mus.; Minn. Acad. (hon. curator ornith., 04); Cooper Ornith. Club. Ichthyology; birds of the Hawaiian group; ethnological and biological survey of the Pacific Islands.
- Bryan, Pres. William Lowe**, Bloomington, Ind. **Psychology*. Bloomington, Nov. 11, 60. A.B., Indiana, 84, A.M., 86; Berlin, 86-87; Ph.D., Clark, 92; Paris and Würzburg, 00-01. Instr. Greek, *Indiana*, 85, assoc. prof. philos., 85-87, prof., 86-02, v. pres, 93-02, pres, 02- Trustee, Carnegie Foundation, 10- A.A.; Soc. Nat.; Psychol. Ass. (pres, 03); Philos. Ass. Experimental psychology; the development of motor ability; the psychology of occupations.
- Bryant, Arthur P(eyton)**, Clinton Corn Syrup Refining Co, Clinton, Iowa. *Chemistry*. South New Market, N. H., May 7, 68. B.S., Wesleyan, 92, M.S., 95. Instr. math. and science, English and Classical High Sch., Providence, R. I., 92-93; chem., Swarthmore, 93-94; with U. S. Dept. Agr., 95-02; chemist, Conn. Exp. Sta., 01-02; chief chemist, Glucose Sugar Refining Co, and Nat. Starch Co, 02-06; Bryant-Miner. Laboratories, 06; directing chemist, *Clinton Corn Syrup Ref. Co.*, and *Nat. Candy Co.*, 07- Consulting chemist, Nat. Candy Co; Nat. Confectioners' Ass. A.A.; Chem. Soc.; Soc. Chem. Indust. Human nutrition; starch and its hydrolytic products; sugar.
- Bryant, Prof. Ernest C(alvin)**, Middlebury, Vt. *Physics*. Manchester, N. H., April 22, 67. B.S., Middlebury, 91; Mass. Inst. Tech., 93; Cambridge, 13-14. With Can. Bridge and Iron Co, 93-94; prof. math. and physics, *Middlebury*, 95-12, physics, 12- A.A.; Physical Soc.
- Bryant, Dr. Harold C(hild)**, California Museum of Vertebrate Zoology, Berkeley, Calif. *Zoology*. Pasadena, Calif., Jan. 30, 86. B.S., Pomona, 08; M.S., California, 10, fellow, 10-12, Ph.D., 13. Teacher science, Yale Sch., Los Angeles, 08-09; reader zool., *California*, 13, asst. curator birds, museum vert. zool., 13-14, econ. ornithologist, 14-; game expert, *Calif. Fish and Game Commission*, 14- Mem. field party, museum vert. zool., California, summer, 10; lecturer, exten. div., 16-; ed., 'Calif. Fish and Game,' 14- A.A.; mem. Ornith. Union. Economic ornithology and

- mammalogy; paleontology; fish and game conservation.
- Bryant, Henry G(rier)**, 1510 Walnut St. Philadelphia, Pa. *Geography*. Allegheny City, Pa., Nov. 7, 59. A.B., Princeton, 83, A.M., 86; LL.B., Pennsylvania, 86. In charge, Labrador exped., 91, 12; Peary auxil. exped., 94; Mt. St. Elias exped., 97. Officier d'Acad. Delegate, Int. Geog. Cong., Berlin, 99; Geneva, 08. A.A.; Ass. Geog. (pres, 13); Philos. Soc.; Am. Alpine Club (pres, 13-16); Phila. Geog. Soc. (pres, 20-); fel. Royal Geog. Soc.; hon. mem. Club Alpin français; cor. mem. Swedish Soc. Anthropol. and Geog.; cor. mem. Soc. de Géog. de Genève. Geographical exploration; ethnology; drift casks to determine arctic currents.
- Bryant, Dr. John**, 338 Marlborough St., Boston, Mass. *Anatomy*. Cohasset, Mass., Sept. 29, 80. A.B., Harvard, 03, M.D., 07; European study, 12-14. Instr. path. and neuropath., Harvard Med. Sch., 07-08, asst. anat., 14-17; U.S.A. service, 17-19; *med. asst. convalescence*, Mass. Gen. Hosp., 19- Mass. Gen. Hosp., 10. A.A.; Am. Med. Ass.; Gastro-Enterol. Ass.; New Eng. Pediat. Soc. Gastro-enterology; chronic intestinal medicine; non-surgical control of incompetence of the ileocaecal valve; convalescence.
- Bryant, Prof. J(ohn) M(yron)**, University of Texas, Austin, Tex. *Electrical engineering*. East Templeton, Mass., 77. B.S.(E.E.), Worcester, 01, E.E., 09; M.S., Illinois, 11. Asst. dept. testing and draughting, Gen. Elec. Co., Schenectady, N. Y., 01-03; electrician, Oriental Powder Co., 03; instr. in charge elec. laboratories, Illinois, 03-07, asst., 07-09; asst. prof., 09-14; *prof. elec. eng. Texas*, 14- Pres., acad. board. and chairman, board of control, U.S.A. schools, Texas, 17-19. A.A.; Elec. Eng.; Mech. Eng.; Eng. Educ.; Illum. Eng. Soc. Lecturer, Wisconsin, summer, 04. Street and interior illumination; power plant economics and rates; commercial production of ozone; insulating materials.
- Buchanan, Prof. D(aniel)**, University of British Columbia, Vancouver, B. C. *Mathematics*. Clearville, Ont., April 14, 80. B.A., McMaster, 06, M.A., 08; fellow, Chicago, 09-11, Ph.D., 11. Asst. prof. *math.*, Queen's (Can.), 11-14, assoc. prof., 14-16, prof., 16-20; *British Columbia*, 20- Math. Soc.; Astron. Soc. Astronomy; isosceles-triangle solutions of problem of three bodies (four cases); oscillations near the isosceles-triangle solutions (two cases); periodic orbits on a smooth surface.
- Buchanan, Prof. Herbert Earle**, Tulane University, New Orleans, La. *Mathematics*. Cane Hill, Ark., Oct. 4, 81. A.B., Arkansas, 02; A.M., Chicago, 03, Ph.D., 09. Instr. *math.*, Wisconsin, 09-11; assoc. prof., Tennessee, 11-12, *prof.*, 12-20; *Tulane*, 20- Math. Soc.; Math. Ass.; Tenn. Acad. Mathematical astronomy; celestial mechanics; uniform convergence of monotonic functions.
- Buchanan, L(ee) L(aForest)**, U. S. Department of Agriculture, Washington, D. C. *Entomology*. Solon, Iowa, Oct. 27, 93. A.B., Iowa, 16. Asst. zool. Iowa, 15-16; *scientific indexer. biol. surv. U. S. Dept. Agr.*, 17- Entom. Soc. Taxonomy of Coleoptera.
- Buchanan, Prof. R(obert) E(arle)**, Station A, Ames, Iowa. *Bacteriology*. Cedar Rapids, Iowa, March 27, 83. B.S., Iowa State, 04, M.S., 06; Ph.D., Chicago, 08. Instr. *bacter.*, Iowa State, 05-06; asst., Chicago, 07-08; assoc. prof. *Iowa State*, 08-09, *prof.*, 09-, *dean* indust. science, 13-19, *grad. col.*, 19- A.A.; Soc. Bact. (pres, 18). Agricultural bacteriology.
- Bucher, Prof. John E(mery)**, Littlehales Chemical Co., Syracuse, N. Y. *Chemistry*. Hanover, Pa., Aug. 17, 72. A.C., Lehigh, 91; Ph.D., Hopkins, 94; Se.D., Brown, 17. Instr. chem., Tufts, 94-97; assoc. prof., R. I. Col., 97-01; Brown, 01-15, prof. and head of dept., 15-17; *perman.*, *Littlehales Chem. Co.*, 17- A.A.; Chem. Soc.; Chem. Gesell. Organic chemistry; action of acetic anhydride on unsaturated acids; the phenyl-naphthalene, fluorene and diphenyl series; the benzene polycarboxylic acids; fixation of nitrogen.
- Bucher, Dr. Walter H(ermann)**, University of Cincinnati, Cincinnati, Ohio. *Geology*. Akron, Ohio, March 12, 88. Ph.D., Heidelberg, 11. Instr. *geol.*, *Cincinnati*, 13-15, *asst. prof.*, 16- A.A.; Geol. Soc.; Ohio Acad.; Geol. Gesell. German Tertiary; oolites; ripples; joints; sedimentation; cryptoplasmic structures in Ohio; diastrophic processes.
- Buchholz, Prof. John T(heodore)**, Fayetteville, Ark. *Botany*. Polk Co., Nebr., July 14, 88. B.S., Iowa Wesleyan, 09; A.B., Iowa, 09; M.S., Chicago, 14, fellow, 16-17, Ph.D., 17. Instr. biol., Ark. State Nor. Sch., 09-11, head, dept. science, 11-18; dept. biol., W. Tex. State Nor. Col., 18-19; *prof. bot. and head of dept.*, *Arkansas*, 19- A.A.; Bot. Soc. Evolution of cotyledony and polyembryony; embryogeny of conifers.
- Buchner, Prof. Edward F(ranklin)**, Johns Hopkins University, Baltimore, Md. *Psychology, Philosophy, Education*. Paxton, Ill., Sept. 3, 68. A.B., Leander Clark, 89; Ph.D., Yale, 93. Lecturer pedag. and philos., Yale, 92-94, instr., 94-97; prof. anal. psychol., N. Y. Univ., 96-01; docent philos., Clark, 01-03; *prof. philos.* and educ., Alabama, 03-08; *Hopkins*, 08-15, *educ.*, 15- Asst., psychol. lab., Columbian Expos., 93; lecturer psychol., Brooklyn Inst., 98-00. A.A.; Soc. Nat.; Psychol. Ass.; Philos. Ass.; Soc. Sci. Educ.; Soc. Col. Teachers Educ.; S. Soc. Philos. and Psychol. (sec'y, 04-09, pres, 10); fel. N. Y. Acad. Kant's psychology; Kant's educational theory; history of modern psychology; educational psychology.
- Buck, Dr. A(lbert) H(enry)**, H. W. Buck, 49 Wall St., New York, N. Y. *Otology*. New York, Oct. 20, 42. A.B., Yale, 64; M.D., Columbia, 67. Aural surgeon, N. Y. Eye and Ear Infirmary, 71-83; prof. otol., Columbia, 87-04. Consulting aural surgeon, N. Y. Eye and Ear Infirmary. Otol. Soc. (past pres). Diseases of the ear.
- Buck, Prof. A(lonzo) M(orris)**, 52 Vanderbilt Ave., New York, N. Y. *Electrical engineering*. Washington, D. C., Jan. 17, 81. M.E., Cornell, 04. Instr. elec. eng., Cornell, 05-06; engineer, Westinghouse Elec. and Mfg. Co., 04-07; asst. prof. elec. eng., N. H. Col., 08-10; prof., Clark-son Mem. Sch. Tech., 10-11; asst. prof. railway

- elec. eng, Illinois, 11-17; *consulting engineer*, 17- A.A.; Elec. Eng; Elec. Ry. Ass; Eng. Educ. Railway engineering.
- Buck, Harold Winthrop**, 49 Wall St, New York, N. Y. *Electrical engineering*. New York, May 7, 73. Ph.B, Yale, 94; E.E, Columbia, 95. Elec. engineer, Gen. Elec. Co, 95-00; Niagara Falls Power Co, 00-06; v. pres, *Viele, Blackwell and Buck, Engineers*. A.A.; Elec. Eng. (pres, 16).
- Buck, Dr. Thomas**, University of California, Berkeley, Calif. *Mathematics*. Orland, Maine, Dec. 25, 81. B.S, Maine, 01; Ph.D, Chicago, 09. Instr. math, Maine, 02-06; Illinois, 09-11; *California*, 11-18, asst. prof, 18- A.A.; Math. Soc.
- Buckborough, Dr. Siegel A**, 2101 Maple Ave, Evanston, Ill. *Chemistry*. Ont, Can, Feb. 4, 72. B.A, McMaster, 02; A.B, Harvard, 03; M.S, Chicago, 10; Ph.D, Northwestern, 15. Prof. chem, Fairmount, 03-05; instr, high sch, Evanston, 07- Organic chemistry; molecular structure of maltose sugar.
- Buckingham, Prof. B(urdette) R(oss)**, 706 W. Nevada St, Urbana, Ill. *Education*. Riverhead, N. Y, Dec. 9, 76. A.B, Wesleyan, 99, A.M, 00; Ph.D, Columbia, 13. Supt. schools, Northport, N. Y, 01-04; teacher math, Morris High Sch, N. Y. City, 04-07; principal, Pub. Sch. 86, 07-14; chief statistician, office of city supt. of schools, 14-16; educ. statistician, Wis. State Board of Educ, 16-18; prof. educ. and director, bur. educ. research, Illinois, 18- A.A.; Statist. Ass; Nat. Ass. Directors Educ. Research (v. pres, 17, pres, 18-19). Measurement of results of teaching school subjects.
- Buckingham, Edgar**, Bureau of Standards, Washington, D. C. **Physics*. Philadelphia, Pa, July 8, 67. A.B, Harvard, 87; Strasbourg, 89-90; Ph.D, Leipzig, 93. Asst. physics, Harvard, 88-89; Strasbourg, 89-90; Harvard, 91-92; assoc. physics and physical chem, Bryn Mawr, 93-98, assoc. prof, 98-99; instr. physics, Wisconsin, 01-02; asst. physicist, bur. soils, U. S. Dept. Agr, 02-06; Bur. Standards, 06- Lecturer thermodynamics, grad. sch, U. S. Naval Acad, 10, 11-12; assoc. scientific attaché, U. S. Embassy, Rome, 18. Physical Soc. (ed. board, 15-17); Mech. Eng; Naval Eng; Wash. Acad; Wash. Philos. Soc. (pres, 15); Soc. de Physique. Thermodynamics; engineering physics; fluid dynamics.
- Buckley, Prof. Albert C(oulson)**, Friends Hospital, Frankford, Philadelphia, Pa. *Neurology, Psychiatry*. Philadelphia, Pa, Aug. 6, 73. A.B, Cent. High Sch, Phila, 94, A.M, 00; M.D, Medico-Chirurg. Col, 97. Asst. demonstrator anat. and demonstrator nor. histol, Medico-Chirurg. Col, 97-98, assoc. prof. nor. histol, 99-09, clin. prof. mental diseases, 09-18; assoc. prof. psychiat, grad. sch. med, Pennsylvania, 19-; med. supt, Friends Hosp, 18- Lecturer clin. neur. and neuropath, Medico-Chirurg. Col, 07; asst. neurologist, Phila. Gen. Hosp, 07-16; visiting physician, psychopathic wards, 16-18; alienist in charge, mental clinic, Phila. Orthop. Hosp. and Infirmary for Nervous Diseases, 12- A.A.; Am. Med. Ass; Medico-Psychol. Ass; Phila. Col. Physicians; Phila. Neurol. Path. and Psychiat. societies. Neuropathology; clinical psychiatry; basis of psychiatry.
- Buckley, Dr. O(liver) E(llsworth)**, 36 Clinton Ave, Maplewood, N. J. *Physics*. Sloan, Iowa, Aug. 8, 87. B.S, Grinnell, 09; Ph.D, Cornell, 14. Instr. physics, Grinnell, 09-10; Cornell, 10-14; research physicist, West. Elec. Co, 14- Major, Sig. C, A.E.F, 17-18. Physical Soc; Elec. Eng. Hall effect; ionization manometer.
- Buckman, Prof. H(arry) O(liver)**, 118 Wait Ave, Ithaca, N. Y. *Agronomy*. West Liberty, Iowa, July 4, 83. B.S.A, Iowa State, 06, M.S.A, 08; Ph.D, Cornell, 12. Asst. chemist, Iowa Exp. Sta, 06-07; asst. agronomist, Mont. Exp. Sta, 07-09; asst. prof. soils, Cornell, 12-17, prof, 17- A.A.; Soc. Agron. Formation of residual clay.
- Buckner, Dr. G(arrett) Davis**, 128 E. Fourth St, Lexington, Ky. *Chemistry*. Lexington, May 17, 85. B.S, Kentucky, 08; Ph.D, Princeton, 12. Asst. food chemist, Ky. Exp. Sta, 08-09; asst. instr. chem, Princeton, 09-12; research chemist, Ky. Exp. Sta, 12- Chem. Soc; Ky. Acad. Plant chemistry; nutrition; silver coulometer.
- Buddington, Dr. A(rthur) F(rancis)**, Princeton University, Princeton, N. J. *Geology*. Wilmington, Del, Nov. 29, 90. Ph.B, Brown, 12, M.S, 13; Ph.D, Princeton, 16. Proctor fellow geol, Princeton, 16-17; instr, Brown, 17-19; petrologist, geophys. lab, Carnegie Institution, 19-20; asst. prof. geol, Princeton, 20- Asst, N. Y. State Geol. Surv, 16-19; asst. geologist, U. S. Geol. Surv, 19- Geol. Soc. Pre-Cambrian rocks; the melilite group of minerals.
- Budington, Prof. Robert A(lynn)**, Oberlin College, Oberlin, Ohio. *Zoology*. Leyden, Mass, Oct. 22, 72. A.B, Williams, 96, A.M, 99; Columbia, 99-00. Asst. zool, Williams, 98-99; asst. demonstrator physiologist, Columbia, 00-02; instr. zool. and physiol, Mt. Hermon Sch, 02-05; biol, Wesleyan, 05-08; assoc. prof. zool, Oberlin, 08-13, prof, 13- Instr. zool, Woods Hole, 99-07, embryol, 09-18. A.A; Soc. Nat; Soc. Zool; Ohio Acad. Physiological characteristics of annelid muscle; effect of thyroid extract on Protozoa and on plant root-tips.
- Buehler, H(enry) A(ndrew)**, Rolla, Mo. *Geology*. Monroe, Wis, April 27, 76. B.S, Wisconsin, 01. Geologist, Mo. Bur. Geol. and Mines, 01-07; Federal Lead Co, 07-08; state geologist and director, Mo. Bur. Geol. and Mines, 08- A.A; Geol. Soc; Min. Eng; Wis. Acad; St. Louis Acad. Theory of ore deposits; oxidation of sulphids.
- Buell, Dr. Mary V(an Rensselaer)**, 115 Ely Place, Madison, Wis. *Biological chemistry*. Madison, 93. A.B, Wisconsin, 14, A.M, 15, Ph.D, 19. Asst. gen. chem, Illinois, 15-16; Wisconsin, 17-19, instr, 19- Chem. Soc. Blood regeneration; fat soluble vitamin.
- Buerger, Dr. Leo**, 1000 Park Ave, New York, N. Y. *Surgery*. Vienna, Austria, Sept. 13, 79. A.B, Col. City of N. Y, 97; A.M, M.D, Columbia, 01; Surgical Clinic, Breslau, Germany, 05-06. On visiting surg. staff, Good Samaritan Dispensary, Har Horiah and Mt. Sinai Hospitals, 06- Methods of staining and mounting; identification of the pneumococcus; gangrene;

thrombo-angiitis obliterans; cystoscopy; urology; bone tumors; Raynaud's disease.

Buffum, Prof. Burt C., 4033 Valejo St, Denver, Colo. *Agriculture*. South Bend, Ind, April 7, 68. B.S. Colo. Agr. Col, 90, M.S. 93. Asst. irrig. eng. Colo. Agr. Col, 90-91; prof. hort. Wyoming, 91-94, agr. and hort, 94-00, v. director, Wyo. Exp. Sta, 95-00; prof. agr. Colo. Agr. Col, 00-02; agr. and hort, Wyoming, and director, Wyo. Exp. Sta, 02-07; *plant breeder and manager, Wyo. Plant and Seed Breeding Co*, 07- Treas. Emmer Products Co, 19. Ed. 'Agricola Aridus'; 'Ranchman's Reminder.' A.A.; Soc. Prom. Agr. Sci; life mem. Pomol. Soc. Irrigation; arid agriculture.

Bugbee, Prof. Edward E(verett), Massachusetts Institute of Technology, Cambridge, Mass. *Metallurgy*. Brookline, Mass, Oct. 5, 76. B.S. Mass. Inst. Tech, 00. Asst. instr. metal, Mass. Inst. Tech, 00-01; chemist and metallurgist, Brookfield Mining Co, 01; asst. instr. ore dressing, Mass. Inst. Tech, 02-03; special agent, U. S. census, 03; *asst. prof. mining eng. and metal*, Iowa State, 03-06; Washington (Seattle), 06-07; *Mass. Inst. Tech*, 07- Asst. geologist, U. S. Geol. Surv, 07- Min. Eng; Min. and Metal. Soc. Fire assaying.

Bull, Dr. Carroll G(ideon), 310 W. Monument St, Baltimore, Md. **Pathology*. Knoxville, Tenn, June, 83. B.S. Peabody, 07; M.D. Nashville, 10. Teacher bacter. and path. Lincoln Mem. Univ, 10-12; fellow, Nelson Morris Inst, Chicago, 12-13; asst. and assoc. path. and bacter, Rockefeller Inst, 13-17; major, M.C, 17-18; *assoc. prof. immunol. sch. hygiene and pub. health, Hopkins*, 18- Ass. Path. and Bact; Soc. Bact; Soc. Exp. Biol; Chicago Path. Soc. Bacteriology; ferment actions; immunity; septicemias in rabbits; agglutination of bacteria in Vivo; antitoxin for B. welchii.

Bull, Prof. C(oates) P(reston), Worthington, Minn. *Agronomy*. Edina Mills, Minn, Oct. 11, 72. B.S. Minnesota, 01. Asst. dept. agr. Minnesota, 97-01; asst. prof. agron, Illinois, 01-02; asst. agr. Minnesota, 02-07, asst. prof, 07-19; *with St. John and Bull Seed Co*, 19- Soc. Agron; Nat. Corn Ass. (state v. pres. and director); Minn. Field Crop Breeders' Ass. Plant breeding; plant biology.

Bull, R(obert) A(lexander), 223 Bank St, Sewickley, Pa. *Metallurgy*. New Albany, Ind, June 28, 74. A.B. Butler, 97, hon. A.M. St. Louis, 14. With various steel and iron foundries; *consulting engineer*, 20- A.A.; Min. Eng. (v. chairman, St. Louis sect, 15); Inst. Metals; Soc. Test. Mat; Int. Ass. Test. Mat; Foundrymen's Ass. (v. pres, 11-14, pres, 15); British Iron and Steel Inst. Metallurgy of iron and steel; foundry practise.

Bull, Sleeter, 706 Michigan Ave, Urbana, Ill. *Animal husbandry*. Sidney, Ohio, Dec. 23, 87. B.S. Buchtel, 09; B.S.(Agr), Ohio State, 10; M.S. Pa. State, 11. *Assoc. animal nutrition, Illinois*, 11- Soc. Animal Production.

Bullard, Dr. H(erbert) Hays, Western University Medical School, London, Ont, Can. *Pathology*. St. Louis Co, Mo, Aug. 9, 83. A.B. Missouri, 08, A.M. 09; Ph.D. Tulane, 12; M.D. Hopkins,

16. Instr. anat, Tulane, 09-12; anat. and neur, Pittsburgh, 12-14; asst. instr. and later assoc. path, Hopkins, 16-20, res. pathologist, Hopkins Hosp, 18-20; *prof. path. and chief of dept, Western Univ. Med. Sch*, 20- Pathologist, city hospitals and Union Protestant Infirmary, Baltimore, 18-20. A.A.; Ass. Path. and Bact; Ass. Anat. Bacteriology; histology of muscles; congenital syphilis.

Bullard, Prof. Warren G(ardner), 117 Redfield Place, Syracuse, N. Y. *Mathematics*. Hinsdale, N. Y. Feb. 25, 67. A.B. Brown, 92; Ph.D. Clark, 96. Instr. math, Free Acad, Elmira, N. Y, 92-93; St. Lawrence, 94; Vermont, 96-00; *Syracuse*, 00-01, assoc. prof, 01-09, *prof*, 09- A.A.; Math. Soc; Math. Ass; Math. Verein; Circolo Mat. di Palermo. Plane curves; cubic and quartic curves.

Bullard, Dr. William N(orton), 89 Marlborough St, Boston, Mass. *Medicine*. Newport, R. I, Aug. 23, 53. A.B. Harvard, 75, M.D. 80. Med. house officer, Mass. Gen. Hosp, 79-80; physician, dept. neur, Boston City Hosp; neurologist, Children's Hosp; visiting physician and later consulting neurologist, Carney Hosp, mem. consulting staff; chairman, board trustees, Monson State Hosp, 95-13. A.A.; Neur. Ass. (pres); Am. Med. Ass; Boston Soc. Psychiat. and Neur. (pres).

Buller, Prof. A(rthur) H(enry) Reginald, University of Manitoba, Winnipeg, Can. *Botany*. Birmingham, England, Aug. 19, 74. Birmingham, 91-97, 1851 Exhibition scholar, 98-01, Sc.D, 03; B.Sc. London, 96; Ph.D. Leipzig, 99; Munich, 99-01; Naples Biol. Sta, 00, 01. *Lecturer bot, Birmingham*, 01-04; *prof, Manitoba*, 04- *Phytopath. Soc; Bot. Soc; Can. Phytopath. Soc.* (pres, 20); *fel. Royal Soc. Can.* (pres, sect, 4, 14); *British Ass. (sec'y, K, 09)*; *British Soc. Econ. Biol; British Mycol. Soc.* (pres, 13). Chemotaxis of the spermatozoa of ferns and of sea-urchins; destruction of wood by fungi; the distribution of bacteria; the occurrence of enzymes; physiology and morphology of fungi; history of wheat growing and wheat breeding.

Bullitt, Prof. James B(ell), University of North Carolina, Chapel Hill, N. C. *Pathology*. Louisville, Ky, Jan. 18, 74. A.B. Washington and Lee, 94, A.M. 95; M.D. Virginia, 97. *Demonstrator anat, Virginia*, 98-03; *prof, Mississippi*, 03-13; *path, North Carolina*, 13- Major, U.S.A. 18-19. A.A.; Am. Med. Ass; Micros. Soc; N. C. Acad. Hookworm; trichinosis; tuberculosis; influenza pneumonia.

Bullock, Dr. Frederick D, 550 W. 190th St, New York, N. Y. *Pathology*. Lexington, Ky, Nov. 20, 78. B.S. Ky. Col, 99; M.D. Hopkins, 07. *Assoc. cancer research, Crocker Research Fund, Columbia*, 09- Ass. Cancer Research. Cancer; chronic irritation; cancer metastasis.

Bullock, William E(dward), 29 W. 39th St, New York, N. Y. *Mechanical engineering*. Hingham, England, July 9, 88. B.S. London, 10; M.E. London Inst, 10. With Ransomes Sims and Jeffries, Ipswich, England, 04-07; Baldwin Locomotive Works, Phila, Pa, 10-11; sec'y to committee on science and arts, and asst. director, sch. mech. arts, Franklin Inst, 11-15; *asst.*

- sec'y, *Am. Soc. Mech. Eng.*, 15— Yarrow student, Inst. Civil Eng., 07–10; Bramwell medal, London Inst., 10. A.A.; assoc. Mech. Eng. Engineering education.
- Bullowa, Dr. Jesse G(odfrey) M.**, 62 W. 87th St., New York, N. Y. *Medicine*. New York, Oct. 19, 79. A.B., Col. City of N. Y., 99; M.D., Columbia, 03. *Adj. prof. clin. med.*, N. Y. *Poly-clinic Med. Sch.*, 16—; *prof.*, *Fordham*, 20— Visiting physician, Willard Parker Hosp; Riverside Sanitarium. A.A.; Am. Med. Ass; N. Y. Acad. Med. Colloidal chemistry; adrenalin in asthma; bronchial function.
- Bumpus, H(ermon) C(arey)**, Waban, Mass. **Biology*. Buckfield, Maine, May 5, 62. Ph.B., Brown, 84, hon. Sc.D., 05; fellow, Clark, 89–90, Ph.D., 91, LL.D., 09; hon. Sc.D., Tufts, 05. Prof. biol., Olivet, 86–89; asst. prof. zool., Brown, 90–91, assoc. prof., 91–92, prof. comp. anat., 92–01; asst. to pres. and curator invert. zool., Am. Museum Nat. Hist., 01–02, director, 02–11; business manager, Wisconsin, 11–14; pres., Tufts, 14–19. Asst. director, Woods Hole, 93–95; commissioner inland fisheries, R. I., 97–01; director, biol. lab., U. S. Fish Commission, 98–01; mem. board of trustees, Woods Hole, 05—; board of fellows, Brown, 05—; board of managers, Cold Spring Harbor; trustee, Home for Feeble-minded, Waverly, Mass; patron, Am. Museum Nat. Hist.; hon. fel. Met. Museum of Art, N. Y. City. Fourth Int. Fishery Cong., 08 (pres); Int. Zool. Cong. Graz, 10. A.A.; Soc. Nat; Soc. Zool. (pres, 03); assoc. Ornith. Union; Fisheries Soc; Nat. Ass. Audubon Societies; Mus. Ass. (pres, 06); Philos. Soc; Am. Acad; N. Y. Audubon Soc. (v. pres, 05—); N. Y. Linnean Soc; fel. N. Y. Acad. (sec'y, 05); N. Y. Zool. Soc; Boston Soc. Nat. Hist; N. Y. Bot. Garden; cor. mem. Senckenbergische Naturforsch. Gesell.; hon. mem. K. K. Oester. Fischerei Gesell. Heredity; marine biology; larval development of the lobster.
- Bumstead, Dr. Henry A(ndrews)**, Yale University, New Haven, Conn. **Physics*. Pekin, Ill., March 12, 70. A.B., Hopkins, 91; Ph.D., Yale, 97; Sc. D., Toronto, 20. Instr. *physics*, Sheffield Sci. Sch., Yale, 93–00, asst. prof., 00–06, *prof. and director*, *Sloane Physical Lab*, 06— Scientific attaché, Am. Embassy, London, 18–19; chairman, Nat. Research Council, 20— Nat. Acad; A.A. (v. pres, 16); Philos. Soc; Physical Soc. (v. pres, 16, pres, 18); Am. Acad; Conn. Acad. Radioactivity; Röntgen rays; theory of electrons; photoelectric effects; delta rays. [Died Jan. 1, 21.]
- Bumsted, Dr. C(larence) V(an) R(eynegon)**, 235 Graften Ave, Newark, N. J. *Internal medicine*. Jersey City, N. J., April 7, 79. Ph.B., Brown, 03; M.D., Pennsylvania, 07. Intern., Episcopal Hosp., Phila., 07; asst. attending physician, German Hosp., Newark, 12–15; asst. physician, Babies Hosp; first asst. attending physician, St. Michael's Hosp; chief, med. clinic, St. Barnabas Hosp. A.A.; Am. Med. Ass; Soc. Clin. Research; Ass. Study Infant Mortality; N. Y. Acad. Med. Pediatrics; pulmonary tuberculosis; exophthalmic goiter; oral sepsis.
- Bunker, Dr. J(ohn) W(ymond) M(iller)**, Digestive Ferments Co, 920 Henry St., Detroit, Mich. *Bacteriology*. Toungoo, Burma, July 10, 86. A.B., Brown, 09, A.M., 10, Ph.D., 11. Instr. sanit. biol., Harvard, 11–15, sanit. inspector, 15; *director, bacter. laboratories, Digestive Ferments Co*, 15— A.A.; Soc. Bact. (councilor, 18–20, asst. sec'y, 20, exec. sec'y, research council, 20); Chem. Soc; Pub. Health Ass; Boston Bact. Soc. Sanitary biology; bacterial metabolism; enzymes and toxins.
- Bunting, Dr. C(harles) H(enry)**, University of Wisconsin, Madison, Wis. **Pathology*. La Crosse, Wis., May 22, 75. B.S., Wisconsin, 96, fellow, 96–97; M.D., Hopkins, 01. Asst. demonstrator *path.*, Pennsylvania, 02–03; asst., Hopkins, 03–04, instr., 04–05, assoc., 05–06; *prof.*, Virginia, 06–08; *Wisconsin*, 08— Consulting pathologist, C. W. S. A.A.; Ass. Path. and Bact; Ass. Anat; Am. Physicians; Soc. Exp. Biol; Soc. Exp. Path; Am. Med. Ass; Chicago Path. Soc. Hematology.
- Bunting, Dr. Elmer N(ewman)**, University of Illinois, Urbana, Ill. *Chemistry*. Chicago, Ill., March 19, 92. B.S., Chicago, 15, Ph.D., 18. Asst. chem., Chicago, 15–18; chemist, Bausch and Lomb Optical Co., 18–19; *research assoc.*, *Illinois*, 20— Chem. Soc. Inorganic and physical chemistry; glass manufacture.
- Bunting, Dr. Martha**, The Netherlands, 4302 Chestnut St., Philadelphia, Pa. *Biology*. Philadelphia, Dec. 2, 61. B.L., Swarthmore, 81; Pennsylvania, 88–91, fellow by courtesy, 19–20; Bryn Mawr, 91–93, Ph.D., 99; Woods Hole, 91, 92, 99; Columbia, 98–99. Instr. biol., Woman's Col. of Baltimore, 93–97; head teacher, Girls' High Sch., Phila., 97–98; asst. teacher, Wadleigh High Sch., N. Y., 00–10; research asst., Pennsylvania, 10–15, 19–20. War relief work, 16–18. A.A. Origin of sex cells in Hydraetia and Podocoryne; development of Hydraetia; significance of the otoliths for the geotropic functions of Astacus; structure of the cork tissues in roots of some rosaceous genera.
- Bunzell, Dr. H(erbert) H(orace)**, 575 E. Jefferson St., Detroit, Mich. *Chemistry*. Prague, Czechoslovakia, Jan. 13, 87. B.S., Chicago, 06, Ph.D., 09. Asst. physiol. chem., Chicago, 06–10; biochemist, bur. plant indust., U. S. Dept. Agr., 10–11, chem. biologist, 11–16; prof. chem., George Washington, 14–16; special lecturer and assoc. prof., Georgetown, 15–16; assoc. prof. *biochem.*, *Cincinnati*, 16–17, *prof. and head of dept. med. sch.*, 17— A.A.; Soc. Biol. Chem. Rate of oxidation of sugars; time relation of galvanic polarization; oxidation of uranous salts; toxicity of the metal ions towards living organisms; mechanism of the oxidation of glucose by bromin; the active element in the internal secretion of the testicles; plant oxidases; poisonous plants.
- Burbank, Luther**, Santa Rosa, Calif. *Plant evolution*. Lancaster, Mass., March 7, 49. Dist. sch. and Lancaster Acad; hon. Sc.D., Tufts, 05. *Owner and manager, Burbank Exp. Farms*. Lecturer plant evolution, Stanford, 04–09. Great gold medal, Calif. Acad. Sciences. A.A.; Pomol. Soc. (v. pres); hon. mem. Calif. Acad; Calif. Floral Soc; fel. Royal Hort. Soc; hon. mem. Royal Bot. Soc. Sweden; hon. mem. Royal Italian Agr. Soc. Scientific improvement of

- trees, fruits, flowers, vegetables, grains, grasses; origin of new types of plants.
- Burbeck, Allan Beal**, Concord, Mass. *Astronomy*. North Abington, Mass, July 31, 82. High sch. Astron. Soc; Ass. Var. Star Observers (treas, 17-); British Astron. Ass; Soc. astron. de France. Variable stars.
- Burbridge, Dr. Harry C(arleton)**, 2437 Shattuck Ave, Berkeley, Calif. *Physics*. Greeley, Iowa, July 4, 85. A.B., Stanford, 08, Ph.D, 13. Teacher science, high sch, 08-09; instr. physics, Stanford, 13-14; assoc. physicist, Bur. Standards, 18-20; with *Assoc. Oil Co*, 20- Lubrication; Volta effect.
- Burchard, Ernest F(rancis)**, U. S. Geological Survey, Washington, D. C. *Economic geology*. Independence, Kans, May 20, 75. Lehigh, 97; B.S., Northwestern, 00, M.S., 03. Instr. chem. and geol, high sch, Sioux City, Iowa, 00-03; asst. geologist, Wis. Geol. and Nat. Hist. Surv, 03; geol. aid, *U. S. Geol. Surv*, 04-06, asst. geologist, 06-10, *geologist*, 11-, in charge, *sect. iron and steel metals*, 17- Geol. Soc; Min. Eng; Wash. Geol. Soc; Ill. Acad; Sioux City Acad. Chemistry; physiography; areal geology of Nebraska lignite deposits; lead and zinc ores in Arkansas and Wisconsin; iron ore deposits in Alabama, Georgia, Texas and Tennessee; marble resources of Alaska; chromite and manganese of Cuba; petroleum resources of Philippine Islands; utilization of ores and nonmetallic minerals as pigments; origin of the Clinton iron ores.
- Burckhalter, Cha(rlie)s**, Leona Heights, Oakland, Calif. *Astronomy*. Taylorsville, Ohio, Jan. 5, 49. High sch. and special study. *Astronomer in charge, Chabot Observatory*, 85- Mem. Calif. State Earthquake Investigation Commission. Seismol. Soc. (director, 07); Pacific Astron. Soc. (past pres. and sec'y); Calif. Acad; British Astron. Ass; fel. Royal Astron. Soc. Solar corona; stellar photography.
- Burge, Prof. W(illiam) E(dward)**, University of Illinois, Urbana, Ill. *Physiology*. Lynchburg, Va, Sept. 17, 81. A.B., Randolph-Macon, 03, A.M., 06; fellow, Hopkins, 08-09, Ph.D., 09. Physical director, Randolph-Macon, 04-06; instr. *physiol*, Univ. and Bellevue Hosp. Med. Col, 09-10; asst, Hopkins, 10-11, instr, 11-12; *assoc. prof. and acting head of dept, Illinois*, 12- With Nela Research Lab, 16, 17, 18. Ninth Int. Physiol. Cong; Physiol Cong, Paris, 20. Physiol. Soc; Nat. Anesthesia Research Soc. Normal and cataractous lenses; effect of radiant energy on lenses; separation of rennin and pepsin; oxidation of enzymes and pro-enzymes; effect on catalase of phosphorus poisoning; thyroid feeding; pyretics; starvation; alcohol; narcotics; diabetes; acidosis; adrenalin.
- Burger, Dr. O(wen) F(rancis)**, Mt. Ranier, Md. *Plant pathology*, Freeland, Pa, June 8, 85. A.B., Indiana, 09; M.S., Florida, 11; Harvard, 15, Sc.D, 16. Asst. to plant pathologist, Fla. Exp. Sta, 09-11, asst. pathologist, 11-13; instr. plant path, California, 16-18; *pathologist, fruit disease investigations, U. S. Dept. Agr*, 18- A.A.; Phytopath. Soc. Diseases of vegetables and peaches in Florida; variations in *Colletotrichum*; sexuality in the genus *Cunninghamella*.
- Burger, Prof. William H(enry)**, College of Engineering, Evanston, Ill. *Civil engineering*. Caribou, Colo, May 1, 74. B.S., Colorado, 96, 96-97. With eng. dept, Colo. N. W. R. R, 97-99; aid, U. S. Coast and Geod. Surv, 99-03, asst, 03-10; asst. prof. *civil eng, col. eng, Northwestern*, 10-15, *prof*, 15- A.A.; Civil Eng; Eng. Educ; West. Soc. Eng; Ill. Soc. Eng.
- Burgess, A(lbert) F(ranklin)**, U. S. Bureau of Entomology, Melrose Highlands, Mass. *Entomology*. Rockland, Mass, Oct. 2, 73. B.S., Mass. Col, 95, M.S., 97. Asst. entomologist, Mass. State Board of Agr, 95-99; asst. entom, Illinois, 99-00; asst. inspector of nurseries and orchards, Ohio, 00-02, chief inspector, 02-07; *asst. entomologist, bur. entom, U. S. Dept. Agr*, 07- A.A.; Ass. Econ. Entom. (sec'y, 03, 06-, assoc. ed, 'Jour', 08-09, business manager, 10-); Entom. Soc; assoc. mem. Soc. Foresters; Wash. Acad; Wash. Entom. Soc; Cambridge Entom. Club (pres, 15); Ohio Acad. Economic entomology; insecticides and fungicides; horticulture; predatory insects.
- Burgess, Prof. C(harles) F(rederick)**, 625 Williams St, Madison, Wis. **Electrochemistry*. Oshkosh, Wis, Jan. 5, 73. B.S., Wisconsin, 95, E.E., 98. Instr. elec. eng, *Wisconsin*, 95-00, asst. prof, 00-04, assoc. prof, 04-05, *prof. applied electrochem*, 05-09; *chem. eng*, 09-; *pres, C. F. Burgess Lab*, 10- Pres, Burgess Battery Co. Electrochem. Soc. (past pres); Elec. Eng; Chem. Soc; Soc. Chem. Indust; Eng. Educ. Electrolytic rectifiers; electrolytic purification of iron; separation and concentration of ores; electric furnace applications; electrolytic corrosion of underground structures; dry batteries.
- Burgess, Prof. Edward S(anford)**, Hunter College, New York, N. Y. *Botany*. Little Valley, N. Y, Jan. 19, 55. A.B., Hamilton, 79, A.M., 82, hon. Sc.D, 04; fellow, Hopkins, 81-82; Ph.D, Columbia, 99. Instr. bot, Del. Lit. Inst, Franklin, N. Y, 79-80; high schools, Washington, D. C, 82-95; *prof. nat. science, Hunter*, 95- Instr. bot, Summer Inst, Marthas Vineyard, 80-95; Hopkins, 85. A.A.; Bot. Soc; Anthropol. Ass; Folk-lore Soc; Am. Scenic Soc; Torrey Bot. Club (sec'y, 97, v. pres, 06-); Wash. Geol. Soc. Asters and related Compositae; flora, Indian history and locality-lore of Marthas Vineyard; American plant-lore.
- Burgess, Dr. Geo(rge) K(imball)**, Bureau of Standards, Washington, D. C. **Physics*. Newton, Mass, Jan. 4, 74. B.S., Mass. Inst. Tech, 96, fellow, 98-00; Sc.D, Paris, 01. Asst. physics, Mass. Inst. Tech, 96-98; instr, Michigan, 00-01; California, 01-03; asst. physicist, *Bur. Standards*, 03-05, assoc. physicist, 05-13, *physicist and chief, div. metal*, 13- Mem. various committees, Nat. Research Council, 17-; requirements div, W. I. B, 18; adviser duplication in govt. departments, Bur. Efficiency, 19-; metal, ordnance dept, U. S. A, 19-; chairman light alloys committee, Nat. Advisory Committee for Aeronaut, 17-18, chairman committee on metals, 19-; mem. Nat. Aircraft Standards Board, 17-18. Silver medal, Pan-Am. Expos, 15. A.A.; Physical Soc. (councilor, 14-17, 19-, ed, 18-20); Automotive Eng; Min. and Metal. Eng. (v. pres, 15); Soc. Test. Mat. (mem. exec. committee, 18); Wash. Acad. (sec'y, 12-16, v. pres, 18); Wash. Philos.

- Soc. (sec'y, 05-09, v. pres, 11-17, pres, 18); British Iron and Steel Inst; Soc. de Physique. Gravitation constant; vapor pressure of solutions; physical metallurgy; pyrometry; radiation.
- Burgess, Prof. Horace T(homas)**, 812 W. Dayton St, Madison, Wis. *Mathematics*. Harveysburg, Ohio, Oct. 17, 81. A.B, Yale, 06, A.M, 07, Ph.D, 09. Instr. *math*, Yale, 07-09; *Wisconsin*, 09-13, *asst. prof*, 13- A.A; Math. Soc. Modern geometry from standpoint of transformation theory; point-circle transformations.
- Burgess, Dr. L(aurie) L(orne)**, Box 525, Jackson Laboratory, Wilmington, Del. *Chemistry*. Kinsmans Corners, N. S, Oct. 21, 82. B.S, Dalhousie, 05; A.M, Harvard, 06, Thayer scholar, 07, 09, Ph.D, 09. Asst. chem, Harvard, 05-08; instr, Illinois, 09-12; asst. prof. anal. chem, Saskatchewan, 12-14, prof, 14-16; chief chemist and asst. supt, Allegheny By-Product Coke Co, 16-17; *research chemist*, E. I. duPont de Nemours and Co, 17- Instr. chem, Maine, summers, 07-09. Chem. Soc. Heats of solution of metals in acids; refractive index of water; spark spectrum of cadmium.
- Burgess, Prof. Robert W(ilbur)**, Brown University, Providence, R. I. *Mathematics*. Newport, R. I, July 25, 87. A.B, Brown, 08; B.A, Oxford, 10, *Rhodes scholar*, 08-11; Ph.D, Cornell, 14. Instr. *math*, Purdue, 11-12; asst, Cornell, 12-14, instr, 14-16; *Brown*, 16-17, *asst. prof*, 19- Lieut, capt. and major, ordnance dept, and statist. branch, Gen. Staff, 17-19. A.A; Math. Soc; Statist. Ass. Approximate solutions of differential equations; statistical analysis.
- Burgess, Prof. T(homas) J(oseph) W(orkman)**, Protestant Hospital for Insane, Montreal, Can. *Botany*, *Psychology*. Toronto, Can, March 11, 49. Upper Canada, 63-66; M.B, Toronto, 70. Surgeon, Her Majesty's B.N.A. Boundary Commission, 71-76; asst. med. supt, London Asylum, 75-87; Hamilton Asylum, 87-90; *med. supt*, *Protestant Hosp. for Insane*, 90-; lecturer *mental diseases*, McGill, 93-99, *prof*, 99- Pan-Am. Med. Cong, 96 (hon. sec'y). A.A; Medico-Psychol. Ass. (pres, 04); cor. mem. Torrey Bot. Club; fel. Royal Soc. Can. (pres, nat. sci. sect, 98); Can. Inst; hon. mem. Hamilton Lit. and Sci. Ass.
- Burget, Prof. G(eorge) E(mmanuel)**, University of Oregon Medical School, Portland, Oregon. *Physiology*. Kempton, Ind, May 18, 89. A.B; Ph.D, Chicago, 16. Assoc. physiol, Chicago, 16-17; *prof. physiol*, Oregon, 17- Glands of internal secretion.
- Burka, Dr. Samuel M(oses)**, McCook Field, Dayton, Ohio. *Physics*. Union Springs, Ala, May 26, 91. A.B, Hopkins, 13, A.M, 16, Ph.D, 19. Lab. asst, Bur. Standards, 17-18, asst. physicist, 18-20; *eng. div*, *Air Service*, U.S.A, 20- Physical Soc; Wash. Philos. Soc. Spectroscopy; photography; red-sensitive photographic plates; airplane photography; spectroscopic analysis; rare gas vacuum tubes.
- Burke, Dr. C(harles) E(ldrid)**, Box 525, Wilmington, Del. *Chemistry*. Hartford, Ont, July 7, 81. A.B, McMaster, 07, A.M, 09; Ph.D, Illinois, 11. Instr. chem, California, 11-14; asst. prof, Vermont, 14-18; *research chemist*, E. I. duPont de Nemours and Co, 18- Chem. Soc. (sec'y, Vt. sect, 17). Terpenes and essential oils; nitrogen derivatives and homologues of benzene.
- Burke, Edmund**, Agricultural Experiment Station, Bozeman, Mont. *Chemistry*. Niles, Mich, April 26, 65. B.S, Mont. Col, 07. Instr. chem, Mont. Col, 01-06, asst. prof, 06-07; asst. chemist, *Mont. Exp. Sta*, 00-08, *chemist*, 08-, *meteorologist*, 06- Lecturer, farmers' institutes and exten. service. Chem. Soc. Salicylic acid in fruits; effect of alkali on Portland cement; nitrates in soil; artificial incubation of eggs; Montana climate.
- Burke, H(arry) E(ugene)**, Los Gatos, Calif. *Entomology*. Paradise Valley, Nev, May 19, 78. B.S, Wash. State, 02, M.S, 08. *Specialist forest entom*, *forest insect investigations*, *bur. entom*, U. S. Dept. Agr, 02- A.A; Soc. Adv. Forest Entom. (v. pres, 13); Ass. Econ. Entom; Wash. Biol. Soc; Wash. Entom. Soc. (rec. sec'y, 08). Biology of insects injurious to forest and shade trees; taxonomy of buprestid larvae.
- Burkett, Prof. Charles W(illiam)**, 660 Riverside Drive, New York, N. Y. *Agronomy*. Thornville, Ohio, Jan. 3, 73. B.S, Ohio State, 95, M.S, 98. Asst. agr, Ohio State, 95-98; prof, N. H. Col, and agriculturist, *Exp. Sta*, 98-01; N. C. Col, and *Exp. Sta*, 01-06; director, *Kans. Exp. Stations*, 06-08; *ed*, '*Am. Agriculturist*,' 08- *Kans. agr. investigator to Russia*, 07. Animal husbandry and nutrition; soils; crops.
- Burkholder, Dr. W(alter) H**, Cornell University, Ithaca, N. Y. *Plant pathology*. Crawfordsville, Ind, Feb. 1, 91. A.B, Wabash, 13; fellow, Cornell, 13-17, Ph.D, 17. *Investigator plant path*, Cornell, 17- Collaborator, bur. plant indust, U. S. Dept. Agr, 17- A.A; Bot. Soc; Phytopath. Soc. Diseases of beans; anthracnose of raspberry.
- Burling, Lancaster D(emorest)**, 47 Parliament St, Westminster, S.W.1, London, England. *Geology*. Anita, Iowa, Nov. 2, 82. B.S, Wisconsin, 05. Asst. to Charles D. Walcott, 05-12; asst. geologist, U. S. Geol. Surv, 05-07; asst. curator, U. S. Nat. Museum, 07-12; invert. paleontologist, Can. Geol. Surv, 13-20; *geologist*, *Whitehall Petrol. Corp, Ltd, London*, 20- A.A; Geol. Soc; Paleont. Soc; Min. and Metal. Eng; Wash. Geol. Soc; Can. Min. Inst; Ottawa Field Nat. Club (sec'y, 18, v. pres, 19). Paleontology; stratigraphy; paleoecology; experimental geology; Cambrian and Pre-Cambrian rocks and faunas; bibliography; education.
- Burlingame, Prof. Leonas L(ancelot)**, Stanford University, Calif. *Botany*. Guernsey Co, Ohio, Aug. 25, 76. Ph.B, Ohio Northern, 01; fellow, Chicago, 04-08, A.B, 06, Ph.D, 08. Prof. biol. and geol, Ohio Northern, 02-04; acting prof, East. Ill. State Nor. Univ, summer, 06; asst. bot, Chicago, 06-08; instr, *Stanford*, 08-09, asst. prof, 09-16, *assoc. prof*, 16- Field asst, U. S. Dept. Agr, 18. A.A; Bot. Soc; Ass. Prof; West. Soc. Nat. (sec'y, 17); Pacific Coast Biol. Ass. (sec'y-treas, 15-17); Calif. Acad. Cytology; genetics; morphology of pteridophytes and gymnosperms.
- Burlingham, Dr. Gertrude S(immons)**, 556 Lafayette Ave, Brooklyn, N. Y. *Botany*. Mexico, N. Y, April 21, 72. A.B, Syracuse, 96; Ph.D, Co-

- lumbia, 08. Preceptress, high sch, Ovid, N. Y, 96-98; teacher *biol*, high sch, Binghamton, N. Y, 98-05; Trenton Nor. Sch, 08; *asst. teacher*, *East. Dist. High Sch*, Brooklyn, 08- Bot. Soc; Torrey Bot. Club. Mycology; Russula; Lactaria.
- Burlison, William L(eonidas)**, University of Illinois, Urbana, Ill. *Agronomy*. Harrison, Ark. B.S, Okla. Col, 05; M.S, Illinois, 08, Ph.D, 15. Asst. agronomist, Okla. Col, 05-08, asst. prof, 08-10; assoc. ed, 'Orange Judd Weeklies,' 10-12; assoc. *crop production*, Illinois, 12-15, assoc. prof, 15-17, *prof. and chief*, *Exp. Sta*, 17-, *head*, *dept. agron*, 20- Bot. Soc; Soc. Agron. Physiological botany; crop production; plant nutrition.
- Burnett, Dr. C(harles) T(heodore)**, Brunswick, Maine. *Psychology*. Springfield, Mass, June 24, 73. A.B, Amherst, 95; A.M, Harvard, 00, Ph.D, 03. Asst. *philos*, Harvard, 00-02; instr, *Bowdoin*, 04-06, asst. prof, 06-09, *prof*, 09- A.A; Psychol. Ass. Influences modifying the judgment of numbers.
- Burnett, Dr. C(lough) T(urrill)**, Majestic Building, Denver, Colo. *Internal medicine*. Lapeer, Mich, Jan. 30, 83. Mich. Agr. Col, 01-03; M.D, Michigan, 08. Asst. bacter, Mich. Agr. Col, 02-03; first asst, Michigan, 05-07; asst. prof, Colorado, 08-10, prof, 10-19. Soc. Bact; Col. Physicians; Soc. Internal Med; Pub. Health Ass; Mich. Acad. Flagellum staining of Spirochaeta obermeieri; bacteriology of milk; anaphylaxis; tuberculosis; internal medicine.
- Burnett, E(arle) S(mead)**, 19 E. 96th St, New York, N. Y. *Experimental engineering*. River Falls, Wis, Feb. 16, 80. B.S, Wisconsin, 05, 05-06. Research asst. mech. eng, Wisconsin, 06-10; instr. exp. eng, Cornell, 10-14; *consulting engineer*, 14- Assoc. Mech. Eng. Porous plug expansion of gases and fluids; hydro-pneumatic relations.
- Burnett, Prof. E(dgar) A(libert)**, 3256 Holdrege St, Lincoln, Nebr. *Agriculture*. Oakland Co, Mich, Oct. 17, 65. B.S, Mich. Agr. Col, 87, Sc.D, 17. Instr. agr, Mich. Agr. Col, 89-91, asst. prof, 91-93; manager, Hiram Walker Farms, 94; prof. animal husbandry, S. Dak. Col, 96-99; *Nebraska*, 99-07, assoc. dean agr. instruction, 01-09, *dean*, *agr. col*, 09-, *director*, *Exp. Sta*, 01- Mem. Educ. C, A. E. F., 19. Animal nutrition.
- Burnett, Dr. T(heodore) C(r  t  )**, University of California, Berkeley, Calif. *Physiology*. Brooklyn, N. Y, Dec. 6, 61. M.D, Columbia, 87. *Ophthalmologist*, House of Mercy, Pittsfield, Mass, 95-98; *students' infirmary*, California, 09-, asst. *physiol*, California, 04-10, instr, 10-13, *asst. prof*, 13- A.A; Physiol. Soc; Soc. Exp. Biol; Ass. Study Int. Secretions; West. Soc. Nat. Catalase; muscle tonus; influence of temperature on striped muscle.
- Burnham, Prof. Sherburne Wesley**, Yerkes Observatory, Williams Bay, Wis. *Astronomy*. Thetford, Vt, Dec. 12, 38. A.M, Yale, 78. Observer, Dearborn Observatory, 77-81; Washburn Observatory, 81-82; Dearborn Observatory, 82-84; astronomer, Lick Observatory, 88-92; clerk, U. S. Courts, Chicago, 92-02; *prof. practical astron*, Chicago, and astronomer, Yerkes Observatory, 02- Gold medal, Royal Astron. Soc,
94. Am. Acad; assoc. Royal Astron. Soc. Double stars.
- Burnham, S(tewart) H(enry)**, Cornell University, Ithaca, N. Y. *Botany*. Vaughns, N. Y, Oct. 6, 70. Stanford, 93-95; B.S, Michigan, 99. Museum aid, N. Y. Bot. Garden, 01-03; asst. bot, Cornell, 04-05; asst. state botanist, N. Y, 05-13. A.A; Bot. Soc; Fern Soc. (sec'y, 19-); Ornith. Union; Forest Ass; Nature Study Soc; Wild Flower Preservation Soc; Torrey Bot. Club; Vt. Bot. Club; Sullivant Moss Chapter; Sierra Club; Phila. Bot. Club. Pteridophyta and Phanerogamia; systematic botany; mycology; cryptogamic plants.
- Burnham, Prof. William Henry**, Clark University, Worcester, Mass. *Psychology*. Dunbarton, N. H, Dec. 3, 55. A.B, Harvard, 82; Ph.D, Hopkins, 88. Instr, Wittenberg, 82-93; State Nor. Sch, Potsdam, N. Y, 83-85; psychol, Hopkins, 88-89; docent, Clark, 90-92, instr. pedag, 92-00, asst. prof, 00-06, *prof. pedag. and sch. hygiene*, 06- Int. Cong. of Sch. Hygiene; Life Extension Inst. (advisory board). A.A; Soc. Nat; Psychol. Ass; Sch. Hygiene Ass. (mem. council); Soc. Col. Teachers Educ. Memory; school hygiene; mental hygiene.
- Burns, Prof. Eleanor I(rene)**, Constantinople College, Constantinople, Turkey. *Physics*. Philadelphia, Pa, July 16, 83. A.B, Cornell, 04; Sc.D, Lafayette. Instr. *physics*, Wellesley, 05-08; *prof*, *Am. Col. for Girls*, Constantinople, 08- A.A; assoc. mem. Physical Soc. Meteorological conditions, past and present, of Constantinople and the west coast of Asia Minor.
- Burns, Frank(lin) L(orenzo)**, Berwyn, Pa. *Zoology*. Chester Co, Pa, Jan. 18, 69. Mem. Ornith. Union; Wilson Ornith. Club; Cooper Ornith. Club; Soc. Mammal. Ornithology; mammalogy; ornithology of Chester County, Pa.
- Burns, Dr. George P(lumer)**, University of Vermont, Burlington, Vt. *Botany*. Maroa, Ill, Oct. 30, 71. B.S, A.M, Ohio Wesleyan, 98; Ph.D, Munich, 00. Instr. bot, Ohio Wesleyan, 97-98; Michigan, 02-07, asst. prof. and director, bot. garden, 07-10; *prof*, Vermont, 10- A.A; Phytopath. Soc; assoc. Bot. Soc; Ecol. Soc; Mich. Acad. (librarian, 07-). Ecology; tolerance of forest trees; reproduction of forests; formation of peat in Dead Lake; edaphic conditions and position of greatest peat deposits in local bogs.
- Burns, Dr. Keivin**, Allegheny Observatory, Pittsburgh, Pa. *Spectroscopy*. Pleasant Ridge, N. B, March 1, 81. A.B, Minnesota, 03, Ph.D, 10; fellow, Lick Observatory, 11-12. Lick Observatory, 04-07, 10; asst, Minnesota, 07-10; assoc. physicist, Bur. Standards, 13-17, physicist, 18-19; astronomer, Allegheny Observatory, 20- Wash. Philos. Soc. Orbit of λ Andromedae; spectrum of ring nebula in Lyra; Orion region; are spectrum iron 2373-8824; secondary standards.
- Burr, Dr. Charles W(alts)**, 1918 Spruce St, Philadelphia, Pa. *Neurology*. Philadelphia, Nov. 16, 61. B.S, Pennsylvania, 83, M.D, 86. *Prof. mental diseases*, Pennsylvania, 01- Neurologist, Phila. Hosp. Neur. Ass. (past pres); Phila. Neur. Soc. (past pres); Phila. Path. Soc. (past pres); Phila. Col. Physicians. Pathology of Friedreich's ataxia; asthenic bulbar palsy; in-

- termittent lameness and other nervous symptoms of peripheral arterial disease; the blood in chorea; spinal cord lesions and symptoms of pernicious anemia; trauma of the head as a cause of insanity; visual hallucinations on the blind side in hemianopsia.
- Burr, Prof. H(arold) Saxton**, Yale University, New Haven, Conn. *Anatomy*. Lowell, Mass., April 10, 89. Ph.B., Yale, 11, Ph.D., 15. Instr. anat., Yale, 14-19, asst. prof., 19- A.A.; Ass. Anat. Experimental embryology; neuro-anatomy; regeneration and development of the nervous system; human vascular system.
- Burr, Prof. W(illiam) H(ubert)**, New Canaan, Conn. *Civil engineering*. Watertown, Conn., July 14, 51. C.E., Rensselaer, 72, D.Eng., 18. Practising civil engineer, 72-76; prof. rational and tech. mech., Rensselaer, 76-84; asst. to chief engineer and later gen. manager, Phoenix Bridge Co., 84-91; prof. eng., Harvard, 92-93; *civil eng.*, Columbia, 93-16, emer. prof., 16- Mem. first and second Isthmian Canal Commissions; consulting engineer, various municipal departments, N. Y. City, 93- A.A.; Civil Eng.; Inst. Consult. Eng.; Am. Acad.; Wash. Acad.; British Inst. Civil Eng.
- Burr, W(illiam) W(esley)**, University of Nebraska, Lincoln, Nebr. *Agriculture*. Goodland, Ind., March 26, 80. B.S., Nebraska, 06. Assoc. prof. crops and soils, Nebraska, 06-13; in charge cooperative work, office dry land agr., N. Platte Exp. Sta., bur. plant indust., U. S. Dept. Agr., 06-13, asst. agriculturist, 13-16; *prof. agron. and head of dept.*, Nebraska, and *v. director*, Exp. Sta., 16- A.A.; Soc. Agron. Soil moisture; crop production and principles of cultivation; tillage methods; dry land agriculture.
- Burrell, Dr. George A.**, 120 Broadway, New York, N. Y. **Chemical engineering*. Cleveland, Ohio, Jan. 23, 82. Hon. Ch.E., Ohio State; hon. Sc.D., Wesleyan. With U. S. Geol. Surv., 03-07; in charge gas, gasoline and oil investigations, Bur. Mines, 07-15; *consulting engineer*, 15- Col. C. W. S., 18-19. Chem. Soc.; Petrol. Inst.; Nat. Gas Ass. Oil; gas; gasoline.
- Burrill, Prof. A(lfred) C(ummings)**, University of Missouri, Columbia, Mo. *Zoology*. Boston, Mass., Aug. 14, 81. B.S., Harvard, 05; M.S., Wisconsin, 15. Scientific asst., in charge Am. forestry and Congo ethnol., Am. Museum Nat. Hist., 07-08; lecturer, Pub. Museum, Milwaukee, Wis., 08-10; instr. econ. entom. and lecturer forest, fish and game conservation, col. agr., Wisconsin, 10-15; prof. entom. and zool., Idaho, and entomologist, Exp. Sta., 16-18; field agent, bur. entom., U. S. Dept. Agr., 18-20, scientific asst., 20; *extension prof. entom. and plant path.*, Missouri, 20- A.A.; Soc. Nat.; Ass. Econ. Entom.; Entom. Soc.; Soc. Mammal. Insect carriers of disease; ecology of ants, aphids and birds; habits of animals; classification.
- Burroughs, Miss Lillian C(rombie)**, 2313 E. Federal St., Baltimore, Md. *Chemistry*. Baltimore, April 22, 96. A.B., Goucher, 17; Hopkins, 17-18. Chemist, Baltimore City Water Dept., 18; *asst. chemist*, Md. State Dept. Health, 18- Chem. Soc.; Soc. Bact.; Pub. Health Ass. Food products.
- Burrow, Dr. Trigant**, Johns Hopkins University, Baltimore, Md. *Psychology*. Norfolk, Va., Sept. 7, 75. A.B., Fordham, 95; M.D., Virginia, 99; Ph.D., Hopkins, 09. Demonstrator biol., Virginia, 99-00; asst. psychol., Hopkins, 07-09; *asst. clin. psychiatrist*, 09- Intern., Univ.-Frauenklinik, Munich, 00. A.A.; Psychol. Ass.; Psychopath. Ass.; Psychoanal. Ass.; Am. Med. Ass.; S. Soc. Philos. and Psychol.; Md. Med. and Chirurg. Faculty; Md. Psychiat. Soc. Attention; abnormal psychology.
- Burrows, Dr. Charles W(illiam)**, Grasmere, Borough Richmond, New York, N. Y. *Physics, Engineering*. Wilkesport, Ont., July 2, 74. A.B., Michigan, 98, A.M., 01, Ph.D., 07. Instr. science and math, high sch., Detroit, Mich., 98-00; asst. physics, Michigan, 05-06; lab. asst., Bur. Standards, 06-07, asst. physicist, 07-11, assoc. physicist, 11-18, *magnetic research engineer*, 18- Physical Soc.; Soc. Test. Mat. (chairman and mem. various committees); Elec. Eng.; Mech. Eng.; Automotive Eng.; Steel Treating Soc. Magnetic analysis of steel and steel products; physics of magnetic and electrical measuring instruments.
- Burrows, Prof. Geo(rge) H(oward)**, University of Vermont, Burlington, Vt. *Chemistry*. Wyoming, Ohio, 75. B.S., Vermont, 99; Ph.D., Mass. Inst. Tech., 14. Asst. physics, Pratt Inst., 99-00; *chem.*, Cornell, 00-03; asst. prof., Vermont, 03-14, *prof.*, 14- A.A.; Chem. Soc. Equilibrium measurements in organic chemistry.
- Burrows, Prof. M(ontrose) T(homas)**, Washington University Medical School, St. Louis, Mo. *Experimental surgery*. Halstead, Kans., Oct. 31, 84. A.B., Kansas, 05; M.D., Hopkins, 09; fellow, Rockefeller Inst., 09-10. Asst. path., Rockefeller Inst., 10-11; instr. anat., med. col., Cornell, 11-15; assoc. path., Hopkins, and res. pathologist, Hopkins Hosp., 15-17; *assoc. prof. path.*, Washington (St. Louis), 17-20, *exp. surg. and director, research lab.*, Barnard Free Skin and Cancer Hosp., 20- A.A.; Ass. Anat.; Ass. Path. and Bact.; Soc. Exp. Path.; Soc. Zool.; Soc. Exp. Biol.; Physiol. Soc.; Soc. Cancer Research; Ass. Prof.; N. Y. Path. Soc. Tissue cultivation; mechanism of growth and division of cells and heart muscle contraction; normal rhythm in isolated heart muscle cells; intracranial pressure; epidermiology.
- Burt, Prof. E(dward) A(ngus)**, Missouri Botanical Garden, St. Louis, Mo. **Botany*. Athens, Pa., April 9, 59. A.B., Harvard, 93, A.M., 94, Ph.D., 95. Teacher, Albany Acad., 80-85; prof. nat. science, N. Y. State Nor. Sch., Albany, 85-91; nat. hist., Middlebury, 95-13; *librarian and mycologist*, Mo. Bot. Garden, and *prof. bot.*, Washington (St. Louis), 13- Examiner nat. science for regents, Univ. State of N. Y., 83-86; mem. construction committee, Middlebury Water Works, 00-02. A.A.; Bot. Soc.; New Eng. Bot. Club; Int. Ass. Bot. Morphology and physiology of Phalloideae and other fungi; taxonomy of Basidiomycetes; North American Thelephoraceae.
- Burt, H(enry) J(ackson)**, Monroe Building, Chicago, Ill. *Civil engineering*. Urbana, Ill., Feb. 6, 73. B.S., Illinois, 96, C.E., 14. Asst. prof. civil eng., Iowa State, 00-01; contracting manager, Am. Bridge Co., 01-11; *structural engineer and manager*, Holabird and Roche, 11- With construction div., U.S.A., 17-18. Civil Eng.; Eng.

- Educ; Soc. Test. Mat; West. Soc. Eng. (pres, 17). Steel construction.
- Burton, Prof. A(lfred) E(dgar)**, Massachusetts Institute of Technology, Cambridge, Mass. *Geodesy, Topographical surveying*. Portland, Maine, March 24, 57. B.S., Bowdoin, 78, C.E., 81, Sc.D., 13. Aid, U. S. Coast and Geod. Surv., 79-82; instr. *topog. eng. Mass. Inst. Tech.*, 82-84, asst. and later assoc. prof., 84-96, *prof.*, 96-, *dean*, 02- Mem. Mass. Topog. Surv. Committee, 95-01; in charge, scientific exped. to Greenland, 96; eclipse exped. to Ga, 00; Mass. Inst. Tech. eclipse exped. to Sumatra, 01. In charge instruction, Free Navig. Schools, U. S. Shipping Board, 17. Astron. Soc; Civil Eng; fel. Am. Acad. Geodetic measurements; base line apparatus.
- Burton, Dr. E(li) F(ranklin)**, University of Toronto, Toronto, Can. *Physics*. Green River, Ont, Feb. 14, 79. A.B., Toronto, 01, fellow, 01-03, 1851 Exhibition scholar, 04-06, Ph.D., 10; A.B., Cambridge, 06. Asst. demonstrator *physics*, Toronto, 02-04, senior demonstrator, 06-11, *assoc. prof.*, 11- Science research exhibitor, Emmanuel Col, Cambridge, 04-06. Physical Soc. Radioactivity of crude petroleum; physical properties of colloidal solutions; action of electrolytes on colloids.
- Burton, H(arry) E(dward)**, 3621 Hall Place, Washington, D. C. *Astronomy*. Onawa, Iowa, June 11, 78. A.B., Iowa, 01, fellow, 02-03, M.S., 03. Instr. math. and astron, Parsons, 07-08; U. S. Naval Observatory, 09- Observations of asteroids, comets and satellites.
- Burton, Dr. William Merriam**, Standard Oil Co, Whiting, Ind. *Chemistry*. Cleveland, Ohio, Nov. 17, 65. A.B., Western Reserve, 86; Ph.D., Hopkins, 89. Chemist, Standard Oil Co. of Ind., 89-15, v. pres, 15-18, *pres*, 18- Willard Gibbs medal, 18. Chem. Soc. Atomic weight of zinc and magnesium.
- Burton-Opitz, Prof. R(ussell)**, 437 W. 59th St, New York, N. Y. **Physiology*. Fort Wayne, Ind, Oct. 25, 75. M.D., Rush Med. Col, 95, B.S., Chicago, 98, M.S., 02, Ph.D., 05; Vienna, 98; Naples Zool. Sta, 01. Asst. *physiol.*, Breslau, 98-01; Harvard, 01-02; demonstrator, Columbia, 02-04, adj. prof., 04-10, *assoc. prof.*, 10-, head, dept. *physiol.*, 09-11. A.A.; Soc. Nat; *Physiol. Soc*; Soc. Exp. Biol; Soc. Biol. Chem; Harvey Soc; Soc. Pharmacol; Am. Med. Ass. Viscosity of blood and body fluids; vaso-motor nerves of different organs; blood pressure; blood flow; secretion of saliva and bile.
- Burt, Dr. Harold E(rnest)**, Ohio State University, Columbus, Ohio. *Psychology*. Haverhill, Mass, April 26, 90. A.B., Dartmouth, 11; A.M., Harvard, 13, Ph.D., 15. Instr. *psychol.*, Simmons, 15-18; Harvard, 16-18; Ohio State, 19-20, *asst. prof.*, 20- Capt. Air Service; consulting psychologist, Can. Consol. Rubber Co. A.A.; Psychol. Ass. Experimental and applied psychology; aviation and vocational tests.
- Burwash, Prof. E(dward) M(oorc Jackson)**, University of Manitoba, Winnipeg, Can. *Geology*. Cobourg, Ont, July 10, 73. B.A., Victoria (Can), 93, M.A., 97, B.D., 03; Ph.D., Toronto, 14; fellow, Chicago, 10-12, Ph.D., 15. Sec'y to chancellor, Victoria (Can), 02-05; prof. nat. science, Columbian Methodist Col, 05-10; science master, Upper Can, 13-14; *asst. prof. geol. and miner.*, Manitoba, 19- Asst. Can. Geol. Surv, 93, 11; asst. geologist, Ont. Bur. Mines, 95, field geologist, 96, 19; mining geologist, Mex. and Can. Geol. Soc; B. C. Acad. (organizer and sec'y, 09); British Ass; Soc. Belge d'Astron. Canadian geology; Cretaceous invertebrates.
- Busck, August**, U. S. National Museum, Washington, D. C. *Entomology*. Randers, Denmark, Feb. 18, 70. Ordrup Col, Denmark, 87-89; A.M., Ph.B., Royal Univ, Copenhagen, 93. Instr. zool. and math, Ordrup Col, 89-93; *asst. div. entom.*, U. S. Dept. Agr, 96- A.A.; Ass. Econ. Entom; Entom. Soc. (pres, 13); Wash. Acad; Wash. Entom. Soc; Wash. Biol. Soc; Wash. Biol. Field Club; Stockholm Entom. Soc; Copenhagen Entom. Soc. American Microlepidoptera; biology of mosquitoes.
- Bush, Prof. Arthur D(ermont)**, University of North Dakota, University, N. D. *Physiology, Pharmacology*. Townsend, Mass, Aug. 18, 75. B.S., Tufts, 14; M.D., Emory, 01. Dean and prof. anat, Flint Med. Col, 05-09; instr. *physiol.* and *pharmacol.*, Vermont, 11-14; prof. *biol.*, Olivet, 15-16; *physiol. and pharmacol.*, Southern California, 16-18; acting prof, Missouri, 18-19; *prof.*, North Dakota, 19- A.A.; Am. Med. Ass. Tobacco smoking and mentality; effect of disease toxins upon drug action; perfusion of isolated medulla of turtle with drugs.
- Bush, B(enjamin) V.**, 69 Colgate St, Rochester, N. Y. *Chemistry*. Canton, N. Y, Feb. 14, 89. B.S., St. Lawrence, 12; A.M., Columbia, 19. Instr. chem, Kingston, N. Y, 12-14; head, science dept, Lakewood, N. J, 14-17; Friends Cent. Col, 18-19; *research chemist*, Eastman Kodak Co, 19- Chem. Soc. Organic chemistry; alkyl substituted thioureas.
- Bush, Dr. Katharine J(eannette)**, Farmington, Conn. *Natural science*. Scranton, Pa, Dec. 30, 55. Ph.D., Yale, 01. *Asst. zool. dept.*, Peabody Museum, Yale, 79- Asst. U. S. Fish Commission, 81-88; 'Webster's Int. Dict.', 82-90; U. S. Nat. Museum, 91-92, 94-98. Soc. Nat; Soc. Zool. Marine mollusks and annelids; annelids of the Harriman Alaska and Bermuda expeditions.
- Bush, Prof. V(annevar)**, Chelsea, Mass. *Electrical engineering*. Everett, Mass, March 11, 90. B.S., M.S., Tufts, 13; D.Eng., Mass. Inst. Tech. and Harvard, 16. Instr. and asst. *prof. elec. eng.*, Tufts, 14-17; *assoc. prof.*, Mass. Inst. Tech., 19-; consulting engineer, Am. Radio and Research Corp, 19- Elec. Eng; Radio Eng; Eng. Educ. Oscillating current circuit theory; submarine detection.
- Bushong, F(rancis) W(illiam)**, Gulf Refining Co, Port Arthur, Tex. *Chemistry*. Near Lancaster, Pa, March 17, 64. A.B., Franklin and Marshall, 85, A.M., 88; Leipzig, 85-87; hon. Sc.D., Emporia, 00; fellow, Chicago, 00-02; fellow, Kansas, 08-10, 11-13. Prof. nat. science and German, Emporia, 95-00; asst. *prof. org. chem.*, Kansas, 03-10, *assoc. prof. indust. research*, 10-13; fellow, Mellon Inst, 13-14; *research chemist*, Gulf Refining Co, 15- A.A.; Chem. Soc; Kans. Acad; Chem. Gesell. Esters of sulphuric acid; petroleum; naphthenic acids.

- Bussey, Prof. W(illiam) H(enry)**, University of Minnesota, Minneapolis, Minn. *Mathematics*. Chicago, Ill., Oct. 24, 79. A.B., Northwestern, 00; A.M., Harvard, 02; fellow, Chicago, 02-04, Ph.D., 04. Instr. *math. Acad.*, Northwestern, 04-05; tutor, Barnard, Columbia, 05-07; asst. prof., *Minnesota*, 07-14, assoc. prof., 15-20, *prof. and head of dept.*, 20-, *asst. dean, junior col.* A.A.; Math. Soc. (managing ed., 16). Generational relations for the abstract group simply isomorphic with the group $LF(2, p^n)$; Galois field tables; finite projective geometries.
- Buswell, Dr. Arthur M(oses)**, Urbana, Ill. *Chemistry*. Madison, Wis., March 20, 88. A.B., Minnesota, 10; A.M., Maine, 12; fellow, Columbia, 13, Ph.D., 17. Instr. *chem.*, Maine, 10-12; Columbia, 13-20; *chief, Ill. State Water Surv.*, 20-Asst. sanit. officer, A.E.F., 17-19. A.A.; Chem. Soc.; Pub. Health Ass.; Water Works Ass.; Micros. Soc. Treatment of trade wastes.
- Butler, Amos W(illiam)**, 52 Downey Ave., Indianapolis, Ind. *Anthropology, Zoology, Sociology*. Brookville, Ind., Oct. 1, 60. Hanover, 77, LL.D., 15; A.B., Indiana, 94, A.M., 00. *Sec'y, Ind. Board of State Charities*, 98- Pres., Nat. Conf. Charities and Correction, 07; Int. Prison Cong., Washington, 10 (chairman, gen. committee, v. pres); pres., Ind. State Conf. Charities, 15; non-res. lecturer applied sociol., Indiana, 20. A.A.; (sec'y, H, 86, F, 89, gen. sec'y, 92, v. pres, 00); mem. Ornith. Union; Soc. Mammal. (founder); Anthropol. Ass. (founder); Am. Prison Ass. (sec'y, 05-08, pres, 10); Ind. Acad. (sec'y, 85-93, v. pres, 94, pres, 95, ornithologist, dept. geol. and nat. resources of Ind, 96); Ind. Soc. Mental Hygiene (founder); Ind. Audubon Soc. (founder); Soc. Cient. Ant. Alz. Birds; mammals; reptiles; antiquities of Ohio Valley; degeneracy, pauperism and crime; dependency, defectiveness and delinquency; public charities; penology.
- Butler, B(ert) S.**, U. S. Geological Survey, Washington, D. C. *Geology*. Gainesville, N. Y., March 30, 79. A.B., Cornell, 05, A.M., 07. Asst. geol., Cornell, 04-05, instr. geol. and physical geog., 05-07; junior geologist, *U. S. Geol. Surv.*, 07-09, asst. geologist, 09-11, *geologist*, 11- A.A.; Geol. Soc.; Min. and Metal. Soc.; Wash. Geol. Soc. Geology and petrography; areal geology of the Yakutat Bay region, Alaska; copper mineral resources of the United States; petrography of copper district, Shasta County, California; geology of San Francisco and adjacent districts; ore deposits of Utah.
- Butler, Dean (Gurdon) M(ontague)**, University of Arizona, Tucson, Ariz. *Geology*. Lake Geneva, Wis., March 26, 81. E.M., Colo. Sch. Mines, 02. Instr., asst. prof. and assoc. prof. geol. and miner., Colo. Sch. Mines, 03-13; assoc. prof. mining eng., Oregon Col., 13-14, prof. geol., 14-15; *dean, col. mines and eng., Arizona*, 15-, *prof. miner. and petrol.*, 17- Geologist, Colo. Geol. Surv., 08-13; Oregon Bur. Mines and Geol., 14-15; director, Ariz. Bur. Mines, 15-; consulting mining engineer and geologist. A.A.; Geol. Soc.; Am. Geog. Soc.; Ass. Eng. (pres. southwest sect., 19, 20); Min. and Metal. Eng.; Seismol. Soc. Mining and petroleum geology; mineralogy; clays.
- Butler, Dr. O(rmond) R(ourke)**, New Hampshire State College, Durham, N. H. *Botany*. Melbourne, Australia, Aug. 14, 77. Ph.D., Cornell, 10. Instr. hort., Wisconsin, 10-12; *prof. bot., N. H. Col., and botanist Exp. Sta.*, 12- A.A.; Phytopath. Soc.; Soc. Agron. Plant physiology; physiological diseases of plants; fungicides and insecticides.
- Butman, Chester A(rthur)**, Rockport, Mass. *Physics*. Rockport, Feb. 19, 82. Mass. Inst. Tech., 02-04; Clark, 08-10, A.M., 09; Yale, 10-11. Asst. physics, Tufts, 07-08; Clark, 09-10; instr., Mass. Agr. Col., 11-13; *research physicist, Westinghouse Elec. and Mfg. Co.*, 14- With Gen. Elec. Co., Lynn, Mass., 06-07; Elec. Testing Laboratories, N. Y. City, 09; Edison Co., 13; Davy-Faraday Research Lab., Royal Inst., London, summer, 13. A.A.; Physical Soc. The photoelectric effect of phosphorescent material and of sulphur; the electron theory of phosphorescence and fluorescence; Zeeman effect; actino-dielectric effect; energy losses in dielectrics at high voltages and low frequencies; A. C. bridge measurements; effect of temperature on the dielectric strength and constant of solids and liquids.
- Butterfield, Prof. Arthur D(exter)**, Norton Co., Worcester, Mass. *Mathematics*. Dunstable, Mass., Oct. 13, 70. B.S., Worcester, 93, M.S., 98; A.M., Columbia, 04. Asst. civil eng., Worcester, 94-98; instr. math. eng. dept., Vermont, 98-00, asst. prof., 00-04, prof. mech. and math., 04-08; asst. prof. math., Worcester, 08-10, prof., 10-14, math. and geod., 14-17; capt., Air Service, 17-18, major, 18-19, lieutenant col., 19; prof. math. and geod., Worcester, 19-20; *educ. director, Norton Co.*, 20- With U. S. Lighthouse Service, 93-94; asst., Mass. State Surveys, summers, 95-98, 00-03; chief of field party, U. S. Geol. Surv., 04, 09. Chevalier Légion d'honneur; K. C. M. G. A.A.; Eng. Educ. Geodesy; history and development of triangulation in Massachusetts; base line measurements with steel tapes; history of the determination of the figure of the earth from arc measurements.
- Butterfield, Pres. Kenyon L(eech)**, Amherst, Mass. *Rural sociology*. Lapeer, Mich., June 11, 68. B.S., Mich. Agr. Col., 91; Michigan, 00-03, A.M., 02; LL.D., Amherst, 10. Ed., 'Mich. Grange Visitor,' 92-95; supt., Mich. Farmers' Institutes, 95-99; *pres.*, R. I. Col., 03-06; *Mass. Col.*, 06- Lecturer rural sociol., Michigan, 02; collaborator in charge agr., dept. econ. and sociol., Carnegie Institution; Carew lecturer, Hartford Theol. Sem., 09; mem. Roosevelt Country Life Commission, 08; Am. Commission Study Rural Credit in Europe, 13. A.A.; Soc. Prom. Agr. Sci.; Econ. Ass.; Sociol. Soc. Rural social life.
- Butters, Prof. Frederic K(ing)**, University of Minnesota, Minneapolis, Minn. *Botany*. Minneapolis, Feb. 8, 78. B.S., Minnesota, 99; A.B., Harvard, 00, Ph.D., 17. Instr. bot. and pharmacog., *Minnesota*, 01-10, asst. prof. bot., 10-19, *assoc. prof.*, 19- A.A.; Bot. Soc.; Ecol. Soc.; Minn. Acad. Plant geography; taxonomy of ferns.
- Butts, Charles**, U. S. Geological Survey, Washington, D. C. *Geology*. Portville, N. Y., Sept. 18, 63. B.S., Alfred, 99, M.S., 00. Field asst.,

- U. S. Geol. Surv. 60; asst. to N. Y. state paleontologist, 00-01; asst. geologist, *U. S. Geol. Surv.*, 01-09, paleontologist, 09-12, *geologist*, 12-A.A.; Geol. Soc.; Paleont. Soc.; Wash. Geol. Soc. Areal, structural and stratigraphic geology; geology of Pennsylvania, Alabama, Tennessee, Kentucky, Illinois, Virginia and New York.
- Butts, Prof. William H(enry)**, 919 Oakland Ave, Ann Arbor, Mich. *Mathematics*. Harmony, N. Y. Feb. 16, 57. A.B. Michigan, 18, A.M. 79; Ph.D. Zürich, 07. Principal, Mich. Mil. Acad. Orchard Lake, 83-98; asst. prof. *math*, Michigan, 05-08, assoc. prof. 08-20, *prof*, 20-, asst. dean, col. eng. 08- Math. Soc.; Circolo Mat. di Palermo. Elliptic cylinder function of class K.
- Buwalda, Prof. John P(eter)**, Yale University, New Haven, Conn. *Geology*. Zeeland, Mich. Dec. 16, 86. B.S. California, 12, Ph.D. 15. Instr. physiog. and meteorol. California, 15-17; asst. prof. *geol*, Yale, 17-; with *U. S. Geol. Surv.*, 17- A.A.; Paleont. Soc.; Soc. Mammal. Mammalian paleontology; Tertiary geology.
- Byars, Dr. L(uther), P(arris)**, U. S. Department of Agriculture, Washington, D. C. *Plant pathology*. Forest City, N. C. Sept. 25, 87. B.S. Clemson, 09; M.S. Wisconsin, 13, Ph.D. 19. Asst. plant path. S. C. Exp. Sta. 10-11; bot. Wisconsin, 12-14; *pathologist*, bur. plant indust. U. S. Dept. Agr. 14- A.A.; Bot. Soc.; Phytopath. Soc.; Wash. Bot. Soc. Diseases of plants due to nematodes.
- Bybee, Prof. H(al) P(leasant)**, University of Texas, Austin, Tex. *Geology*. Rochester, Ind. Jan. 7, 88. B.S. Rochester (Ind), 08; A.B. Indiana, 12, fellow, 12-14, A.M. 13, Ph.D. 15. Teacher, pub. schools, Ind. 08-09; nat. science, Clinton, 10-11; instr. *geol*, Texas, 14-16, adj. prof. 16-20, *assoc. prof*, 20- A.A.; Ass. Petrol. Geol.; Ind. Acad. Stratigraphic and field geology; Thrall oil field.
- Byerly, Prof. W(illiam) E(lwood)**, 39 Hammond St, Cambridge, Mass. **Mathematics*. Philadelphia, Pa. Dec. 13, 49. A.B. Harvard, 71, Ph.D. 73. Asst. prof. *math*, Cornell, 73-76; Harvard, 76-81, prof. 81-13, *emer. prof*, 13-Ed, 'Annals of Math,' 99- Math. Soc.; Am. Acad.
- Byers, Dr. H(orace) G(reeley)**, Cooper Union Institute, New York, N. Y. *Chemistry*. Pulaski, Pa. Dec. 26, 72. A.B. B.S. Westminster (Mo), 95, A.M. 98; Ph.D. Hopkins, 99. Prof. chem, Tarkio, 95-96; instr. Maryland, 98-99; prof. Washington (Seattle), 99-19; *head, dept. chem*, Cooper Union, 19- Instr. chem. lab. Chicago, summers, 02-04; Leipzig, 07-08; Northwestern, 15-16; Columbia, summer, 16; capt. C.W.S. 18; chief chemist, bur. soils, U. S. Dept. Agr. 19. A.A.; Chem. Soc. Passivity of metals.
- Byford, Dr. Henry T(urman)**, Peoples Gas Building, Chicago, Ill. *Gynecology*. Evansville, Ind. Nov. 12, 53. M.D. Northwestern, 73. Prof. clin. gynec. Woman's Med. Col. Northwestern, 90-08; consulting gynecologist, St. Luke's Hosp; prof. gynec. med. dept. Illinois, 92-14. Lecturer obstet. Rush Med. Col. 89. Am. Med. Ass.; Gynec. Soc.; Col. Surg.; S. Surg. and Gynec. Soc.; West. Surg. Ass.; Chicago Gynec. Soc. (pres, 89); Int. Cong. Gynec. and Obstet. (hon. pres, 96). Anemia in women; cancer; eczema; relation of sugar to public health.
- Byrd, Dr. Hiram**, Miami, Fla. *Biology*. Blackshear, Ga. Aug. 3, 74. B.S. Georgia, 95, M.D. 02. Special agent, Fla. State Board of Health, 03-05; asst. state health officer, Fla. 05-13; pres, Fla. Tuber. Sanatorium, 14-16; scientific sec'y, Fla. State Board of Health, 17-19; *director, dept. hygiene*, Mississippi, 19-20; Alabama, 20- Lecturer, Am. Med. Ass. 12-13. A.A.; Am. Med. Ass.; Pub. Health Ass. Typhoid fever; latent material carriers; hook worm; citrus canker.
- Byrd, Prof. Mary E(mma)**, Box 77, R.R. 9, Lawrence, Kans. *Astronomy*. Le Roy, Mich. Nov. 15, 49. A.B. Michigan, 78; Harvard Col. Observatory, 82-83; Ph.D. Carleton, 04. Principal, high sch. Wabash, Ind. 79-82; first asst. observatory, Carleton, 83-87; director, Smith, 87-06, prof. astron. 98-06. British Astron. Ass. Comet positions by filar micrometer.
- Byrne, Prof. Joseph**, 244 W. 101st St, New York, N. Y. *Physiology*. Bagenalstown, Ireland, March 21, 70. A.B. Royal Univ. Ireland, 90; A.M. St. Francis Xavier, 93; M.D. Columbia, 95; LL.B. N. Y. Univ. 00, M.R.C.S. England, 13. *Prof. neur. Fordham*, 12- Alumni Ass. prize, Columbia, 10. A.A.; Am. Med. Ass.; Neur. Soc.; N. Y. Acad. Med. Semicircular canals; tabes; pain; paradoxical pupil dilation.
- Byrnes, Dr. C(harles) M(etcalfe)**, 207 E. Preston St, Baltimore, Md. *Biology, Medicine*. Claiborne Co. Miss. Nov. 4, 81. B.S. North Carolina, 02; M.D. Hopkins, 06. Demonstrator anat. Hopkins, 02-03; adj. prof. Virginia, 06-09; instr. *neur*, Hopkins, 09-18, *assoc*, 18- A.A.; Neur. Ass. Pathological and clinical neurology.
- Byrnes, Dr. Esther F(ussell)**, 193 Jefferson Ave, Brooklyn, N. Y. *Biology*. Philadelphia, Pa. Nov. 3, 67. A.B. Bryn Mawr, 91, A.M. 04, fellow, 94-95, Ph.D. 98; Woods Hole, 91. Demonstrator biol. Vassar, 91-93; Bryn Mawr, 95-97; *instr. physiol. and teacher biol*, Girls' High Sch. Brooklyn, 98- A.A.; Soc. Nat.; Soc. Zool.; Marine Biol. Ass.; fel. N. Y. Acad.; N. Y. Ass. Biol. Teachers (v. pres). Cytology; maturation and fertilization in limax; origin of limb muscles in Amphibia; regeneration of limbs in Amphibia; Cyclopidae; metamorphosis of Cyclops.
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- Cabot, Prof. Hugh**, University of Michigan, Ann Arbor, Mich. *Surgery*. Beverley Farms, Mass. Aug. 11, 72. A.B. Harvard, 94, M.D. 98. Visiting surgeon, New Eng. Baptist Hosp. 00-20; surgeon, out-patient dept. Mass. Gen. Hosp. 04-10; instr. genito-urinary surg, Harvard Med. Sch. 10-12; chief, genito-urinary dept. Mass. Gen. Hosp. 12-13; asst. prof. genito-urinary surg, Harvard Med. Sch. 13-18, prof. 18-19; *chief surgeon*, Michigan, 20- Chief surgeon, Harvard Unit, B.E.F. 16-17, commanding officer, 17-18. Ass. Genito-Urinary Surg. (pres, 14); Col. Surg.; Urol. Ass. (pres, 10, 11); Am. Med. Ass.; Miss. Valley Med. Ass. (pres, 15); Ass. Int. d'Urol.
- Cabot, Dr. Richard Clarke**, 1 Marlboro St, Boston, Mass. **Medicine*. Brookline, Mass. May

- 21, 68. A.B., Harvard, 89, M.D., 93, Dalton scholar, 94-95. *Asst. clin. med., Harvard*, 98-03, instr., 04-08, asst. prof., 08-18, *prof.*, 18-Visiting physician, Channing Home, 96-97; physician to out-patients, Mass. Gen. Hosp., 97-08, asst. visiting physician, 08-; consulting physician, Mass. Eye and Ear Infirmary, 00-; New England Hosp., 02-; lecturer philos., Harvard, 02-03, *prof. social ethics*, 20- Am. Physicians; Am. Med. Ass.; Boston Soc. Med. Improv.; Boston Soc. Med. Sci. Blood; methods of examining the chest; action of alcohol and strychnin in fevers; serum diagnosis in disease; abdominal tumors; habits of healthy human beings in American cities as regards food, sleep and exercise; alcohol in arteriosclerosis.
- Cady, Gilbert H(aven)**, University of Arkansas, Fayetteville, Ark. *Geology*, Chicago, Ill., Dec. 18, 82. A.B., Northwestern, 05, fellow, 07-08, M.S., 11; Yale, 09-10; Illinois, 11-12; Chicago, 12-13, Ph.D., 17. *Asst. geologist*, Ill. Geol. Surv., 10-13; instr. geol., Northwestern, 13-14; geologist, Ill. Geol. Surv., 14-19; Yunnan Ming Hsing Mining Co, China, 19-20; *state geologist*, Ark., and *prof. geol.*, Arkansas, 20- Areal geology of Illinois; clays, coals and cement-making limestones of Illinois; general geology of Baker, Oregon, quadrangle.
- Cady, Prof. H(amilton) P(erkins)**, University of Kansas, Lawrence, Kans. **Physical chemistry*. Morris Co, Kans., 74. A.B., Kansas, 97, Ph.D., 03. *Asst. prof. chem.*, Kansas, 99-05, *assoc. prof.*, 05-11, *prof.*, 11- A.A.; Chem. Soc.; Kans. Acad. Liquid ammonia as a solvent; helium and other rare gases in natural gas.
- Cady, Prof. LeRoy**, University Farm, St. Paul, Minn. *Horticulture*. Buffalo, Minn., Jan. 9, 79. B.S., Minnesota, 07. *Assoc. prof. hort.*, Minnesota, and *assoc. horticulturist*, Exp. Sta. Soc. Hort. Sci. Ornamental plants.
- Cady, W(alter) B(riggs)**, Ypsilanti, Mich. *Chemistry*. Pittsfield, Mich. Ph.C., Michigan, 92, B.S., 97. *Asst. chemist*, N. Y. State Exp. Sta., Geneva, 92-95; Mo. Exp. Sta., 97-01; Wabash Portland Cement Co, 02-06; Peninsular Portland Cement Co, 06-11; research chemist, Guantanamo Sugar Co, 12; chemist, Insular Exp. Sta., P. R., 13. A.A.; Chem. Soc. Application of fertilizers to soil; losses by leaching; acid, solid and sugar content of oranges and grapefruit.
- Cady, Prof. Walter G(uyton)**, 49 High St., Middletown, Conn. **Physics*. Providence, R. I., Dec. 10, 74. Ph.B., Brown, 95, A.M., 96; Ph.D., Berlin, 00. Instr. math, Brown, 95-97; *physics*, Wesleyan, 02-03, *assoc. prof.*, 03-07, *prof.*, 07- Magnetic observer, U. S. Coast and Geod. Surv., 00-02. A.A.; Physical Soc.; Elec. Eng.; Radio Eng. Cathode rays; magnetic declinograph; electric arc; electrical oscillations; physical properties of crystals.
- Caesar, L(awson)**, Ontario Agricultural College, Guelph, Ont., Can. *Entomology*, *Plant pathology*. Mono Road, Ont., Feb. 15, 70. A.B., Toronto, 95; B.S.A., Ont. Agr. Col., 08. Classical master, high sch., Port Hope, Can., 00-05; demonstrator fungous diseases and insect pests, Ont. Agr. Col., 08-20; *prof. econ. entom.*, 20- Provincial entomologist, Ont. A.A.; Ont. Entom.
- Soc. Economic entomology; the codling worm and plum Cureulio; lime-sulphur spray mixture.
- Cahn, Prof. A(ivin) R(obert)**, College Station, Texas. *Zoology*. Chicago, Aug. 29, 92. B.S., Cornell, 13; M.S., Wisconsin, 15. *Asst. biol.*, Wisconsin, 13-18; *assoc. prof.*, Tex. Col., 19- Instr., U. S. Sch. Mil. Cinematog., 18; sergt., M.R.C., A.E.F., 18-19. A.A.; mem. Ornith. Union; Ecol. Soc.; Wilson Ornith. Club. Vertebrate zoology; ecology; ornithology of Wisconsin, Michigan, Illinois, Minnesota and Texas.
- Cain, Prof. W(illia)m**, Chapel Hill, N. C. *Mathematics*, *Engineering*. Hillsboro, N. C., May 14, 47. A.M., N. C. Mil. and Polytech. Inst., 65; LL.D., South Carolina, 16. Civil engineer, 65-74; *prof. math. and eng.*, Carolina Mil. Inst., 74-80; civil engineer, 80-82; *prof. math. and eng.*, S. C. Mil. Acad., 82-89; math., North Carolina, 89-20. A.A.; Math. Soc.; Civil Eng. (director, 12-14). Arches; bridges; earth pressure; long columns; least work; dams; transition curves; symbolic algebra; calculus.
- Caine, John T(homas), III**, Utah Agricultural College, Logan, Utah. *Animal husbandry*. Logan, June 4, 82. B.S., Utah Col., 03; M.S.A., Iowa State, 05. *Asst. prof. animal husbandry*, Utah Col., 06-07, *prof.*, 07-, *asst. director* and *animal husbandman*, exten. div., 13-16, *director*, 16-20. In charge animal husbandry in fifteen western states, bur. animal industry, U. S. Dept. Agr., 18-19. A.A. Livestock conditions in the West.
- Cairns, Prof. W(illiam) D(eWeese)**, 27 King St., Oberlin, Ohio. *Mathematics*. Troy, Ohio, Nov. 2, 71. A.B., Ohio Wesleyan, 92; A.B., Harvard, 97, A.M., 98; Ph.D., Göttingen, 07. Instr., high sch., Troy, Ohio, 94-96; Calumet, Mich., 98-99; instr. math. and surv., Oberlin, 99-04, *assoc. prof. math.*, 04-20, *prof. and head of dept.*, 20- A.A.; Math. Soc.; Math. Ass. (sec'y-treas., 16-). Integral equations; binomial coefficients and application to probability.
- Cajori, Prof. Florian**, 2844 Webster St., Berkeley, Calif. **Mathematics*. Near Thuzis, Graubünden, Switzerland, Feb. 28, 59. B.S., Wisconsin, 83, M.S., 86, Sc.D., 13; Hopkins, 84-85; Ph.D., Tulane, 94; LL.D., Colorado, 12. *Asst. prof. math.*, Tulane, 85-87, *prof. applied math.*, 87-88; U. S. Bur. Educ., 88-89; *prof. physics*, Colo. Col., 89-98, math., 99-18, dean, sch. eng., 03-18; *prof. hist. math.*, California, 18- Mem. committee of ten, Nat. Educ. Ass., 92, committee of fifteen, 10. A.A.; Math. Soc.; Math. Ass.; British Math. Ass.; Math. Verein. Infinite series; theory of equations; eighteenth century mathematics; history of fluxions; algebraic notation and slide rule.
- Caldwell, Dr. B(enjamin) Palmer**, Polytechnic Institute of Brooklyn, Brooklyn, N. Y. *Chemistry*. New Orleans, La., April 2, 75. A.B., Tulane, 93, B.E., 95, Ch.E., 96; fellow, Hopkins, 00-01, Ph.D., 01. Instr. chem., Tulane, 95-97, *asst. prof.*, 97-07, *assoc. prof.*, 07-13, *prof.*, 13-16, Oglethorpe, 16-19; *anal. chem.*, Brooklyn Polytech., 19- A.A.; Chem. Soc. Equilibrium of double salts in solution; hydrolysis of carbonates of the alkalis.
- Caldwell, Prof. F(rancis) C(ary)**, 206 16th Ave., Columbus, Ohio. *Electrical engineering*. Ithaca, N. Y., Dec. 25, 68. A.B., Cornell, 90, M.E., (E.E.), 91; Polytech., Zürich, 92-93. Expert,

- Thomson-Houston Elec. Co, 91-92; asst. prof. *elec. eng, Ohio State*, 93-97, assoc. prof, 97-01, *prof, 01-*, acting dean, col. eng, 08-09. Elec. Eng; Eng. Educ; Illum. Eng. Soc; Ohio Elec. Light Ass. Illumination; electric transmission.
- Caldwell, Prof. Geo(rge) T(homas)**, Baylor University College of Medicine, Dallas, Tex. *Pathology*. Cable, Ohio, Dec. 18, 82. A.B., Ohio State, 10, A.M., 13; Ph.D., Chicago, 18, M.D., Rush Med. Col., 19. Assoc. *path*, Chicago, 14-16, instr, 16-19; *prof, Baylor*, 19- Fat embolism; chemical composition of tuberculous tissues; purin enzymes.
- Caldwell, Mrs. Helen Hubbert**, Ripley, W. Va. *Psychology*. Lincoln, Ill., June 11, 87. A.B., Missouri Valley, 07; fellow, Hopkins, 13-14, Ph.D., 15. Adj. prof. psychol. and educ, Randolph-Macon Woman's Col., 16-17; instr. educ, Wisconsin, 17-19; *teacher and educ, adviser, high sch, Ripley, W. Va*, 19- Fellow, Md. Ass. to Promote Educ. among Women, 14-15. Psychol. Ass. Education; mental tests; learning; animal behavior.
- Caldwell, Dr. John W(illiamson)**, 1718 Palmer Ave, New Orleans, La. *Chemistry*. Charleston, S. C., Jan. 31, 42. A.B., Col. of Charleston, 61, A.M., 68; M.D., Med. Col. of Va., 64. Prof. mat. med, New Orleans Sch. of Med., 69-70; Stewart prof. nat. sciences, S. W. Presbyterian Univ, Clarksville, Tenn., 74-84; *prof. chem. and geol, Tulane*, 86-07, *emer. prof*, 07-
- Caldwell, Prof. Joseph S(tuart)**, U. S. Department of Agriculture, Washington, D. C. *Botany*. Knoxville, Tenn., Oct. 31, 78. A.B., Maryville, 02; A.M., Chicago, 04, Ph.D., 14. Prof. biol, Peabody Col. for Teachers, 04-11; *prof. bot, Ala. Polytech*, and plant physiologist, Exp. Sta., 12-16; *plant physiologist*, Wash. Exp. Sta., 16-18; *in charge fruit and vegetable utilization, bur. plant indust, U. S. Dept. Agr*, 18- A.A.; Bot. Soc; Phytopath. Soc; Soc. Hort. Sci. Plant physiology; biological chemistry; fruit and vegetable utilization.
- Caldwell, Prof. Otis W(illiam)**, Teachers College, Columbia University, New York, N. Y. **Botany*. Lebanon, Ind., Dec. 18, 69. B.S., Franklin, 94, LL.D., 17; Ph.D., Chicago, 98. Asst. bot, Chicago, 97-99; head, dept. biol, East. Ill. Nor. Sch., 99-06; assoc. prof. and later prof. bot. and head science teaching, Chicago, 07-16; *director, Lincoln Exp. Sch. and prof. educ, Columbia*, 17- A.A.; Soc. Nat; Bot. Soc. Plant morphology; education.
- Caldwell, R(alph) E(imer)**, Blatchford Calf Meal Co, Waukegan, Ill. *Agriculture*. Garnett, Kans., Aug. 20, 85. B.S., Kansas State, 08. Asst. animal husbandry, Ohio Exp. Sta., 09-10; asst. prof. milk production, Purdue, 11-15, *prof. in charge, dept. dairy husbandry*, 15-17; *director, research and educ. dept, Blatchford Calf Meal Co*, 17- Soc. Animal Production; Dairy Sci. Ass. Milk substitute feeding of young animals.
- Calhane, Prof. D(aniel) F(rancis)**, 32 Berkman St, Worcester, Mass. *Chemistry*. Bradford, Mass., Aug. 19, 69. A.B., Harvard, 94, A.M., 96, Ph.D., 04. Instr, asst. prof. and later *prof. indust. chem. and electrochem, Worcester*, 03- A.A.; Chem. Soc; Electrochem. Soc. Electrochemistry; organic chemistry.
- Calhoun, Prof. F(red) H(arvey) H(all)**, Clemson College, S. C. *Geology*. Elbridge, N. Y., June 27, 73. B.S., Chicago, 98, Ph.D., 02. Asst. physiog. and field geol, Chicago, 99-02; asst. prof. geol. and physics, Illinois Col., 02-04; *prof. geol. and miner, Clemson*, 04-, *director, dept. agr*, 17- Asst. geologist, U. S. Geol. Surv., 02-17. A.A.; Geol. Soc. The drift in Montana; field work in Montana; relations of the different drift sheets.
- Calhoun, Prof. J(ohn) W(illiam)**, 2805 Rio Grande St, Austin, Tex. *Mathematics*. Manchester, Tenn., Oct. 24, 71. A.B., Texas, 05; A.M., Harvard, 08. Tutor pure math, Texas, 05-09, instr, 09-13, adj. prof, 13-17, *assoc. prof*, 17-20, *applied math*, 20- Math. Soc; Tex. Acad. Fourier's series; pedagogy of mathematics.
- Calkins, Frank C(athcart)**, U. S. Geological Survey, Washington, D. C. *Geology*. Lakewood, Ohio, June 7, 78. B.S., California, 99. Asst. miner, California, 00-01; asst. geologist, U. S. Geol. Surv., 01-11, assoc. geologist, 11-17, *geologist*, 17- Geol. Soc; Wash. Acad; Wash. Geol. Soc. Geology of northern Washington, northern Idaho, western Montana, Yosemite region, Calif. and of Wasatch Mountains, Utah.
- Calkins, Prof. Gary N(athan)**, Columbia University, New York, N. Y. **Zoology, General biology*. Valparaiso, Ind., Jan. 18, 69. B.S., Mass. Inst. Tech., 90; Ph.D., Columbia, 98. Lecturer biol, Mass. Inst. Tech., 90-93; tutor zool, Columbia, 94-98, instr, 99-03, asst. prof, 03-04, *prof*, 04-07, *protozool*, 07- Biologist, N. Y. State Cancer Lab, Univ. of Buffalo, 02-08; clerk, Marine Biol. Lab., 15- Nat. Acad; A.A.; Soc. Nat; Soc. Zool; Statist. Ass. (asst. sec'y, 90-96); Soc. Exp. Biol. (pres, 19-21); Soc. Cancer Research (pres, 16); fel. N. Y. Acad. (sec'y, biol. sect, 97-99). General cytology; systematic zoology; life history of Protozoa.
- Calkins, Prof. Mary Whiton**, Newton, Mass. **Psychology, Philosophy*. Hartford, Conn., March 30, 63. A.B., Smith, 85, A.M., 87; Harvard, 90-91, 93-95; Litt.D., Columbia, 09; LL.D., Smith, 10. Instr. Greek, Wellesley, 88-90, psychol, 91-93, assoc. prof, 93-97, *prof. philos. and psychol*, 97- A.A.; Psychol. Ass. (pres, 05); Philos. Ass. (pres, 18). Dreams; association; supplementary images in recognition; personalistic conceptions in psychology and in philosophy.
- Call, Prof. L(eland) E(verett)**, 223 N. 14th St, Manhattan, Kans. *Agronomy*. Darrowville, Ohio, Feb. 9, 81. B.S.(Agr), Ohio State, 06, fellow, 06-07, M.S.(Agr), 12. Asst. agron, Kansas State, 07-08, asst. prof. soils, 08-11, assoc. prof, 11-13, *prof. agron*, 13- Supervisor crop instr, A.E.F. Univ, Beaune, 19. Soc. Agron. Soils; fertility and tillage.
- Callaway, Dr. L(awrence) A(rthur)**, Anaconda, Mont. *Metallurgy*. Mo., 85. B.S., Arizona, 10; Met.E., Harvard, 14, Sc.D., 15. Instr. metal. and mining, Kentucky, 11-13; *asst. research engineer, Anaconda Copper Mining Co*, 15- Min. Eng. Hydrometallurgy of copper.

Calvert, Dr. Philip P(owell), University of Pennsylvania, Philadelphia, Pa. **Zoology*. Philadelphia, Jan. 29, 71. Certificate in biol, Pennsylvania, 92, Ph.D, 95; Berlin, 95-96; Jena, 96. Asst. instr. *zool*, Pennsylvania, 92-97, instr, 97-07, asst. prof, 07-12, *prof*, 12- Assoc. ed, 'Entom. News,' 93-10, ed, 11- Zool. research in Costa Rica, 09-10. A.A; Soc. Nat; Soc. Zool; Entom. Soc. (pres, 99-15); Philos. Soc; Entom. Soc. Am. (pres, 14); Ecol. Soc; Phila. Acad. (mem. council, 97-). The Odonata; odonate fauna of Mexico, Central America and neotropical region; natural history of Costa Rica; ecology and larval forms of Odonata of tropical America.

Calvert, Mrs. Philip P. (Amelia Catherine Smith), University of Pennsylvania, Philadelphia, Pa. *Zoology*. Philadelphia, Feb. 23, 76. B.S, Pennsylvania, 99; scholar, Bryn Mawr, 99-00, fellow, 00-01. Structure and parasitism of Aphyllon uniflorum; reactions of Allolobophora foetida; illustrations of Odonata; natural history of Costa Rica.

Calvert, Dr. R(obert) P(eyton), 65 Union St, Montclair, N. J. *Chemistry*. Milford, Mo, March 15, 89. A.M, Oklahoma, 10; M.S, Chicago, 12; Ph.D, Columbia, 14. Instr. chem, Oklahoma, 09-10, 11-12; Columbia, 13-15; *research chemist*, E. I. duPont de Nemours and Co, 15-, *director*, Delta Lab, Arlington, N. J, 18- Inorganic chemicals; plastics.

Calvert, Prof. Sidney, University of Missouri, Columbia, Mo. *Chemistry*. Rochdale, England, Sept. 18, 68. Ont. Agr. Col, 84-87; B.S, McGill, 90; A.M, Harvard, 92; Freiburg, 01-02. Asst. chem, Harvard, 92-94; asst. prof, Missouri, 94-06, *prof. org. chem*, 06-, *director*, chem. lab, 10- A.A; Chem. Soc; London Chem. Soc. Behavior of certain derivatives of benzol containing halogens; bromine derivatives of meta-phenylenediamin; dietary studies.

Calvert, Prof. W(illiam) J(ephtha), Dallas, Texas. *Pathology*. Lexington, Ky, Oct. 7, 71. A.B, Transylvania, 83; M.D, Hopkins, 98. Asst. surgeon, U.S.A, 99-02; *prof. physical diagnosis*, Missouri, 09-11, prev. med, 11-13; *clin. med*, Baylor, 14- Heart; pericardium; pleura; plague.

Calvin, Prof. John W(illard), Agricultural Experiment Station, Wooster, Ohio. *Chemistry*. Topeka, Kans, March 24, 87. B.S, Kansas State. Asst. animal nutrition, Pa. State, 08-10; asst. chemist, Kans. Exp. Sta, 10-14; asst. prof. agr. chem, Nebraska, and assoc. chemist, Exp. Sta, 14; chief chemist, Santo Domingo Exp. Sta. Expert animal nutrition, U. S. Dept. Agr, 08-10. A.A; Chem. Soc; Soc. Animal Production. Agricultural chemistry; animal nutrition; chemistry of wheat and flour; inheritance of stalk color in corn.

Camac, Dr. C(harles) N(icol) B(anker), 128 E. 65th St, New York, N. Y. *Medicine*. Philadelphia, Pa, Aug. 6, 68. A.B, Pennsylvania, 92, M.D, 95; London, 93; Oxford, 94; Hopkins, 95-97. Instr. physiol, Pennsylvania, 95; physical diagnosis, Hopkins, 96-97, clin. path, 98; director, lab. clin. path, med. col, Cornell, 99-05, instr. med, 05-09, *asst. prof. clin. med*, 09-10;

Columbia, 10-; med. director, Gouverneur Hosp, 16- Res. first asst. physician, Hopkins Hosp, 95-98; Mütter lecturer, Philadelphia, 03; physician, out-patients dept, Bellevue Hosp, N. Y. City, 98-00; chief of clinic, Cornell Med. Col. Dispensary, 00-09; visiting physician, N. Y. City Hosp, 99-16; mil. physician, Am. War Hosp, England, 15; physician, Ocean Ambulance, Flanders, Belgium; lieut. and instr. gas defense, Inf. Sch, 17-19; major, lieut. col. and chief, med. service, U.S.A. Gen. Hospitals, 6 and 38, 18-19; director, Med. Officers' Training Sch, Atlanta, Ga, 18-19. Am. Physicians; Am. Med. Ass; N. Y. Acad. Med; Interurban Clin. Club. Clinical medicine; gall bladder complication in typhoid fever; diseases of the heart and blood vessels.

Cameron, Prof. A(lexander) T, University of Manitoba, Winnipeg, Can. *Biochemistry*. London, England, 82. B.Sc. Edinburgh, M.A. Lecturer physiol, Manitoba, 09-13, asst. prof. physiol. and physiol. chem, 13-20, *assoc. prof. biochem*, 20-, *acting prof. physiol*, 20- Chemist water purification, B.E.F, 15-19; capt, R.A.M.C. Soc. Biol. Chem; Physiol. Soc; Chem. Soc; fel. Royal Soc. Med; fel. Royal Soc. Can; Inst. Chem. Gt. Britain and Ireland. Radio-chemistry; biochemistry of iodine; temperature limits conditioning life of frog; metabolism of creatin.

Cameron, Prof. Alfred E(nnest), University of Saskatchewan, Saskatoon, Can. *Zoology*. Aberdeen, Scotland, 90. B.S, M.A, Aberdeen, 11, Carnegie fellow, 12, Sc.D, 15; M.S, Manchester, 13. Lecturer, Manchester and Wales, 13-15; *prof. zool*, Saskatchewan, and *chief entom. investigations*, Sask, 16- Ass. Econ. Entom; Ecol. Soc; fel. London Entom. Soc. General and economic entomology.

Cameron, Dr. E(dward) H(erbert), University of Illinois, Urbana, Ill. *Psychology*. Yarmouth, N. S, Jan. 24, 75. A.B, Acadia, 00; A.B, Yale, 03, A.M, 04, Ph.D, 06. Principal, high sch, Bridgetown, N. S, 00-02; instr. psychol, Yale, 06-10, asst. prof, 10-20, *prof. educ. psychol*, Illinois, 20- Supt. schools, Washington, Conn. A.A; Psychol. Ass; Soc. Col. Teachers Educ. Illusions; tonal reactions; reading.

Cameron, Dr. Frank K(enneth), American Smelting and Refining Co, Salt Lake City, Utah. **Chemistry*. Baltimore, Md, Feb. 2, 69. A.B, Hopkins, 91, Ph.D, 94; Sage fellow, Cornell, 94-95. Instr. org. chem, Cornell, 94-95; assoc. prof, Catholic, 95-97; research asst. physical chem, Cornell, 97-98; expert, U. S. Dept. Agr, 98-99, soil chemist, 99-15; *consulting chemist*, Am. Smelting and Ref. Co, 15- A.A; Chem. Soc. Chemical dynamics; application of the principles of physical chemistry to organic chemistry; solution phenomena in relation to soils and plants; dynamics of the soil; utilization of by-products.

Cameron, John E(dwin), 215 N. Van Buren St, Iowa City, Iowa. *Biology*. Columbia Co, Ohio, 67. B.S, Iowa State, 95. Instr. biol, high sch, Cedar Rapids, Iowa, 95-06; Kansas City, Mo, 06-10; biol. and agr, State Nor. Sch, Maryville, 10-15; *bot. Iowa*, 15- A.A; Am. Geog. Soc; Iowa Acad. Botany; nesting habits of birds.

- Camp, Prof. Burton H(oward)**, 110 Mt. Vernon St, Middletown, Conn. *Mathematics*. Hartford, Conn, Sept. 20, 80. A.B, Wesleyan, 01; Harvard, 03, A.M, 07; fellow, Yale, 10-11, Ph.D, 11. Teacher, Vassalboro, Maine, 01-02; asst. astron, Harvard, 02-03; instr. math, Mass. Inst. Tech, 03-04; Wesleyan, 04; mech, Harvard, 06-07; *math, Wesleyan*, 07-09, assoc. prof, 09-14, *prof, 14-*, acting director, Van Vleck Observatory, 18-20. Math. Soc. Mathematical analysis; statistics.
- Camp, Dr. Carl D(udley)**, 304 S. State St, Ann Arbor, Mich. *Neurology*. S. Watauga, Tenn, Oct. 2, 80. M.D, Pennsylvania, 02. Instr. neuropath, Pennsylvania, 05-07; *prof. neurol, Michigan*, 07- Asst. visiting physician, Phila. Polyclinic and Univ. of Pa. Hosp; Phila. Gen. Hosp, 05-07. Psychopath. Ass; Ass. Path. and Bact; Neur. Ass; Am. Med. Ass. Clinical neurology; neuropathology; psychology; sensory condition in the brain and spinal cord; treatment of nervous diseases.
- Camp, Charles L(ewis)**, American Museum of Natural History, New York, N. Y. *Zoology*. Jamestown, N. Dak, March 12, 93. A.B, California, 15; A.M, Columbia, 16. *Asst. zool, Columbia*, 16-17, 19-; *research asst, Am. Museum Nat. Hist*, 16-17, 19- Field worker, museum vert. zool, California. A.A; Soc. Ichthyol. and Herp; Ecol. Soc; Paleont. Soc; Soc. Mammal; Cooper Ornith. Club; N. Y. Acad; Calif. Acad. Systematic herpetology; paleontology; comparative myology.
- Campbell, Archibald**, 3229 Stettinius Ave, Cincinnati, Ohio. *Chemistry*. Manhattan, Ill, Oct. 31, 72. Ph.B, Michigan, 96, Ph.M, 98. Instr. org. chem, Michigan, 98-99; chief chemist, *Globe Soap Co*, 99-06, gen. supt, 06-16, *second v. pres*, 16- Chem. Soc. (chairman, committee on soap); Soc. Cotton Products Analysts (pres, 17). Azo and hydrazo derivatives of triphenylmethane; soap and soap products.
- Campbell, Dr. C(harles) Macfie**, Harvard Medical School, Boston, Mass. *Psychiatry*. Edinburgh, Scotland, Sept. 8, 76. M.A, Edinburgh, 97, B.Sc, 00, M.R.C.P, 08, M.D, 11; Paris, 02-03; Heidelberg, 03. Instr. psychopath, med. col, Cornell, 10-13; assoc. *psychiat*, Hopkins, 13-14, assoc. prof, 14-20; *prof, Harvard*, 20-A.A; Psychopath. Ass. (pres, 19); Medico-Psychol. Ass; Neur. Ass; Psychol. Ass; Edinburgh Royal Med. Soc; Soc. neur. de Paris. General paralysis; histopathology of the brain.
- Campbell, Prof. D(onald) F(rancis)**, Armour Institute of Technology, Chicago, Ill. *Mathematics*. Nova Scotia, April 26, 67. A.B, Dalhousie, 90; A.B, Harvard, 94, A.M, 95, Ph.D, 98. Instr. *math*, Harvard, 97-00; asst. prof, *Armour Inst*, 00-01, *prof*, 01- Math. Soc; fel. Inst. Actuaries. Homogeneous forms in connection with linear differential equations.
- Campbell, Dr. D(ouglas) H(oughton)**, Stanford University, Calif. **Botany*. Detroit, Mich, Dec. 16, 59. Ph.M, Michigan, 82, Ph.D, 86; Bonn, Tübingen and Berlin, 86-88. Instr. biol, high sch, Detroit, 82-86; *prof. bot*, Indiana, 88-91; *Stanford*, 91- Assoc. ed, 'Am. Naturalist,' Nat. Acad; A.A. (v. pres, 02); Soc. Nat; Bot. Soc. (pres, 13); Philos. Soc; Am. Acad; Int. Ass. Bot; British Ass; for. mem. London Linnean Soc; Bot. Gesell. Comparative morphology; the evolution of plants; embryology of the simpler angiosperms.
- Campbell, Prof. E(dward) D(e Mille)**, 1555 Washenaw Ave, Ann Arbor, Mich. **Chemistry*. Detroit, Mich, Sept. 9, 63. B.S, Michigan, 86. Chemist, Ohio Iron Co, Zanesville, 86-87; Sharon Iron Co, Pa, 87-88; Dayton Coal and Iron Co, Tenn, 88-90; asst. prof. metal, *Michigan*, 90-93, junior prof, 93-02, prof. chem. eng. and anal. chem. and head, dept. chem. eng, 02-14, *director, chem. lab*, 05-, *prof. chem*, 14-20, *chem. and metal*, 20- A.A; Chem. Soc; Min. and Metal. Eng; Faraday Soc; Wash. Acad; hon. mem. Mich. State Gas Ass; hon. mem. Detroit Chemists; British Iron and Steel Inst. Constitution of steel; constitution of hydraulic cements.
- Campbell, Dr. G(eorge) A(shley)**, 195 Broadway, New York, N. Y. *Electrical engineering*. Hastings, Minn, Nov. 27, 70. B.S, Mass. Inst. Tech, 91; A.B, Harvard, 92, Ph.D, 01; Göttingen, Vienna and Paris, 93-96. *Research engineer, eng. dept, Am. Telephone and Telegraph Co*, 97-A.A; fel. Elec. Eng; Physical Soc; Math. Soc; Am. Acad. Electrical transmission.
- Campbell, Harry Huse**, Steelton, Pa. *Metallurgy*. West Roxbury, Mass, March 10, 59. B.S, Mass. Inst. Tech, 79. *Metal. engineer, Pa. Steel Co, Steelton, Pa*, 06- Min. Eng; Civil Eng; British Iron and Steel Inst. Steel making, especially open hearth work.
- Campbell, Prof. H(enry) D(onald)**, Lexington, Va. *Geology*. Lexington, July 29, 62. A.M, Washington and Lee, 82, Ph.D, 85; Berlin, 86-87; Heidelberg, 87-88; hon. Sc.D, Pittsburgh, 12. Instr. chem. and geol, *Washington and Lee*, 82-84, asst. prof, 84-86, *prof. geol. and biol*, 88-, *dean, acad. faculty*, 06-08, *univ*, 08- A.A; Geol. Soc. Geology of western Virginia; Mesozoic diabases of the Atlantic border.
- Campbell, Leon**, Harvard College Observatory, Cambridge, Mass. *Astronomy*. Cambridge, Jan. 20, 81. Pub. schools. *Asst, Harvard Col. Observatory*, 99- Asst. in charge, *Arequipa Sta*, Harvard Col. Observatory, 11-15. Astron. Soc; Seismol. Soc; Ass. Var. Star Observers (pres, 19-); Soc. Geog. de Lima. Variable stars; novae.
- Campbell, Prof. L(eslie) L(yle)**, Simmons College, Boston, Mass. *Physics*. Powhatan Co, Va, Sept. 17, 63. A.M, Washington and Lee, 87, fellow, 89-91, Ph.D, 95; A.M, Harvard, 04. Asst. *math*, Washington and Lee, 89-91; *prof. physics*, Westminster (Mo), 96-03; asst, Harvard, 04-05; *prof. and head, dept. physics, Simmons*, 06- Research, Cavendish lab, Cambridge, 14. A.A; Physical Soc; East. Ass. Physics Teachers. The Thomson effect in soft iron; thermal and electrical properties of soft iron; thermoelectric heterogeneity of alloys; the Hall, Ettingshausen, Leduc and Nernst effects in iron.
- Campbell, M(arius) R(obinson)**, U. S. Geological Survey, Washington, D. C. **Geology, Physiography*. Garden Grove, Iowa, Sept. 30, 58. Ohio State, 85-87. Aid, *U. S. Geol. Surv*, 89-90, asst. geologist, 91-96, *geologist*, 97- A.A; Geol. Soc;

Min. Eng; Ass. Geog; Wash. Geol. Soc. (v. pres, 07-). Structure and stratigraphy of Appalachian coal field; physiographic history of eastern United States; coal testing; classification and valuation of western coal lands.

Campbell, Prof. W(illia)m, Columbia University, New York, N. Y. *Metallurgy*. Newcastle-on-Tyne, England, June 24, 76. King's Col, London, 92; Oxford, 93-94; B.S. Durham, 98, M.S. 03, Sc.D. 05; Royal School of Mines, London, 99-01; fellow, Columbia, 02, Ph.D. 03, Barnard fellow, 03-05, A.M. 05. Lecturer geol. and demonstrator metal, Durham, 98-99; non-res. lecturer, Columbia, 03, instr. metal, 04-07, adj. prof, 07-10, assoc. prof, 10-14, prof, 14- Assoc. ed, 'Jour. Indust. and Eng. Chem,' 08-; 'School of Mines Quarterly'; metallographer, tech. branch, U. S. Geol. Surv, 08-12; U. S. Bur. Mines, 12-; mem. committee on alloy steels, Nat. Research Council; metallurgist, U. S. N., 17-, lieut. commander, R. F. 18, commander, 19-; Carnegie scholar, British Iron and Steel Inst, 02; Saville Shaw medal, Soc. Chem. Indust, 03. Min. Eng; Soc. Test. Mat. (chairman, committee on non-ferrous metals and alloys); fel. N. Y. Acad. (sec'y, sect. astron, physics and chem, 07-09, v. pres, 10); cor. mem. Can. Min. Inst; London Geol. Soc; British Iron and Steel Inst. Micro-structure and physical properties of metals and alloys; influence of heat and mechanical treatment on structure and properties of iron and steel and other alloys; opaque ores.

Campbell, Prof. W(illia)m Francis, 394 Clinton Ave, Brooklyn, N. Y. *Surgery*. Brooklyn, Nov. 7, 65. N. Y. Univ, 87; Long Isl. Col. Hosp, 92. Prof. anat, L. I. Col. Hosp, 01-19, clin. surg. 19- Surgeon, Swedish, Bushwick and Meth. Epis. Hospitals; consulting surgeon, Jamaica Hosp; surgeon-in-chief, Trinity Hosp. A.A.; Ass. Anat; Am. Med. Ass; fel. Am. Acad. Med; Ass. Mil. Surg; N. Y. Acad. Med; Brooklyn Surg. Soc; Brooklyn Path. Soc; Brooklyn Med. Club. Surgical anatomy.

Campbell, Director W(illiam) W(allace), Lick Observatory, Mt. Hamilton, Calif. **Astronomy, Astrophysics*. Hancock Co, Ohio, April 11, 62. B.S. Michigan, 86, hon. M.S. 99, Sc.D. 05; Pittsburgh, 00; LL.D. Wisconsin, 02. Prof. math, Colorado, 86-88; instr. astron, Michigan, 88-91; astronomer, Lick Observatory, 91-01, director, 01- Assoc. ed, 'Astrophys. Jour'; in charge, Lick Observatory eclipse exped. to India, 98, Georgia, 00, Spain, 05, Flint Island, 08, Russia, 15, Goldendale, 18. Silliman lecturer, Yale, 09-10, William Ellery Hale lecturer, 14; delegate, Int. Astron. Union, Brussels; Int. Research Council. Commander Order Leopold II. Janssen gold medal, Paris Acad; Draper, Bruce, and Royal Astron. Soc. medals. Nat. Acad; A.A. (pres, 15); Astron. Soc. (v. pres, 06-); Seismol. Soc; Philos. Soc; for. mem. Royal Soc; Royal Inst; for. assoc. Royal Astron. Soc; cor. mem. Bur. des Longitudes de France; Inst. de France. Comets and orbits; spectra of new stars, comets, nebulae, bright-line stars, etc; radial motions of stars; motion of solar system; spectroscopic binary stars; solar eclipse problems.

Camsell, Charles, Department of Mines, Ottawa, Can. *Geology*. Fort Liard, N. W. T, Can, 76.

B.A. Manitoba, 94; Queen's (Can), 01; Harvard, 03; Mass. Inst. Tech, 08-09. *Geologist*, Can. North. Ry, 02-03; *Can. Geol. Surv*, 04-, in charge B. C. branch, 18-, deputy minister, dept. mines. V. pres, 12th Int. Geol. Cong, 13. Geol. Soc; fel. Harvard Travelers Club; fel. Royal Soc. Can; fel. Royal Geog. Soc. Exploration; mineral resources; exploration of northern Canada.

Candy, Prof. A(lbert) L(uther), Station A, Lincoln, Nebr. *Mathematics*. Jonesboro, Ind, March 12, 57. A.B. Kansas, 92, A.M. 93; Ph.D. Nebraska, 98. Prof. math. and civil eng, Campbell Univ, Holton, Kans, 86-91; instr. math, Nebraska, 93-98, adj. prof, 98-03, asst. prof, 03-04, assoc. prof, 04-07, prof. pure math, 07-18, head, dept. math, 18-19, chairman, 19- A.A.; Math. Soc; Math. Ass. A theorem in transversals and its consequences; a mechanism for the solution of an equation of the nth degree; elimination of skidding due to steering mechanism used on motor cars.

Cann, Dr. Jessie Y(ereance), Smith College, Northampton, Mass. *Physical chemistry*. Newark, N. J, May 17, 83. A.B. Goucher, 04; A.M. Columbia, 10, Ph.D. 11. Instr. science, high sch, Belleville, N. J, 04-09; head, dept. chem, Rockford, 11-14; instr. Illinois, 14-17, assoc, 17-18; asst. prof, Smith, 18-19, assoc. prof, 19- Chem. Soc; Ill. Acad. Surface tension and the falling drop.

Cannon, A(mmie) J(ump), Harvard College Observatory, Cambridge, Mass. **Astronomy*. Dover, Del, Dec. 11, 63. B.S. Wellesley, 84, A.M. 07; Sc.D. Delaware, 18. Asst. Harvard Col. Observatory, 96-11, curator, 11- Chairman, fellowship committee, Maria Mitchell Observatory, Nantucket, Mass. A.A.; Astron. Soc; hon. mem. Royal Astron. Soc. Classification of stars by means of their photographic spectra; the spectrum of Nova Persei, No. 2; spectra of the stars; variable and new stars.

Cannon, G(eorge) L(yman), 1914 Pennsylvania St, Denver, Colo. *Geology*. New York, N. Y, March 10, 60. A.M. Denver, 00. Teacher, high sch, Denver, 87- Manager, Colo. Chem. Works, 82-87; asst. geologist, U. S. Geol. Surv, 88-89; lecturer nat. science, summer schools, Denver, Boulder, Palmer Lake, Colorado Springs, ten years. A.A.; Colo. Acad; hon. fel. Colo. Sci. Soc. (pres); Colo. Sci. Teachers Ass. (pres); Colo. Hist. and Nat. Hist. Soc. (pres, 17). Geology of Denver Basin; quaternary deposits of the South Platte Valley.

Cannon, Prof. W(alter) B(radford), Harvard Medical School, Boston, Mass. **Physiology*. Prairie du Chien, Wis, Oct. 19, 71. A.B. Harvard, 96, A.M. 97, M.D. 00. Instr. zool, Harvard, 99-00, *physiol*, Harvard Med. Sch, 00-02, asst. prof, 02-06, George Higginson prof, 06- Nat. Acad; A.A.; Physiol. Soc. (treas, 05-12, pres, 14-16); Soc. Exp. Biol; Am. Physicians; Psychol. Ass; Am. Röntgen Ray Soc; Am. Med. Ass; Gastro-Enterol. Ass. (pres, 10-12); Philos. Soc; Am. Acad; Boston Soc. Med. Sci. (pres, 08). Medical education; freedom of medical research; movements of stomach and intestines; mechanical factors in digestion; physiology of nerve plexuses; peripheral inhibition; glands of internal secretion; effects of emotions on bodily processes; traumatic shock.

- Cannon, Dr. W(illiam) A(ustin)**, Tucson, Ariz. **Botany*. Washington, Mich, Sept. 23, 70. A.B, Stanford, 99, A.M, 00; fellow, Columbia, 00-02. Ph.D, 02. Asst. bot, Stanford, 99-00; asst. in laboratories, N. Y. Bot. Garden, 02-03; res. investigator, *desert lab, Carnegie Institution*, 03-05, *mem. staff*, 05- Carnegie fellow, 03- A.A.; Soc. Nat; Bot. Soc; Ecol. Soc; West. Soc. Nat. Biology of desert plants; root systems of desert plants; aeration of roots.
- Canter, Dr. Hall, Ashland, Va.** *Chemistry*. Baltimore, Md, April 5, 73. A.B, Randolph-Macon, 92, A.M, 97; Ph.D, Hopkins, 00. Lecture asst. *chem*, Hopkins, 99; assoc, Tulane, 00; *prof*, Randolph-Macon, 00- A.A.; Chem. Soc. Benzene sulphonic acid derivatives; orthophenylsulphonebenzoic acid and derivatives.
- Caparó y Pérez, Prof. J(osé) A(ngel)**, Box 54, Notre Dame, Ind. *Mathematics, Electrical engineering*. Cuzco, Peru, S. A, Nov. 2, 88. C.E, Notre Dame, 08, M.C.E, 09, E.E, 09, M.S, 11, M.E, Ph.D, 13; ScD, St. Anthony, Peru, 10; A.M, Chicago, 19. Instr. physics and math, Notre Dame, 08-09; *prof. chem. and anthrop*, St. Anthony, Peru, 09-10; *prof. physics, math. and elec. eng*, Notre Dame, 12-14, *dean, dept. elec. eng*, 14- Instr. elec. eng, Carnegie Inst. Tech, 17. Hughes medal, Notre Dame. A.A.; Math. Soc; Elec. Eng; Math. Ass; Am. Geog. Soc; Ind. Acad. Some physical facts in their relation to the nervous system; non-Euclidean geometries and hyperspace.
- Capp, J(ohn) A(llen)**, 62 Bedford Road, Schenectady, N. Y. *Mechanical engineering*. Pennsylvania. *Chief, testing lab, Gen. Elec. Co*, 92-Mech. Eng; Min. Eng; Soc. Test. Mat. (pres, 19); British Inst. Metals; British Iron and Steel Inst. Materials of engineering.
- Capps, Prof. Joseph A(lmarin)**, 1215 E. 56th St, Chicago, Ill. *Medicine*. Jacksonville, Ill, Feb. 28, 72. A.B, Ill. Col, 91; M.D, Harvard, 95, fellow, 95-96, A.M, 97. Asst. *prof. med*, Rush Med. Col, 04-18, *prof*, 19- Chief, med. service, Cook Co. Hosp; lieut. col, M.C, A.E.F, 18-19. Am. Physicians; Soc. Clin. Invest. (v. pres, 09, pres, 16); Chicago Inst. Med. Morphology of blood; physiology of pleura; respiratory infections; venous blood pressure; epidemic streptococcus infection.
- Capps, Dr. S(tephen) R(eld)**, Jr, U. S. Geological Survey, Washington, D. C. *Geology*. Jacksonville, Ill, Oct. 15, 81. A.B, Chicago, 03, fellow, 05-07, Ph.D, 07. Instr. *physiog*, Chicago, 03-04; *with U. S. Geol. Surv*, 06- Geol. Soc; Wash. Acad; Wash. Geol. Soc. Glacial and areal geology; underground waters; areal and economic geology in Alaska.
- Card, Prof. Fred W(allace)**, Sylvania, Pa. *Agriculture*. Sylvania, Feb. 17, 63. B.S.A, Cornell, 92, M.S, 93. Asst. horticulturist, Cornell Exp. Sta, 93; assoc. *prof. hort*, Nebraska, 93-98; *prof. R. I. Col*, 98-07, *hort. and agr*, 01-07. Pomol. Soc. Horticulture; plant breeding; bush fruits; farm management.
- Card, John H(enry)**, 31 Elm Ave, Brockton, Mass. *Chemistry*. Deering, Maine, Nov. 22, 87. B.S, Dartmouth, 11. *Teacher science and math, high sch*, Southampton, N. Y, 11-12; New Bedford, Mass, 13-15; *science, Brockton*, 15- Research chemist, C. W. S, 18. A.A; Chem. Soc; New Eng. Ass. Chem. Teachers. War gases for cold weather offense.
- Cardiff, Dr. Ira D**, Tieton Drive and Grandview Ave, S, Yakima, Wash. *Botany*. Stark Co, Ill, June 20, 73. B.S, Knox, 97; fellow, Chicago, 03-04; Ph.D, Columbia, 06. Teacher and principal, pub. schools, Ill, 97-01; asst. bot, Columbia, 04-06; asst. *prof*, Utah, 06-07, *prof*, 07-08; Washburn, 08-12; plant path, Wash. State, 12-20, head, dept. bot, and director, Exp. Sta, 13-20. A.A; Kans. Acad; Utah Acad. (pres, 08). Morphology of Pteridophytes; cytology.
- Carey, Prof. E(ben) J(ames)**, Marquette School of Medicine, Milwaukee, Wis. *Anatomy*. Chicago, Ill, July 31, 89. B.S, Creighton, 16, M.S, 18, Sc.D, 20. Instr. *anat*, Creighton, 14-18, asst. *prof*, 18; *prof*, Marquette, 20- Lecturer histol, Chicago, 18. A.A; Ass. Anat. Biology; bone and joint development; teratology; myogenesis.
- Carhart, Prof. Daniel**, 1410 Center St, Wilkesburg, Pa. *Mathematics, Civil engineering*. Clinton, N. J, Jan. 28, 39. B.C.E, Polytech. Col. of Pa, 59, M.C.E, 69; hon. Sc.D, Pittsburgh, 97. Asst. *prof. math. and eng*, Polytech. Col. of Pa, 68-72, *prof*, 72-77; Pittsburgh, 82-92, *math. and civil eng. and dean, eng. faculty*, 92-08, *emer. prof. civil eng*, 08- Eng. Educ; West. Pa. Eng. Soc.
- Carleton, Prof. M(ark) A(lfred)**, United Fruit Co, Bocus del Toro, Panama. *Agronomy*. Jerusalem, Ohio, March 7, 66. B.S, Kansas State, 87, M.S, 93. Instr. nat. hist, Garfield Univ, 89-90, *prof*, 90-91; asst. botanist, Kans. Exp. Sta, 92-93; cerealist, bur. plant indust, U. S. Dept. Agr, 94-18; *field investigator*, U. S. Grain Corp, 19- Agr. explorer in Russia for U. S. Dept. Agr, 98-00; Pa. Chestnut Tree Blight Commission, 12-13; expert in charge, U. S. grain exhibit, and mem. int. jury, class 39, Paris Expos, 00. Chevalier du Mérite agricole, 01. A.A; Bot. Soc; Soc. Agron. (pres. 08); Phytopath. Soc; Ass. Geog; Wash. Bot. Soc; Wash. Biol. Soc; Kans. Acad. Uredineae of the Great Plains; cereal rusts of the United States; Russian cereals; durum wheats; climate in relation to wheat cultivation; ontogeny of cereal rusts; physiological relations of spring and winter cereals.
- Carleton, Prof. Paul W(hittier)**, Jackson Laboratory, Wilmington, Del. *Chemistry*. Haverhill, Mass, April 10, 83. A.B, Harvard, 06, A.M, 07, Ph.D, 11. Instr. *chem*, Case, 07-09; Wisconsin, 11-14, *asst. prof*, 14- Research chemist gas warfare, E. I. duPont de Nemours and Co, 17-19. Chem. Soc. Organic chemistry; quinone addition reactions; Grignard reaction; organic chemistry of titanium.
- Carlson, Prof. A(nton) J(ulius)**, University of Chicago, Chicago, Ill. **Physiology*. Svarteberg, Sweden, Jan. 29, 75. B.S, Augustana, 93, A.M, 99; Ph.D, Stanford, 02; hon. M.D, Lund, 18. Asst. *physiol*, Stanford, 01-02; research asst, Carnegie Institution, 03-04; assoc. *physiol*, Chicago, 04-05, asst. *prof*, 05-09, assoc. *prof*, 09-14, *prof*, 14- Instr. gen. and comp. *physiol*, Woods Hole, 05-07; lieut. col, Sanit. C, 17-18. Int. Zool. Cong, Graz, 10; Int. Cong. *Physiol*,

- Vienna, 10. Nat. Acad.; A.A.; Soc. Nat.; Physiol. Soc. (sec'y, 10); Soc. Exp. Biol.; Harvey Soc.; Chicago Path. Soc.; Soc. Biol. de Paris; hon. mem. Swedish Med. Soc. Rate of conduction of the impulse in nerves; the nature of the heart-beat; lymph formation and salivary secretion; comparative physiology of the circulation; comparative physiology of the thyroid and parathyroid; physiology of the alimentary tract and of the visceral sensory system.
- Carmalt, Prof. W(illiam) H(enry)**, 261 St. Ronan St, New Haven, Conn. *Surgery*. Friendsville, Pa., Aug. 3, 36. M.D., Columbia, 61; hon. A.M., Yale, 81. Lecturer ophthalm. and otol, Yale, 77-79, prof, 79-81, *principles and practise of surg*, 81-07, *emer. prof*, 07- Attending surgeon, New Haven Hosp, 77-08, consulting surgeon, 08-; consulting surgeon, Middlesex Hosp, Middletown, Conn. A.A.; Surg. Ass. (pres, 07); Ophthalm. Soc.; Am. Med. Ass.; Cong. Am. Physicians and Surgeons (sec'y, 88-13); Ass. Tuber; Soc. Int. Chirurgie. Abortion in cows; motility of young cancer cells; formation of new blood vessels in inflamed cornea; heredity in crime.
- Carman, Prof. Albert P(ruden)**, University of Illinois, Urbana, Ill. **Physics*. Woodbury, N. J., July 15, 61. A.B., Princeton, 83, fellow, 83-84, A.M., 85, Sc.D., 86; Berlin, 88-90. Instr. physics and math, Princeton, 84-88; *prof. physics and elec. eng*, Purdue, 90-93; *theoret. physics*, Stanford, 93-96; *physics, Illinois*, 96- A.A.; Physiological Soc. Collapsing pressure of tubes; volumometers; rectifiers; thermal conductivities at high temperatures.
- Carman, Prof. J(oel) Ernest**, Ohio State University, Columbus, Ohio. *Geology*. St. Charles, Iowa, Aug. 13, 82. B.S., Simpson (Iowa), 01; M.Di., Iowa State Nor. Sch, 03; Chicago, 04-05, fellow, 05-07, Ph.D., 16. Teacher science, high sch, Council Bluffs, Iowa, 02-04; instr. geol., Cincinnati, 08-16; asst. prof, *Ohio State*, 16-17, *prof. hist. geol. and curator, museum*, 17- Asst., Ill. Geol. Surv, 06; junior geologist, U. S. Geol. Surv, 07; asst., Iowa Geol. Surv, 09; Ohio Geol. Surv, 17- A.A.; Geol. Soc.; Ohio Acad. Pleistocene of northwestern Iowa; stratigraphy of Ohio.
- Carmichael, Dr. Henry**, Highland Terrace, Malden, Mass. *Chemistry*. Brooklyn, N. Y., 46. A.M., Amherst, 67; Ph.D., Göttingen, 71. Prof. chem., Grinnell, 71; Bowdoin, and lecturer, Med. Sch. of Maine, 72-86; state assayer, Maine, 72-86; *assayist and inventor*, 86- Lecturer, Mass. Inst. Tech, 99-01. Chem. Soc.; Soc. Chem. Indust.; Min. Eng. Processes in manufacture of soda, bleach and fiberware.
- Carmichael, Prof. R(obert) D(aniel)**, University of Illinois, Urbana, Ill. **Mathematics*. Goodwater, Ala., March 1, 79. A.B., Lineville, 98; fellow, Princeton, 09-11, Ph.D., 11. Prof. math, Ala. Presb. Col, 06-09; asst. prof, Indiana, 11-12, assoc. prof, 12-15; asst. prof, *Illinois*, 15-18, assoc. prof, 18-20, *prof*, 20- Ed.-in-chief, 'Am. Math. Monthly,' 18-19. A.A.; Math. Soc. (councilor, 16-18, chairman, Chicago sect, 20-); Math. Ass. (councilor, 17); Circolo Mat. di Palermo. Theory of difference and differential equations; theory of numbers; theory of relativity.
- Carney, Prof. Frank**, 208 S. Chautauqua St, Wichita, Kans. *Geology, Geography*. Watkins, N. Y., March 15, 68. A.B., Cornell, 02, Ph.D., 09. Instr., Starkey Sem, N. Y., 88-91; prof. math. and lang, Keuka, 95-00; v. principal, high sch, Ithaca, N. Y., 01-04; prof. geol., Denison, 04-17; *chief geologist, Nat. Ref. Co*, 17- Lecturer geog., Virginia, summer, 09. A.A.; Geol. Soc.; Ass. Geog.; Ohio Acad. (pres, 08). Glacial geology; stream diversion; metamorphism of glacial drift; raised beaches; glacial lakes of northern Ohio; geographic influences in Ohio.
- Carney, Prof. R(obert) J(ohn)**, 720 Whaley Court, Ann Arbor, Mich. *Chemistry*. Sturgis, Mich., July 19, 84. A.B., Michigan, 07, Ph.D., 16. Instr. *anal. chem, Michigan*, 07-16, *asst. prof*, 16- Chem. Soc. (sec'y, Univ. of Mich. sect, 17-). Analytical chemistry; thorium; rare earths.
- Carothers, Dr. E(stella) Eleanor**, University of Pennsylvania, Philadelphia, Pa. *Zoology*. Newton, Kans., Dec. 4, 82. A.B., Kansas, 11, fellow, 11-12, A.M., 12; Pepper fellow, Pennsylvania, 13-14, Ph.D., 16. *Asst. zool, Pennsylvania*, 14- Univ. of Pa. scientific expedition to south. and west. states, 15, 19. A.A.; Soc. Nat.; Soc. Zool. Orthopteran cytology and genetics with special reference to heteromorphic homologous chromosomes.
- Carpenter, Prof. A(llen) F(uller)**, University of Washington, Seattle, Wash. *Mathematics*. Marengo, Iowa, June 12, 80. A.B., Hastings, 01; A.M., Nebraska, 09; Ph.D., Chicago, 15. Instr. *math*, Hastings, 01-04, prof, 04-08; instr., Nebraska, 08-09; *Washington (Seattle)*, 09-13, asst. prof, 13-18, *assoc. prof*, 18- A.A.; Math. Soc. Projective differential geometry of ruled surfaces.
- Carpenter, C(larence) W(illard)**, Experiment Station, Hawaii Sugar Planters' Association, Honolulu, Hawaii. *Plant pathology*. Westport, N. Y., Sept. 23, 88. B.S., Vermont, 11, M.S., 12. Asst. bacteriologist, Vt. Exp. Sta, 11-12; scientific asst. path, bur. plant indust, U. S. Dept. Agr, 12-16; pathologist, Hawaiian Agr. Exp. Sta, 16-19. A.A.; Phytopath. Soc.; Wash. Bot. Soc. Bacteriology; microorganisms of maple sap; the fusarium problem.
- Carpenter, Prof. C(lifford) D(aniel)**, 114 Morningside Drive, New York, N. Y. *Chemistry*. Union, Mich., Aug. 16, 81. A.B., Mich. State Nor. Col, 06; Chicago, 08-12, Ph.D., 15. Teacher math. and sciences, high sch, Ontonago, Mich, 03-04; Mansfield, Ohio, 06-07; Newark, 07-09; Univ. of Chicago High Sch, 10-12; instr. *chem*, Teachers Col, Columbia, 12-14, *asst. prof*, 14-19, *Columbia*, 19- A.A.; Chem. Soc. Inorganic and physical chemistry; addition products of sulphuric acid with organic compounds; vapor pressure.
- Carpenter, Dr. Ford A(shman)**, Central Building, Los Angeles, Calif. *Meteorology*. Chicago, Ill., March 25, 68. High sch. and acad; L.L.D., Whittier, 13. Asst. observer, Sig. C, U.S.A., Portland, Oregon, 88-90, San Francisco, 91; observer, U. S. Weather Bur, Carson City, Nev, 92-96, San Diego, Calif, 96-06, local forecaster, 06-12, meteorologist, Los Angeles, 12-19; *manager, dept. meteorol. and aeronaut, Los Angeles Chamber of*

- Commerce*, 19— Asst. Carson Observatory, Carson City, and director in charge, Nev. State Weather Service, 92–96; lecturer meteorol., San Diego State Nor. Sch., 01–14; California, 14–17, southern branch, 19—; U. S. Aviation Sch., San Diego, Calif., 15–16; U. S. Balloon Sch., Ross Field, Calif., 19—; mem. aeronaut. research committee, Calif. Inst. Tech. Meteorol. exped. to Baja Calif., Mex., 03; asst. forecast div., Washington, D. C., 08; climatol. commissioner, Seattle Expos., 09. Medal, Alaska-Yukon-Pacific Expos., 09. Int. Cong. Arts and Science, St. Louis, 04; Eighth Int. Geog. Cong., Washington, 04; Int. Cong. Tub., Washington, 08. A.A.; Meteorol. Soc.; assoc. Civil Eng.; Aero Club; Climat. Ass.; S. Calif. Acad.; San Diego Nat. Hist. Soc. (sec'y, 01–12); San Diego Photog. Soc. (pres, 99–01); San Diego Marine Biol. Ass.; fel. Royal Meteor. Soc. Aeronautics; air charting; applied meteorology and climatology; climatology of southern California.
- Carpenter, F(rank) B(erton)**, Virginia-Carolina Chemical Co., Richmond, Va. *Chemistry*. Leyden, Mass., May 7, 64. B.S., Mass. Col., 87. Asst. chemist, Mass. Exp. Sta., 87–89; N. C. Exp. Sta., 89–05; *chief chemist*, Virginia-Carolina Chem. Co., 05— A.A.; Chem. Soc.; Soc. Chem. Indust. Agricultural chemistry; tobacco.
- Carpenter, Dr. F(rederic) W(alton)**, Trinity College, Hartford, Conn. *Zoology*. Millbrook, N. Y., May 12, 76. B.S., N. Y. Univ., 99; A.M., Harvard, 02, Ph.D., 04. Instr. zool., Illinois, 04–08, assoc. and later asst. prof., 08–13; *prof. biol.*, Trinity, 13— Lecturer biol., summer sch., N. Y. Univ., 04, 05; director, Bermuda Biol. Sta., 09. A.A.; Soc. Zool.; Ass. Anat. Development of nerves; reactions of insects; reactions of corals; histology of the autonomic nervous system.
- Carpenter, Prof. H(ubert) V(inton)**, 300 Oak St., Pullman, Wash. *Physics*, *Engineering*. Mt. Carroll, Ill., 75. B.S., (E.E.), Illinois, 97, M.S., 99. Asst. physics, Illinois, 97–99, instr., 99–01; *asst. prof. mech. and elec. eng.*, Wash. State, 01–05, *prof.*, 05—, *dean mech. arts and eng.*, 17— Educ. director, sect. B, S.A.T.C., 18. A.A.; fel. Elec. Eng.; Mech. Eng.; Ass. Prof. Methods in electrical measurements; the analytical balance; methods for calculating transmission lines; flow of steam; electrical instruments; thermal insulation; hydraulic governors.
- Carpenter, Prof. L(ouis) G(eorge)**, 1455 Gilpin St., Denver, Colo. *Irrigation engineering*. Orion, Mich., March 28, 61. B.S., Mich. Agr. Col., 79; M.S., Michigan, 84; Hopkins, 85–88. Instr. math, Mich. Agr. Col., 81–85, asst. prof., 85–88; *prof. eng. and physics*, Colo. Agr. Col., 38—, *meteorologist and irrig. engineer*, Exp. Sta., 88—, *director*, 99— Special agent, artesian well investigation, U. S. Dept. Agr., 90, irrig. expert, 02; co-editor, 'Standard Diet'; state engineer, Colo., 03–05; consulting engineer and expert for Colo. in Kans. interstate water litigation, 03–06; mem. Irrig. Commission, B. C., 07–08; consulting engineer. Chevalier du Mérite agricole, 95; gold medal, Paris Expos., 00. A.A.; Irrig. Eng. (pres, 93); Soc. Prom. Agr. Sci.; Ass. Agr. Col. (v. pres); Eng. Educ.; Soc. Test. Mat.; Forestry Ass.; Mich. Eng. Soc.; British Ass. Measurement of water; gain and loss of water from streams; duty water; water supply.
- Carpenter, Dr. T(horne) M(artin)**, 159 Corey St., West Roxbury, Mass. *Physiology*. Malden-on-Hudson, N. Y., Sept. 18, 78. B.S., Boston, 02; Mass. Col., 02; Ph.D., Harvard, 15. Asst. chemist, exp. sta., Pa. State, 02–05; *research chemist*, Carnegie Institution, 05–07, *nutrition lab*, Boston, Mass., 07— Asst. chemist, Mass. Exp. Sta., 02; expert animal nutrition, bur. animal indust., U. S. Dept. Agr., 02–05, scientific asst. nutrition, 05–07. A.A.; Physiol. Soc.; Soc. Biol. Chem. Respiratory exchange and calorimetry of man; rectal feeding; alcohol ingestion.
- Carr, Dr. Emma P(erry)**, Mt. Holyoke College, South Hadley, Mass. *Chemistry*. Holmesville, Ohio, July 23, 80. Instr. chem., Mt. Holyoke, 05–08, assoc. prof., 10–13, *prof.*, 13— Chem. Soc. Physical chemistry; ultra-violet absorption spectra.
- Carr, Prof. H(arvey)**, University of Chicago, Chicago, Ill. **Psychology*. Morris, Ill., April 30, 73. B.S., Colorado, 01, M.S., 02; Ph.D., Chicago, 05. Instr. psychol., Pratt Inst., 06–08; asst. prof., Chicago, 08–16, *assoc. prof.*, 16— Psychol. Ass. (councilor, 16). Comparative psychology; visual space perception; educational theory.
- Carr, Maurice L(eroy)**, Marietta, Ohio. *Physics*. Avon, Ill., April 17, 77. B.S., Illinois, 05, E.E., 11. Asst. eng. exp. sta., Illinois, 05–06; supt. testing dept., Peoria Gas and Elec. Co., 06–07; engineer, Underwriters' Laboratories, 07–20; *director, reesarch lab*, The Safe-Cabinet Co., 20— A.A.; Physical Soc.; Soc. Test. Mat.; West. Soc. Eng. Strength of boiler flues; effects of heat on materials; heat insulating materials.
- Carr, Prof. Ralph Howard**, 27 N. Salisbury St., La Fayette, Ind. *Agricultural chemistry*. Wooster, Ohio, Aug. 28, 78. A.B., Wooster, 00; A.M., Wisconsin, 10, Ph.D., 13. Chemist, Western Elec. Co., 02–04; instr., Buena Vista, 05–08; Emporia, 09–11; *Purdue*, 13— Chemist, South. Marble Co. A.A.; Chem. Soc.; Soc. Agron.; Ind. Acad. Amino acids in hays; non-protein nitrogen in alfalfa; rate of decay of manures; digestion.
- Carr, Dr. W(illiam) P(hillips)**, 1801 K St., N. W., Washington, D. C. *Surgery*, *Physiology*. Boydton, Va., May 10, 58. Randolph-Macon, 74–76; M.D., George Washington, 88. *Prof. physiol.*, George Washington, 94— Surgeon, Emergency Hosp., 95—; prosecutor anat., lecturer anat. and surg. and coroner, 96–99; assoc. surgeon, Univ. Hosp. and consulting surgeon, Wash. Asylum Hosp., 98— Ass. Anat.; Am. Med. Ass.; South. Surg. and Gynec. Soc.; D. C. Obstet. and Gynec. Soc. Physiology of nerves; pathology of tumors.
- Carrel, Dr. Alexis**, Rockefeller Institute for Medical Research, New York, N. Y. **Surgery*. Ste. Foy les Lyon, France, June 28, 73. L.B., Lyon, 90, Sc.B., 91, M.D., 00; hon. Sc.D., Columbia, 13; Brown; Princeton; M.D., Belfast. *Mem. Rockefeller Inst.* Nobel prize med, 12. *Commandeur Légion d'honneur*. Fel. Surg. Ass.; Physiol. Soc.; Soc. Exp. Path.; Soc. Exp. Biol.; Philos. Soc. Experimental surgery; biology.
- Carrick, Dr. D(oak) B(ain)**, U. S. Bureau of Markets, Chicago, Ill. *Agriculture*. Lexington, N. C., Dec. 11, 88. A.B., Wake Forest, 10; Ph.D., Cornell, 17. *Investigator*, bur. markets, U. S.

- Dept. Agr.*, 17- Soc. Hort. Sci. Influence of low temperatures upon plant tissue; marketing.
- Carrier, Lyman**, U. S. Department of Agriculture, Washington, D. C. *Agronomy*, Duffield, Mich., Oct. 11, 77. B.S., Mich. Agr. Col., 02, M.Agr., 13. Scientific asst., bur. plant indust., U. S. Dept. Agr., 05-07; prof. agron., Va. Polytech., and agronomist, Exp. Sta., 08-14; *agronomist, bur. plant indust., U. S. Dept. Agr.*, 14- A.A.; Soc. Agron. (treas., 11, second v. pres., 13, sec'y-treas., 18-). Farm crops; grazing.
- Carrigan, W(illiam) T(homas)**, Somerset, Md. *Astronomy*. Ellicott City, Md., Jan. 17, 65. Common sch. and acad. *Asst.*, 'Nautical Almanac,' 01- Made computations under Gould and Watson funds. Astron. Soc. Mathematical astronomy; asteroid orbits; direction of the sun's motion in space; methods for finding the position of an unknown planet from its action on a known body; second and third order perturbations of Mars; secular variation of the moon's mean motion.
- Carroll, Prof. (Alexander) Mitchell**, The Octagon, Washington, D. C. *Archaeology*. Wake Forest, N. C., June 2, 70. A.M., Richmond, 88; Ph.D., Hopkins, 93; Leipzig and Berlin, 93-94; Am. Sch. of Classical Studies, Athens, 97-98. Prof. Greek, Richmond, 95-97; reader classical archeol., Hopkins, 98-99; *prof. classical philol., George Washington*, 99-12, *archeol. and hist. of art*, 12- Director and ed., 'Art and Archeol.' 18- A.A.; Archeol. Inst. (assoc. sec'y, 03-07, sec'y, 07-10, gen. sec'y, 11-18); Philos. Ass.; Wash. Acad. (v. pres., 10-). Classical archeology.
- Carroll, Dr. Franklin B(ache)**, 617 S. 16th St., Philadelphia, Pa. *Botany*. Philadelphia, Feb. 23, 87. B.S., Pennsylvania, 13, Ph.D., 17. Teacher bot., Northeast High Sch., Phila., 13-17. In Sanit. C., U. S. A., 17-19; instr. bot., A. E. F. Univ., Beaune, 19. A.A. Plant morphology.
- Carroll, Dr. Mitchel**, Franklin and Marshall College, Lancaster, Pa. *Entomology, Cytology*. Philadelphia, Pa., July 7, 85. B.S., Pennsylvania, 15, Harrison fellow, 16-18, Ph.D., 19. Asst. zool., Pennsylvania, 15-16; asst. entomologist, N. J. Exp. Sta., 18-20; *prof. biol., Franklin and Marshall*, 20- A.A.; Ass. Econ. Entom. Larva of *Mecistogaster modestus*; spermatogenesis of *Cannula pellucida*; numerical variations in the chromosome complex within the individual.
- Carroll, Prof. W(illiam) E(mest)**, Utah Experiment Station, Logan, Utah. *Animal husbandry*. Orderville, Utah, Nov. 8, 82. B.S., Utah Col., 09; M.S., Illinois, 11, fellow, 13-14, Ph.D., 14. Assoc. prof. *animal husbandry, Utah Col.*, 11-13, *prof.*, 14- A.A.; Soc. Animal Production; Utah Acad. Animal nutrition.
- Carruth, Prof. W(illiam) M(asse)**, Clinton, N. Y. *Mathematics*. Cleveland, Ohio, April 22, 79. A.B., Cornell, 01, 04-07. Asst. prof. *math., Hamilton*, 07-12, assoc. prof., 12-17, *prof.*, 17- Math. Soc.; Math. Ass. Points of inflection of plane quartic curves.
- Carsner, Eubanks**, Citrus Experiment Station, Riverside, Calif. *Plant pathology*. San Antonio, Tex., July 19, 91. A.B., Texas, 12; M.S., Wisconsin, 14, Ph.D., 17. Teacher bot. and chem., high sch., Amarillo, Tex., 12; asst. plant path., Wisconsin, 14; Va. Exp. Sta., 15; pathologist, office of sugar plant investigations, *bur. plant indust., U. S. Dept. Agr.*, 17- A.A.; Bot. Soc.; Phytopath. Soc.
- Carson, John R(enshaw)**, 195 Broadway, New York, N. Y. *Electrical engineering*. Pittsburgh, Pa., June 28, 87. B.S., Princeton, 07, E.E., 09, M.S., 12. Engineer, research dept., Westinghouse Elec. and Mfg. Co., 10-12; instr. physics and elec. eng., Princeton, 12-14; *engineer, transmission dept., Am. Telephone and Telegraph Co.*, 14- A.A.; Math. Soc.; Radio Eng. Electric circuit theory; electric wave propagation; electron theory.
- Carter, Prof. Benj(amin) E(dward)**, 3 Center Place, Waterville, Maine. *Mathematics*. Warren, Conn., March 7, 66. A.B., Harvard, 90, A.M., 92. Instr. *math.*, Mass. Inst. Tech., 93-10; asst. prof., *Colby*, 10-18, *assoc. prof.*, 18- A.A.; Math. Soc.; Math. Ass.
- Carter, Dr. C(arnie) B(lake)**, Mellon Institute, Pittsburgh, Pa. *Chemistry*. B.S., North Carolina, 13, M.S., 14, Ph.D., 16. *Research chemist, Mellon Inst.*, 16- Chem. Soc.; Leather Chem. Soc.
- Carter, Edgar B(rock)**, 2615 Ashland Ave., Indianapolis, Ind. *Bacteriology*. Elkinsville, Ind., April 22, 86. A.B., Indiana, 11. *Director, biol. lab., Swan-Myers Co.*, 15- A.A.; Pub. Health Ass.; Pharmaceut. Ass.; Chem. Soc. (sec'y-treas., Ind. sect., 18, sec'y, div. chem. and med. products, 19-); Soc. Bact. (sec'y, Ind. branch, 19-); Indianapolis Sciencetech. Club. Bacteriology of hemorrhagic septicemia in swine.
- Carter, Prof. Edna**, Vassar College, Poughkeepsie, N. Y. *Physics*. High Cliff, Wis., Jan. 29, 72. A.B., Vassar, 94; Chicago, 98-99; Ph.D., Würzburg, 06, 11-12. Asst. principal, high sch., De Pere, Wis., 95-96; asst. *physics*, Vassar, 96-98; State Nor. Sch., Oshkosh, Wis., 99-04; instr., *Vassar*, 06-11; assoc. prof., 12-20, *prof.*, 20- A.A.; Physical Soc. Relation of the energy of the Röntgen rays to the energy of the cathode rays producing them; discharge potentials across very short distances; metallic spectra produced in high vacua.
- Carter, Prof. Gardner L(loyd)**, University, Va. *Chemistry*. Alexandria, Va., March 1, 90. A.M., Virginia, 13, Ph.D., 16. Asst. prof. *chem.*, Vanderbilt, 16-18; *assoc. prof., Virginia*, 18- Asst. gas chemist, U. S. Dept. Int., 17-18. Chem. Soc.
- Carter, Dr. Henry E(ose)**, U. S. Marine Hospital, Baltimore, Md. *Medicine*. Caroline Co., Va., Aug. 25, 52. C. and M.E., Virginia, 73; M.D., Maryland, 79, LL.D., 10. *Commissioned officer, U. S. Pub. Health Service*, 79- Chief, quarantine office, Cuba, 98-00; Isthmian Canal Commission, 04-05, director, hospitals, 05-09; mem. yellow fever commission, Int. Health Board; sanit. adviser, Peruvian Govt. Soc. Trop. Med.; London Soc. Trop. Med. and Hygiene; Venezuela Acad. Med. Maritime quarantine; prevention of yellow fever and malaria.
- Carter, Dr. W(illiam) S(pencer)**, University of Texas, Galveston, Tex. *Physiology*. Warren Co., N. J., April 11, 69. M.D., Pennsylvania, 90. Res. physician, Phila. Hosp., 90; Presb. Hosp., 91; asst. physiol., Pennsylvania, 91-92, asst. demonstrator path., 92-95, asst. prof. comp.

- physiol. and demonstrator physiol, 95-97; *prof. physiol, Texas*, 97-, *dean, med. faculty*, 03-Quiz master, Med. Inst, Phila, 91-96. *Physiol. Soc*; *Phila. Path. Soc*; *Phila. Col. Physicians. Leucocytosis and blood-serum*; cause of uremia; action of drugs and poisons; poisonous mushrooms; functional relation of the parathyroids to the thyroid gland; prophylaxis and public control of tuberculosis; the milk supply of cities; secretory action of renal epithelium; absorption; autodigestion; effect of ether anesthesia upon the alkali reserve of the blood.
- Cartledge, Dr. G(roves) H(oward)**, Johns Hopkins University, Baltimore, Md. *Chemistry*. Gainesville, Ga, Feb. 10, 91. A.B, A.M, Davidson, 11; Ph.D, Chicago, 16. Acting prof. chem, Davidson, 12-13; prof. chem. and physics, Presbyterian (S. C), 13-17; assoc. prof. chem, Davidson, 17-18; chief chemist, Richmond Levering and Co, 19-20; *assoc. prof. chem, Hopkins*, 20- With C.W.S, U.S.A. A.A; Chem. Soc; Soc. Test. Mat. Radioactivity; petroleum.
- Carty, J(ohn) J(oseph)**, 195 Broadway, New York, N. Y. **Electrical engineering*. Cambridge, Mass, April 14, 61. Hon. Eng.D, Stevens, 15; Sc.D, Chicago and Bowdoin, 16; LL.D, McGill, 17; Sc.D, Tufts, 19. With Bell Telephone Co, Boston, 79; in charge, cable dept, West. Union Tel. Co, 87-89; chief engineer, Metropolitan Telephone and Telegraph Co, 89-07; *Am. Telephone and Telegraph Co*, 08-09, *v. pres*, 19- Trustee, Carnegie Institution; director, Research Corporation; mem. Nat. Research Council; major and col, Sig. O.R.C, 17; on staff, Gen. Edgar Russell, A.E.F, 18-19; col. sig. sect, O.R.C, 19. D. S. medal; Officier Légion d'honneur. Longstreth medal, Franklin Inst, 03; Franklin medal, 16; Edison medal, Elec. Eng, 18; Japanese Order of the Rising Sun; Japanese Order of the Sacred Treasure of Meiji. Nat. Acad; A.A; fel. Elec. Eng. (pres, 15, past manager, *v. pres*, 04-06, 08-11); Physical Soc; hon. fel. Electrotherapeut. Ass; hon. mem. Franklin Inst; Eng. Educ; Indust. Educ; Am. Geog. Soc; Japan Soc; Am. Acad; fel. N. Y. Acad; N. Y. Elec. Soc. (pres, 03); hon. mem. N. Y, Pa. and New Eng. Telephone Societies. Telephone; wireless telephone; transcontinental and transoceanic telephone.
- Carver, Dr. B(enjamin) F(ranklin)**, Standard Oil Co, Bayway, N. J. *Chemistry*. Hanover, Pa, Sept. 10, 78. B.S, Pennsylvania Col, 00, M.S, 03; Ph.D, Hopkins, 03. *Chemist, Standard Oil Co*, N. Y. City, 03-18, *asst. chief chemist*, N. J, 18- New semi-permeable membranes prepared by the electrolytic method.
- Carver, Prof. G(ail) L(uke)**, West Lake, Ga. *Zoology*. Climax, Mich, Feb. 4, 78. A.B, Michigan, 07, A.M, 08; Columbia, 12-13. Acting prof. physics and astron, Mercer, 07-08, prof. biol, 08-18. A.A; Bot. Soc; Micros. Soc; Marine Biol. Ass. Hybridization effects in *Drosophila*.
- Carver, Dr. Walter B(uckingham)**, 109 College Ave, Ithaca, N. Y. *Mathematics*. Town Hill, Pa, Jan. 11, 79. Gettysburg, 95-96; Ph.B, Dickinson, 99; fellow, Hopkins, 03-04, Ph.D, 04. Asst, Hopkins, 00-01; prof. math. and physics, Ursinus, 04-06; instr. math, Cornell, 06-10, *asst. prof*, 10- Math. Soc; Math. Ass. Projective geometry.
- Carveth, Dr. Hector Russell**, Niagara Falls, N. Y. *Chemistry*. Port Hope, Ont, Jan. 23, 73. B.A, Victoria and Toronto, 96; fellow, Cornell, 96-98, Ph.D, 98, hon. fellow, 98-99. Instr. gen. chem, Cornell, 99-00, physical chem, 00-05; chemist, Int. Acheson Graphite Co, 05-06; works manager, *Niagara Electrochem. Co*, 06-17, *gen. manager*, 17-; *v. pres*, *Roessler and Hasslacher Chem. Co*, *Stebbins Products Co*, and *pres*, *Pacific R and H Chem. Co*, 17- Chem. Soc; Electrochem. Soc; Soc. Chem. Indust. Vapor composition and phase separations; electrochemical processes.
- Cary, Austin**, U. S. Forest Service, Washington, D. C. *Forestry*. East Machias, Maine, July 31, 65. A.B, Bowdoin, 87, A.M, 90. Surveying work for Maine and U. S. Forestry Dept, 90-98; forester, Berlin Mills Co, 98-04; asst. prof. forestry, Harvard, 05-09; state supt. forests, N. Y, 09-10. A.A. Forest resources of New England and the southern United States.
- Cary, Prof. L(ewis) R(obinson)**, Princeton University, Princeton, N. J. *Zoology*. Topsham, Maine, Sept. 1, 80. B.S, Maine, 01, M.S, 02; Ph.D, Princeton, 09. Asst. biol, Maine, 01-03; zoologist, Gulf Biol. Sta, La, 05-08; instr. biol, Princeton, 10-15, *asst. prof*, 16- Research assoc, Carnegie Institution exped. to Samoa and Fiji, 17- A.A; Soc. Nat; Soc. Zool. Embryology of trematodes and coelenterates; coral reef formation.
- Cary, Dr. William E**, 5441 Kimbark Ave, Chicago, Ill. *Bacteriology*. Gansevoort, N. Y, Nov. 17, 88. B.S, Earlham, 12; Ph.D, Chicago, 16, M.D, Rush Med. Col, 20. Instr. bacter. and hygiene, Chicago, 16-19; *intern, Presb. Hosp, Chicago*, 20- Soc. Bact. Immunity; clinical medicine.
- Casamajor, Prof. Louis**, 40 E. 41st St, New York, N. Y. *Neurology*. Brooklyn, N. Y, Aug. 12, 81. A.B, Columbia, 03, A.M, M.D, 06. *Chief, clinic*, N. Y. Neur. Inst, 09-15; *Vanderbilt Clinic*, 15-; instr. neur, Columbia, 14-15, asst. prof, 15-16, assoc. prof, 16-19, *prof*, 19- Capt, M.R.C, 17-18, major, 18-19. Neur. Ass; Soc. Anat; Medico-Psychol. Ass; Am. Med. Ass. Psychiatry.
- Case, Prof. E(rmine) C(owles)**, University of Michigan, Ann Arbor, Mich. **Paleontology, Geology*. Kansas City, Mo, Sept. 11, 71. A.B, A.M, Kansas, 93; M.S, Cornell, 95; Ph.D, Chicago, 96. Asst. chem, Kansas, 93-95; instr. vert. paleont, Chicago, 96; prof. geol. and physical geog, State Nor. Sch, Milwaukee, 97-07; junior prof. *hist. geol. and paleont, Michigan*, 08-16, *prof*, 16- Research assoc, Carnegie Institution. A.A; Geol. Soc; Paleont. Soc; Soc. Mammal; Mich. Acad. (pres, 12); Wash. Acad. Osteology and morphology of extinct reptiles; morphology of Permian vertebrates of America.
- Casey, Col. Tho(mas) L(incoln)**, U. S. A, Stoneleigh Court, Washington, D. C. *Entomology, Paleontology*. West Point, N. Y, Feb. 19, 57. Sheffield Sci. Sch, Yale, 74-75; grad, U. S. Mil. Acad, 79. All grades to col, U. S. Corps Engineers, 79- Mem. transit of Venus exped. to Cape of Good Hope, 82-83; Greer Co. Commis-

- sion, Tex, 86; Miss. River Commission, 02-06; engineer sec'y, Lighthouse Board, 06-10. A.A.; Soc. Nat; Calif. Acad; fel. N. Y. Acad. (ed, 'Annals,' 90-95); Wash. Entom. Soc; Phila. Acad; Wash. Acad; Soc. entom. de France. Coleoptera; southern Tertiary paleontology.
- Caspari, Dr. Charles E(dward)**, St. Louis College of Pharmacy, St. Louis, Mo. *Chemistry*. Baltimore, Md, April 9, 75. A.B, Hopkins, 96, fellow, 99-00, Ph.D, 00. Asst. to Dr. Ira Remsen, Hopkins, 99-00; org. chem, Columbia, 00-01; research chemist, Mallinckrodt Chem. Works, 01-03; *prof. chem, St. Louis Col. Pharmacy, 03-* Field asst, U. S. Geol. Surv, summer, 98; mem. committee on revision, U. S. Pharmacopoeia, 10- A.A.; Chem. Soc; Pharmaceut. Ass; St. Louis Chem. Soc. The fat contained in the seeds of the spice bush (*Lindera benzoin*); the determination of codein in opium.
- Casteel, Dr. D(ana) B(rackenridge)**, University Station, Austin, Tex. *Zoology*. Grafton, W. Va, May 15, 77. A.B, Allegheny, 99; A.M, Ohio Wesleyan, 00; fellow, Pennsylvania, 02-04, Ph.D, 03. Acting prof. biol, Missouri Valley, 04-05; instr. *zool*, Michigan, 05-09; *Texas*, 09-11, adj. prof, 11-14, assoc. prof, 14-19, *prof*, 19- Soc. Zool. Molluscan embryology; reptilian and insectan behavior; cytology.
- Castle, Dr. W(illiam) E(mnest)**, Payson Road, Belmont, Mass. **Zoology*. Alexandria, Ohio, Oct. 25, 67. A.B, Denison, 89; A.B, Harvard, 93, A.M, 94, Ph.D, 95. Prof. Latin, Ottawa (Kans), 89-92; instr. *zool*, Wisconsin, 95-96; Knox, 96-97; *Harvard*, 97-02, asst. prof, 03-08, *prof*, 08- Nat. Acad; A.A.; Soc. Nat. (sec'y, 06, pres, 19); Soc. Zool. (v. pres, 04, pres, east. branch, 06); Philos. Soc; Am. Acad; Boston Soc. Nat. Hist. Embryology of tunicates; metamorphism of leeches; heredity; sex-determination.
- Caswell, Prof. A(lbert) E(dward)**, University of Oregon, Eugene, Oregon. *Physics*. Winnipeg, Can, May 24, 84. A.B, Stanford, 08, Ph.D, 11. Asst. *physics*, Stanford, 08-11; instr, Purdue, 11-13; *Oregon*, 13-15, asst. prof, 15-17, *prof*, 17- Nat. research fellow physics, 19-20. A.A.; Physical Soc. Peltier and Thomson E.M.F. of metals and bismuth-tin alloys; electron theory; thermoelectric, thermomagnetic and galvanomagnetic properties of metals.
- Caswell, Dr. R(obert) G(amble)**, P. O. Box 525, Wilmington, Del. *Chemistry*. Narragansett Pier, R. I, April 7, 91. Ph.B, Brown, 11, M.S, 12, Ph.D, 14. Instr. chem, Brown, 11-14; asst. prof. org. chem, Colby, 14-18; *research chemist, E. I. duPont de Nemours and Co*, 18- A.A.; Chem. Soc. Organic chemistry; hydroaromatic compounds; bromhexamethylene; anthraquinone colors.
- Cathcart, Cha(rle)s S(Anderson)**, New Brunswick, N. J. *Chemistry*. New Brunswick, Jan. 2, 65. B.S, Rutgers, 86, M.S, 89. Asst. chemist, Listers Agr. Chem. Works, 86-92, chief chemist, 93-07; *state chemist, N. J. Exp. Sta*, 07- Chem. Soc; Agr. Chem. Agricultural chemistry.
- Cathcart, Prof. W(illiam) L(edyard)**, 636 Westview St, Germantown, Philadelphia, Pa. *Marine and mechanical engineering*. Mystic, Conn, Aug. 12, 55. Pennsylvania, 71; grad, U. S. Naval Acad, 75. Engineer Corps, U.S.N, 75-91; chief engineer, Vol. Service, Spanish-Am. War, 98; prof. marine eng, Webb's Acad, N. Y, 97-99; adj. prof. meeh. eng, Columbia, 99-03; *prof. eng, Webb Inst. Naval Archit, N. Y. City*, 18- Lieut. commander, U.S.N.R.F, 17-18, commander, 18. Meeh. Eng; Naval Eng; Naval Archit. and Marine Eng; Franklin Inst. Design of marine machinery.
- Catlett, Charles**, Staunton, Va. *Geology*. Staunton, Aug. 18, 65. Virginia, 86. Asst. chemist, U. S. Geol. Surv, 87-88; *consulting chem. and mining engineer*, 92- Mem. jury awards, La. Purchase Expos, 04. Min. Eng. Coal and iron mining; Portland cement.
- Cattell, Dr. Henry W(are)**, 3712 Irving St, Philadelphia, Pa. *Pathology*. Harrisburg, Pa, Oct. 7, 62. A.B, Lafayette, 83, A.M, 86; M.D, Pennsylvania, 87. Demonstrator morbid anat, Pennsylvania, 92-97; senior coroner's physician, Phila, 96-99; director, Ayer Clin. Lab, Pa. Hosp, 99-01; pathologist, Phila. Hosp, 03. Ed, 'Int. Clinics,' 99-02, 10-16; 'Med. Notes and Queries'; 'Lippincott's Med. Dict.' Major, M.C, 17-19. Phila. Path. Soc; Phila. Col. Physicians. Post-mortem technique; color photography and educational moving pictures.
- Cattell, Dr. J(ames) McKeen**, Garrison-on-Hudson, N. Y. **Psychology*. Easton, Pa, May 25, 60. A.B, Lafayette, 80, A.M, 83, LL.D, 07; Göttingen, Leipzig, Paris, Geneva, 80-82; fellow, Hopkins, 82-83; Leipzig, 83-86, Ph.D, 86. Asst. psychol, Leipzig, 85-86; lecturer, Pennsylvania and Bryn Mawr, 87; Cambridge, England, 88; prof, Pennsylvania, 88-91; Columbia, 91-17, also exec. head of dept. for anthropol, 96-02, for philos, 02-05; ed, 'Science,' 94-; 'Popular Science Monthly,' 00-15; 'Scientific Monthly,' 15-; 'School and Society,' 15-; 'Am. Naturalist,' 07-; 'American Men of Science,' 06, 10, 21. Co-editor, 'Psychol. Rev,' 93-04; established the 'Journal,' the 'Archives' and the 'Library of Philosophy, Psychology and Scientific Methods,' 04. Nat. Acad; A.A. (v. pres, 98, 13); Soc. Nat. (pres, 02); Psychol. Ass. (pres, 95); Philos. Ass; Psychol. Soc; Ethnol. Soc; Eug. Res. Ass. (pres, 14); Philos. Soc; N. Y. Acad. (pres, 02, 03); Wash. Acad. (v. pres, 21), Sigma Xi (pres, 13-15); London Aristot. Soc; cor. mem. Soc. Scientifique "Antonio Alzate." The measurement of psycho-physical and mental processes; practise and fatigue; individual differences and individual efficiency, with special reference to scientific productivity.
- Cattell, Dr. McKeen**, Garrison-on-Hudson, N. Y. *Physiology*. Garrison, Nov. 17, 91. Cambridge, 12-13; Berlin, 14; B.S, Columbia, 14; A.M, Harvard, 17, Ph.D, 20. Teaching fellow physiol, Harvard Med. Sch, 14-17, med. research worker, Red Cross, 19-20; *teaching fellow, pharmacol, Harvard Med. Sch*, 20- Lieut. Sanit. C, Cent. Med. Dept. Lab, Dijon, 18. A.A. Internal secretions; traumatic shock.
- Cattell, W(illiam) A(shburner)**, 101 S. Fifth St, Alhambra, Calif. *Civil engineering*. Princeton, N. J, June 16, 63. C.E, Lafayette, 84. Minor engineering positions, 84-89; asst. chief engi-

- neer, L. I. R. R., 89-97; consulting engineer, 97-05; E. H. Rollins and Sons, 05-08; consulting engineer, 08-18; major, corps eng., 18-19; *consulting engineer*, 19- Sec'y-treas. Int. Eng. Cong. San Francisco, 15. Civil Eng. (director, 12-14); Mech. Eng.; R. R. Ass; Am. Water Works Ass; Consulting Eng; British Inst. Civil Eng. Design, construction, operation and valuation of industrial and engineering works; record of activities of corps of engineers of the United States Army during the World War.
- Caudell, A(ndrew) N(elson)**, U. S. National Museum, Washington, D. C. *Entomology*. Indianapolis, Ind., Aug. 18, 72. B.S., Okla. Col., 97; Mass. Col., 97-98. Asst. entom., Okla. Col., 95; asst. bur. entom., U. S. Dept. Agr., and custodian *Orthoptera*, U. S. Nat. Museum, 98- Weather observer, Stillwater, Okla., 96-97. A.A.; Ass. Eeon. Entom.; Wash. Acad.; Wash. Entom. Soc. Natural history and classification of Orthoptera.
- Caulfeild, Dr. A(lfred) H(ans) W(aring)**, 13 Spadina Road, Toronto, Ont., Can. *Medicine*. Vienna, Ont., 79. M.B., Toronto, 04. Res. and later asst. pathologist, Toronto Gen. Hosp., 04-08; pathologist, Nat. Sanatorium Ass., 08-11; asst. med. research, Toronto, 12-15, *research assoc.*, *Connaught Antitoxin Laboratories*, 18- Colleague, tuber. clinic, Toronto Gen. Hosp., 12-; med. officer, C.A.M.C., C.E.F., 15-18; consultant, Dept. Soldiers, Civil Re-Establishment, 19- Ass. Path. and Bact; Soc. Exp. Biol; Toronto Acad. Med. Internal medicine; immunology; pathology; infectious and pulmonary diseases.
- Cavanagh, A(ngus) L(eonard)**, 2803 Barry Ave., Sawtelle, Calif. *Physics*. Elmira, Ont., Sept. 14, 76. A.B., Stanford, 02. Teacher physics, high schools, Calif., 02-08; *head, science dept., high sch., Los Angeles, Calif.*, 09- Instr. physics, summer, California, 08, 14, 19. Assoc. mem. Physical Soc. Magnetic susceptibility of water.
- Cecil, Dr. Russell L(a Fayette)**, 33 East 61st St., New York, N. Y. *Medicine*. Nicholasville, Ky., Oct. 13, 81. A.B., Princeton, 02; M.D., Med. Col. of Va., 06. Instr. path., Columbia, 09-11, *med.*, 12-16; *med. col., Cornell*, 16- Res. pathologist, Presb. Hosp., N. Y. City, 09-11, asst. attending physician, 12-16; adj. asst. attending physician, Bellevue Hosp., 16-; major, M.C., 18-19; special expert, U. S. Pub. Health Service, 19- A.A.; Am. Physicians; Ass. Path. and Bact; Soc. Exp. Biol; Soc. Clin. Invest; Soc. Bact; Am. Med. Ass; Soc. Immunol; N. Y. Acad. Med. Bacteriology; immunity; experimental influenza and pneumonia.
- Chace, Dr. Arnold B(uffum)**, Albion, R. I. *Mathematics*. Valley Falls, R. I., Nov. 10, 45. A.B., Brown, 66, A.M., 69, Sc.D., 92; Harvard; Paris. Instr. physics, Brown, 68-69, *trustee*, 76-, *treas.*, 82-01, *chancellor*, 07- A.A.; Math. Soc.
- Chace, E(dward) M(acKay)**, Citrus By-products Laboratory, Los Angeles, Calif. *Chemistry*. Havana, N. Y., Nov. 15, 74. George Washington, 95-97; LL.B., National Univ., 06, LL.M., 07. Chief chemist, Cuban Customs Service, Havana, 01-02; chief, lab. food tech. and asst. chief, food div., U. S. Dept. Agr., 03-08, *chemist in charge, citrus by-products lab.*, 08- Chem. Soc; Agr. Chem. (assoc. referee). Food analysis and adulteration; essential oils; flavoring extracts; citrus by-products; maturity of citrus fruits.
- Chaddock, Dr. C(harles) G(ilbert)**, 3705 Delmar Boulevard, St. Louis, Mo. *Neurology*. Jonesville, Mich., Nov. 14, 61. M.D., Michigan, 85; Munich, 88-89; Paris, 96-00. Asst. supt., North. Mich. Asylum, 85-92; *prof. diseases of the nervous system, St. Louis*, 92- Visiting neurologist, St. Louis City Hosp., 09-; consulting alienist, St. Louis City Sanitarium, 09- Am. Med. Ass; Medico-Psychol. Ass; hon. fel. Chicago Acad. Med; St. Louis Neur. Soc. (pres, 15-). Psychiatry; clinical neurology; reflex phenomena.
- Chadwick, Prof. George H(alcott)**, University of Rochester, Rochester, N. Y. *Geology*. Catskill, N. Y., May 27, 76. Ph.B., Rochester, 04, M.S., 07. Ward's Nat. Sci. Establishment, Rochester, N. Y., 96-00, 04-06, 14-18; zoologist, N. Y. State Museum, Albany, 06-07; prof. geol. and biol., St. Lawrence, 07-14; acting asst. prof. *geol.*, Rochester, 14-20, *prof.*, 20- Instr. geol., Nat. Sci. Camp, Canadaigua, N. Y., 00-01; field worker, N. Y. Geol. Surv; Milwaukee Pub. Museum, summer, 02. A.A.; Geol. Soc; Paleont. Soc; Entom. Soc; Wis. Nat. Hist. Soc; Rochester Acad. (sec'y, 04-06, 15-17, pres, 18). Conchology; mite-galls; New York state stratigraphy; Silurian and Devonian of New York; Paleozoic corals; Silurian cephalopods and faunas.
- Chaffee, Prof. E(mory) Leon**, 20 Highland Road, Belmont, Mass. **Physics*. Somerville, Mass., April 15, 85. B.S., Mass. Inst. Tech., 07; A.M., Harvard, 08, Ph.D., 11. Instr. *physics*, Harvard, 12-17, *asst. prof.*, 17- Longstreth medal, Franklin Inst., 12. Physical Soc; Am. Acad; Franklin Inst. Radio telegraphy; electrical oscillations.
- Chamberlain, Prof. Charles J(oseph)**, University of Chicago, Chicago, Ill. **Botany*. Sullivan, Ohio, Feb. 23, 63. A.B., Oberlin, 88, A.M., 94; Ph.D., Chicago, 97; Bonn, 01-02. Teacher, pub. sch., Pittsfield, Ohio, 88-89; principal, high sch., Crookston, Minn., 89-93; asst. and assoc. bot., Chicago, 97-01, instr., 01-07, asst. prof., 07-11, assoc. prof., 11-15, *prof. morphol. and cytol.*, 15- Am. ed. cytol., 'Bot. Centralblatt,' 02-; bot. expeditions to Mex., 04, 06, 08, 10; New Zealand and Australia, 11; S. Africa, 12; Cuba, 14. A.A. (sec'y, G, 03); Bot. Soc; Int. Ass. Bot; Bot. Gesell; hon. mem. Scientific Soc. Kiev. Plant histology; morphology; morphology of gymnosperms and angiosperms; Cycadaceae.
- Chamberlain, Pres. C(lark) W(ells)**, Denison University, Granville, Ohio. **Physics*. Litchfield, Ohio, Oct. 29, 70. A.B., Denison, 94; fellow, Chicago, 99-00; Columbia, 08-09, Adams research fellow, 09-11, Ph.D., 10. Instr. physics and math, Western Reserve Acad., 94-97; *prof. physics and astron.*, Colby, 00-01; physics, Denison, 01-08; Vassar, 08-13; *pres, Denison*, 13- Silver medal, Jamestown Expos., 07. A.A.; Physical Soc. A compound interferometer; the radius of molecular attraction; achromatism of interference; the diffractometer; a spectroscope of high resolving power; the relative motion of the earth and ether; the Lorentz-Fitzgerald effect.
- Chamberlain, G(eorge) E(dwin)**, 1650 E. William St., Decatur, Ill. *Chemical engineering*. Wya-

- lusing, Pa, Nov. 6, 70. A.C, Lehigh, 93. Chemist, Am. Glucose Co, 94-97; *gen. supt.*, Nat. Starch Co, 00-02; Corn Products Co, 05-09; *Staley Mfg. Co.*, 12- A.A.; Soc. Chem. Indust; Mech. Eng; Franklin Inst. Improvements in manufacturing of starch and glucose; specific gravity recorder and automatic control of specific gravity of solutions.
- Chamberlain, James F.**, 33 N. Hudson Ave, Pasadena, Calif. *Geography*. Centreville, Utah, July 2, 69. B.S., Chicago, 04, Ed.B., 05. *Teacher*, pub. schools, Chicago, 90-94; *geog. and conservation*, California, 95- Assoc. ed, 'Jour. Geog.' Am. Geog. Soc; Ass. Geog. Economic geography; conservation; climatic conditions.
- Chamberlain, Dr. Joseph S (cudder)**, Massachusetts Agricultural College, Amherst, Mass. *Chemistry*. Hudson, Ohio, March 7, 70. B.S., Iowa State, 90, M.S., 92; fellow, Hopkins, 98-99, Ph.D., 99; Berlin, 09. Lab. asst. chem, Iowa State, 90-92, instr., 94-97; Oberlin, 99-01; research asst. to Dr. Ira Rensen, Hopkins, 01; physiol. chemist, U. S. Dept. Agr., 01-09; assoc. prof. chem, *Mass. Col.*, 09-13, *prof. org. and agr. chem.*, 13- A.A.; Chem. Soc; Chem. Gesell. Organic agricultural chemistry; parasulphamin benzoic acid; proteins of wheat and flour.
- Chamberlain, Montague**, Arlington Heights, Mass. *Ornithology*, *Anthropology*. St. John, N. B., April 5, 44. Grammar sch, St. John. Recorder, Harvard, 89-93, sec'y, Lawrence Sci. Sch, 93-00. Cor. fel. Ornith. Union; New Brunswick Nat. Hist. Soc. Ornithology; Indian linguistics, legends and history; northeastern tribes.
- Chamberlain, Paul M (ellen)**, 427 Diversey Parkway, Chicago, Ill. *Mechanical engineering*. Three Oaks, Mich, Feb. 28, 65. B.S., Mich. Agr. Col, 88; M.E., Cornell, 90. Engineer, Frick Co, 90-92; Hercules Iron Works, 92-93; asst. prof. mech. eng, Mich. Agr. Col, 93-96; prof, Lewis Inst, 96-06; chief engineer, Underfeed Stoker Co, 07-09; consulting engineer, 09-17; *major, ordnance dept.*, 17- Commanding officer, Chicago Ordnance Dist, and chairman, Salvage Board. Mech. Eng; West. Soc. Eng. Flow of heat through metal; down draft for forging furnaces; power required for cutting metals as index for hardness; horology.
- Chamberlin, Prof. R (alph) V (ary)**, Museum of Comparative Zoology, Cambridge, Mass. *Zoology*. Salt Lake City, Utah, Jan. 3, 79. B.S., Utah, 98; Goldwin Smith fellow, Cornell, 02-04, Ph.D., 05. Teacher, high sch, 98-02; asst. prof. biol, Utah, 04-05, prof, 05-06, prof. zool. and dean, med. sch, 06-08; Brigham Young, 08-11; Harrison fellow and lecturer zool, Pennsylvania, 11-13; *curator Myriapoda, Arachnida and Vermes, museum comp. zool, Harvard*, 13- A.A.; Soc. Nat; Soc. Zool; Entom. Soc. (v. pres, 19); Boston Soc. Nat. Hist; Cambridge Entom. Soc; Wash. Biol. Soc. Morphology and taxonomy of chilopods, diplopods and arachnids; Annelida; Gephyrea; regeneration in Myriapoda; embryology of Linotaenia and Otophyrops.
- Chamberlin, Dr. R (ollin) T (homas)**, University of Chicago, Chicago, Ill. **Geology*. Beloit, Wis,
- Oct. 20, 81. Geneva and Zürich, 99-00; B.S., Chicago, 03, Ph.D., 07. Asst. geologist, U. S. Geol. Surv., 07-09; mem. Chicago oriental educ. exped. to China, 09-10; survey, iron ores of Brazil, 11-12; instr. *geol. Chicago*, 12-14, asst. prof, 14-18, *assoc. prof.*, 18- A.A. (sec'y, E, 17-); Geol. Soc. Structural and dynamic geology; glaciology; gases in rocks; mountain building.
- Chamberlin, Dr. T (homas) C (hrowder)**, Rosenwald Hall, University of Chicago, Chicago, Ill. **Geology*. Mattoon, Ill, Sept. 25, 43. A.B., Beloit, 66, A.M., 69, LL.D., 87; Michigan, 68-69, hon. Ph.D., 82, LL.D., 87; hon. Ph.D., Wisconsin, 82, LL.D., 04, Sc.D., 20; LL.D., George Washington, 87; Toronto, 13; Sc.D., Illinois, 05. Principal, high sch, Delavan, Wis, 66-68; prof. nat. science, State Nor. Sch, Whitewater, Wis, 69-73; geol, Beloit, 73-82; asst. state geologist, Wis, 73-76, chief geologist, 76-82; geologist in charge, glacial div, U. S. Geol. Surv, 82-04; lecturer geol, Beloit, 82-87; prof, George Washington, 85-87; pres, Wisconsin, 87-92; head, dept. *geol. Chicago*, 92-19, *emer. prof.*, 19- Representative for Wis, Paris Expos, 78; geologist, Peary exped, 94; ed, 'Jour. of Geol'; mem. Univ. of Chicago Orient. Educ. Investigation Commission, 09; research assoc, Carnegie Institution. Medal, Paris Expos, 78, 93; Helen Culver medal, Chicago Geog. Soc, 10; Hayden mem. medal, Phila. Acad, 20. Nat. Acad; A.A. (v. pres, 86, pres, 08); Geol. Soc. (pres, 95); Am. Acad; Philos. Soc; Ill. Acad. (pres, 08); hon. mem. Wis. Acad. (pres, 85-87); Wash. Acad; Wash. Geol. Soc; cor. mem. N. Y. Acad; Chicago Geol. Soc. (pres, 10); Chicago Acad. (pres, 97-15); cor. mem. British Ass; cor. mem. London and Edinburgh Geol. Societies. Geology of Wisconsin; lead and zinc deposits; glacial and dynamic geology; the planetesimal hypothesis; early history of the earth; the history of the atmosphere.
- Chamberlin, Thomas R (oscoe)**, 1535 Edison St, Salt Lake City, Utah. *Entomology*. Salt Lake City, March 30, 89. Utah, 09-11, A.B., 20. *Scientific asst, cereal and forage insect investigations, bur. entom, U. S. Dept. Agr.*, 13- A.A.; Ass. Econ. Entom. Alfalfa weevil and means of controlling it; life history studies of the clover seed chalcid on alfalfa in Utah.
- Chambers, Prof. Charles O (scar)**, Oklahoma Agricultural College, Stillwater, Okla. *Botany*. Van Wert, Ohio, Sept. 7, 66. A.B., Indiana, 91, A.M., 95; fellow, Washington (St. Louis), 10-13, Ph.D., 13. Teacher science, high sch, New Castle, Ind, 95-05; prof. biol, Georgetown Col. (Ky), 05-07; Pacific (Oregon), 07-09; asst. bot, Illinois, 09-10; instr, Cincinnati, 13-14; biol, Peabody Col. for Teachers, 14-15; *prof. bot, Okla. Col.*, 15- Mem. faculty, Puget Sound Marine Sta, summers, 08-09. A.A.; Tenn. Acad. Littoral algae of Puget Sound; fixation of nitrogen by fungi.
- Chambers, Dr. Geo (rge) Gailey**, 55 E. Essex Ave, Lansdowne, Pa. *Mathematics*. Fulton Co, Pa, Oct. 12, 73. A.B., Dickinson, 02; Ph.D., Pennsylvania, 08. Principal, pub. schools, Ridley Park, Pa, 02-06; instr. and later *asst. prof.*

- math, Pennsylvania, 06- A.A.; Math. Soc. Isomorphisms of abstract groups.
- Chambers, Prof. Robert**, Cornell University Medical College, New York, N. Y. **Biology, Anatomy*. Erzerum, Turkey, Oct. 23, 81. A.B., Robert Col., Constantinople, 00; M.A., Queen's (Can.), 02; Ph.D., Munich, 08; Columbia, 11-12. Instr., Bithynia High Sch., Turkey, 03-06, acting director, 08-09; lecturer biol., Toronto, 09-11; asst. prof. hist. and comp. anat., Cincinnati, 12-15; instr. anat. med. col., Cornell, 15-19, asst. prof., 19- Instr. zool., Woods Hole, 17-19. A.A.; Soc. Nat.; Soc. Zool. (mem. advisory board, Nat. Research Council); Ass. Anat.; Soc. Exp. Biol. Cytology; egg and cell size; spermatogenesis and oogenesis in Copepoda; physical nature of protoplasm; microdissection and microinjection of the cell.
- Chambers, Prof. Robert F(oster)**, 104 Irving Ave., Providence, R. I. *Chemistry*. Providence, Oct. 8, 87. Ph.B., Brown, 09, M.S., 10, Ph.D., 12. Research chemist, Gen. Elec. Co., Pittsfield, Mass., 12; instr. chem., Brown, 14-16, asst. prof., 16-, acting head of dept., 17- A.A.; Chem. Soc.; Electrochem. Soc.; Providence Eng. Soc. Organic chemistry.
- Chambers, Prof. Victor J(ohn)**, University of Rochester, Rochester, N. Y. *Chemistry*. Rochester, Nov. 18, 69. B.S., Rochester, 95; Ph.D., Hopkins, 01. Instr. chem., Columbia, 01-08; prof., Rochester, 08- Chem. Soc. Organic chemistry.
- Chambers, Prof. Will Grant**, University of Pittsburgh, Pittsburgh, Pa. *Psychology, Education*. Westmoreland Co., Pa., April 26, 67. A.B., Lafayette, 94, A.M., 96, Litt.D., 17; Clark, 97-98; Chicago, 00-01. Prof. math., State Nor. Sch., Indiana, Pa., 94-97; psychol. and educ., State Nor. Sch., Moorhead, Minn., 01-04; psychol. and child study, State Teachers Col., Greeley, Colo., 04-09; educ., Pittsburgh, 09-, dean, sch. educ., 10- Assoc. ed., 'Jour. Pedag.' A.A.; Psychol. Ass.; Soc. Col. Teachers Educ. (pres., 17); Pa. State Educ. Ass. (pres., 20). Genetic psychology; evolution of ideals; how words get meaning; memory types; children's political ideas; ideas of discipline; psychology of proper names; childhood reactions to imaginary freedom; individual differences; reaction of special training on general efficiency; correlation of essential characteristics in the training of teachers.
- Chambers, W(illie) Lee**, Eagle Rock, Calif. *Ornithology*. Sedalia, Mo., May 7, 78. Mem. Ornith. Union; Cooper Ornith. Club (business manager, 09-); Soc. Mammal.
- Chambliss, Prof. Charles Edward**, U. S. Department of Agriculture, Washington, D. C. *Agronomy*. Petersburg, Va., Aug. 20, 71. B.S., Tennessee, 92, M.S., 94. Instr. zool., Tennessee, 94-99, entomologist, Exp. Sta., 96-99; state entomologist, Tenn., 99-01; assoc. prof. zool. and entom., Clemson, and zoologist and entomologist, S. C. Exp. Sta., 01-07; state entomologist, S. C., 07-08; expert in charge rice investigations, bur. plant indust., U. S. Dept. Agr., 08- A.A.; Soc. Agron.; Wash. Bot. Soc. (sec'y., 13-20, pres., 20); Wash. Biol. Soc. Insects affecting orchards, gardens and the rice crop; breeding of rice; taxonomy of Oryzeae.
- Chambliss, Lieut. Col. Hardee**, U. S. A., U. S. N. P., No. 1, Sheffield, Ala. *Chemistry*. Selma, Ala., Dec. 4, 72. Grad., Va. Mil. Inst., 94; fellow, Vanderbilt, 98-99, M.S., 99; Ph.D., Hopkins, 00. Asst. chem., Columbia, 00-01; research chemist, Moore Elec. Co., Newark, N. J., 01-03; Gen. Chem. Co., N. Y. City, 03-09; prof. chem., Okla. Col., 09-15; asst. state commissioner health, Okla., 15-16; chem. director, Commercial Acid Co., 16-17; major, ordnance dept., 17-19, lieut. col. and commanding officer, U. S. Nitrate Plant No. 1, 19- A.A.; Chem. Soc.; Chem. Eng.; Mech. Eng.; Soc. Chem. Indust.; fel. London Chem. Soc. Permanganates; fixation of nitrogen.
- Chamot, Prof. E(mile) M(onnin)**, 927 E. State St., Ithaca, N. Y. **Microchemistry, Sanitary chemistry*. Buffalo, N. Y., March 4, 68. B.S., Cornell, 91, Ph.D., 97; Nancy, Braunschweig, Paris and Delft. Asst. quant. anal., Cornell, 90-91, instr., 91-97, lecturer chem., 98, instr. toxicol., 99, sanit. and toxicol. chem., 00, asst. prof., 01-10, prof. chem. micros. and sanit. chem., 10- Chem. Soc.; Soc. Bact.; Pub. Health Ass. Microchemical analysis.
- Chance, Dr. H(enry) M(artyn)**, Drexel Building, Philadelphia, Pa. *Geology, Mining engineering*. Philadelphia, Jan. 18, 56. C.E., Pennsylvania, 74; M.D., Jefferson Med. Col., 81. Asst. geologist, Pa. Geol. Surv., 74-84; mining and consulting engineer, 84- Senior mem. firm, H. M. Chance and Co. A.A.; Min. Eng.; Min. and Metal Soc. (pres., 13); Econ. Geol.; Philos. Soc.; Phila. Eng. Club. Applied geology.
- Chandler, Dr. Asa C(rawford)**, Rice Institute, Houston, Tex. *Zoology*. Newark, N. J., Feb. 19, 91. A.B., Cornell, 11; M.S., California, 12, Ph.D., 14. Instr. zool., Oregon Col., 14-17, asst. prof., 17-19; instr. biol., Rice Inst., 19- Second lieut., Sanit. C., Cent. Med. Dept. Lab., Dijon. A.A.; Pacific Coast Biol. Ass. Parasitology; bird feathers.
- Chandler, Prof. C(harles) F(rederick)**, Columbia University, New York, N. Y. **Chemistry*. Lancaster, Mass., Dec. 6, 36. Lawrence Sci. Sch., Harvard; Berlin; Ph.D., Göttingen, 56; hon. M.D., N. Y. Univ., 73; LL.D., Union, 73; hon. Sc.D., Oxford, 00; LL.D., Columbia, 11. Asst. chem., Union, 57, prof., 57-64; anal. and applied chem., sch. mines, Columbia, 64-77, adj. prof. chem. and med. juris., col. physicians and surg., 72-76, prof., 76-97, chem., Columbia, 77-11, emer. prof., 11- Emer. prof. org. chem. and pres., N. Y. Col. Pharmacy; chemist and later pres., Metropolitan Board of Health, N. Y. City. Perkins medal, Soc. Chem. Indust., 19. Int. Cong. Applied Chem., London, 09. Nat. Acad.; A.A.; Chem. Soc. (pres., 81-89); Soc. Chem. Indust. (pres., 00); Elec. Eng.; Min. Eng.; Philos. Soc.; N. Y. Chemists Club (pres., 99); N. Y. Acad.; London Chem. Soc.; Chem. Gesell.; Soc. chim. de Paris. Industrial chemistry.
- Chandler, Dr. E(dward) M(arion) A(ugustus)**, 1207 Otto Boulevard, Chicago Heights, Ill. *Chemistry*. Ocala, Fla., April 10, 87. A.B., Howard, 13, A.M., Clark, 14; Ph.D., Illinois, 17. Chemist, Dicks, David and Heller Co., 17- Chem. Soc. Organic chemistry; dyes; intermediates; triphenylmethane dyes.

- Chandler, Prof. Elbert Edwin**, 1011 Woodrow Ave, Eagle Rock, Calif. *Chemistry*. Pleasant Hill, Mo, Oct. 20, 69. A.B, William Jewell, 91; LL.B, Michigan, 93; Ph.D, Chicago, 06. Instr. chem, Mich. Mil. Acad, 01-03; asst, Chicago, 03-06; instr, Pomona, 06-08; *prof, Occidental*, 09- Chem. Soc. (pres, south. Calif. sect, 17, counselor, 18). Ionization of dibasic acids; effect of cement dust on vegetation.
- Chandler, Prof. E(lwyn) F(rancis)**, University, N. Dak. *Civil engineering*. Yellow Springs, Ohio, Aug. 29, 72. A.B, Ripon, 94, A.M, 97; Wisconsin, 97-99, fellow, 98-99. Teacher, prep. and high schools, 93-97; instr. math, *North Dakota*, 99-02, *prof*, 02-15, *civil eng*, 14- City engineer, Ripon, Wis, 95; asst. engineer, U. S. Geol. Surv, 03-; state engineer, N. Dak, 04-05; city engineer, Grand Forks, N. Dak, 18- A.A; assoc. mem. Civil Eng; Eng. Educ; N. Dak. Acad; Wis. Acad; N. Dak. Soc. Eng. (sec'y, 12-). Hydrographic methods and hydrology; the logarithmic mean as applied to estimates; surface water-supply of North Dakota; the rainfall-runoff relation; seasonal distribution of stream-flow.
- Chandler, Dr. Joseph**, 112 Bungalow Terrace, Syracuse, N. Y. *Chemistry*. Livermore Falls, Maine, Jan. 16, 89. A.B, Colby, 09; Ph.D, Hopkins, 12. Asst. prof. chem, Louisville, 12-14; instr. org. chem, Tufts, 14-17, asst. prof, 17-19; *research chemist*, U. S. Color and Chem. Co, 19-20; *Semet Solvay Co*, 20- Chem. Soc. Organic chemistry; dyestuffs and intermediates.
- Chandler, Dr. W(allace) L(arkin)**, East Lansing, Mich. *Entomology*. Antonito, Colo, April 21, 85. B.S, California, 14, M.S, 15; Ph.D, Cornell, 18. Instr, Fielding Acad, Paris, Idaho, 07-08; inspector, plague suppression, U. S. Pub. Health Service, Calif, 10-13; instr. parasitol, Cornell, 15-18; research asst. entom, *Mich. Exp. Sta*, 18-19, *research assoc*, and *asst. prof*, *Mich. Agr. Col*, 19- Exten. lecturer parasitol, California, 14-15; mem. mammal surv. of San Joaquin Valley, Univ. of Calif. and U. S. Pub. Health Service, 11. Entom. Soc; Soc. Mammal; Ass. Econ. Entom. Parasitology; physiology; medical entomology.
- Chandler, Prof. W(illiam) H(enry)**, New York Agricultural College, Ithaca, N. Y. *Pomology*. Butler, Mo, July 31, 78. B.S.A, Missouri, 05, fellow, 05-06, M.S, 06, Ph.D, 14. Asst. hort, Missouri, 06-10, instr, 10-11, asst. prof, 11-13; *prof. pomol*, Cornell, 13-, *v. director research*, 20- A.A; Soc. Hort. Sci; Bot. Soc. Plant tissues and temperature; sap concentration; fruit and fertilizers; pruning.
- Chaney, Prof. Geo(rge) A(rthur)**, 3221 W. Grand Ave, Des Moines, Iowa. *Mathematics*. Bedford, Iowa, May 31, 78. B.S, Highland Park, 04, M.S, 06, Sc.D, 16; A.M, Wisconsin, 11. Asst. prof. math. and physics, Highland Park, 04-06, prof. higher math. and physics, 06-08; instr. math, Wisconsin, 08-11; Iowa, 11-13; asst. prof, *Iowa State*, 13-14, *assoc. prof*, 14-, director, grad. sch, 17. A.A; Math. Soc; Math. Ass; Eng. Educ; Ass. Prof; Iowa Acad.
- Chaney, Prof. L(ucien) W(est)**, Department of Labor, Washington, D. C. *Industrial hygiene*. Heuvelton, N. Y, June 26, 57. A.B, Carleton,
- 78, B.S, 79, M.S, 82, Sc.D, 16. Instr, high schools and supt. schools, 78-82; instr. biol, Carleton, 82-83, prof, 83-08; *statistical expert*, U. S. Bur. Labor, 08- A.A; Statist. Ass; Inst. Social Sci. Embryology of fishes; glacial geology; statistics in accident investigations; relation of physical condition to accident hazard.
- Chaney, Dr. Newcomb K(inney)**, 1535 Elbur Ave, Lakewood, Cleveland, Ohio. *Chemistry*. Northfield, Minn, April 27, 83. B.S, Carleton, 04, M.S, 05; Rhodes scholar, Balliol Col, Oxford, 07-10, B.A, 10; Harrison fellow, Pennsylvania, 10-11, Ph.D, 11. Instr. biol, Carleton, 06-07; research chemist, *Nat. Carbon Co*, 11-17, *asst. director, research and development laboratories*, 19- Consulting chemist, U. S. Bur. Mines, 17-18; C. W. S, 18-19. Chem. Eng; Chem. Soc; Electrochem. Soc; Physiol. Soc; Min. and Metal. Eng; Cleveland Eng. Soc. Industrial chemistry; electrochemistry; physical and photometric measurement; activated carbon and its industrial manufacture; army gas mask carbon.
- Chaney, Ralph W(orks)**, 222 Reynolds St, Iowa City, Iowa. *Geology*. Chicago, Ill, Aug. 24, 90. B.S, Chicago, 12, fellow, 13-14, Ph.D, 19. Head, dept. nat. science, Francis W. Parker Sch, Chicago, 14-17; instr. *geol*, Iowa, 17-19, *asst. prof*, 19- A.A; Paleont. Soc; Ecol. Soc; Iowa Acad. Tertiary paleobotany and geology of Washington, Oregon and California.
- Chant, Prof. C(larence) A(ugustus)**, University of Toronto, Toronto, Can. *Physics*. Near Toronto, May 31, 65. B.A, Toronto, 90, M.A, 00; Ph.D, Harvard, 01. Fellow and tutor physics, *Toronto*, 91-92, lecturer, 92-07, assoc. prof. *astrophysics*, 07-18, *prof*, 18- A.A; Physical Soc; Astron. Soc; Royal Astron. Soc. Can. (pres, 04-07, ed. 'Jour,' 07-); hon. mem. Soc. Astron. de Mex. The 'skin' effect in electrical oscillators; reception by wires of electric waves; physical basis of color; reflecting power of glasses and mirrors; meteoric display of Feb. 9, 13.
- Chapin, Dr. Charles V(alue)**, 84 Keene St, Providence, R. I. *Medicine*. Providence, Jan. 17, 56. A.B, Brown, 76; M.D, Bellevue Med. Col, 79; Sc.D, Brown, 09. Prof. physiol, Brown, 86-94; *supt. of health*, Providence, R. I, 84- Lecturer hygiene, Harvard Med. Sch, 09, Cutter lecturer, 14. A.A; Am. Acad; Royal Soc. Med. Preventive medicine; municipal and state sanitation; sources and modes of infection.
- Chapin, Prof. H(arold) C(anning)**, Lowell Textile School, Lowell, Mass. *Chemistry*. Gill, Mass, Sept. 20, 83. A.B, Harvard, 04, Ph.D, 10. Asst. chem, Harvard, 04-07; instr, Rensselaer, 09-13; research chemist and foreman, *Nat. Carbon Co*, 13-18; assoc. prof. chem. and metal, Lafayette, 18-20; instr, *Lowell Textile School*, 20- Chem. Soc; Electrochem. Soc.
- Chapin, Dr. Henry Dwight**, 51 W. 51st St, New York, N. Y. *Pediatrics*. Steubenville, Ohio, Feb. 4, 57. B.S, Princeton, 77, hon. A.M, 86; M.D, Columbia, 81. *Prof. diseases of children*, Vermont, 88-89; Women's Med. Col, N. Y, 90-95; N. Y. Post-Grad. Med. Sch, 86- 16th Int. Med. Cong. (hon. pres, pediat. sect). Pediat. Soc. (pres, 10); N. Y. Acad. Med. (chairman,

- pediat. sect, 13). Nutrition in children; biology of milk and infant feeding.
- Chapin, Prof. Henry E(dgerton)**, 49 Lefferts Ave, Richmond Hill, N. Y. *Biology*. Wilbraham, Mass, May 9, 59. B.S, Mass. Col. and Boston, 81; Hopkins, 86-87; M.S, Mich. Agr. Col, 95; hon. Sc.D, McKendree, 08. Teacher and ed, 81-86; teacher nat. science, Pa. State Nor. Sch, Bloomsburg, 88-90; biol, high sch, Springfield, Mass, 90-91; *prof. biol. and geol*, Ohio (Athens), 91-00; *biol. and physiog, high sch. system*, N. Y. City, 00- In charge, dept. biol, summer sch, N. Y. Univ, 00. Soc. Nat; Ohio Acad; Brooklyn Inst. (pres, dept. bot, 04-14); hon. fel. London Soc. Biol. Chem. Blood of vertebrates; habits and structure of *Melampus bidentatus*.
- Chapin, James P(aul)**, 166 W. 79th St, New York, N. Y. *Zoology*. New York, July 9, 89. A.B, Columbia, 16, Cutting fellow, 16-17, A.M, 17. Asst. Am. Museum Nat. Hist. exped. to Belgian Congo, 09-15, *dept. ornith. Am. Museum Nat. Hist.*, 15-19, *asst. curator*, 20- Mem. Ornith. Union; Soc. Mammal; Explorers Club; N. Y. Linnean Soc. Vertebrate zoology; African ornithology.
- Chapin, Robert M(acfarlane)**, U. S. Department of Agriculture, Washington, D. C. *Chemistry*. N. Weymouth, Mass, Oct. 5, 77. A.B, Amherst, 97, 98-99. Lab. asst. chem, Amherst, 99-01, instr, 03-07; asst. chemist, U. S. Dept. Agr, 07-10, *senior biochemist*, 10- Chem. Soc. Preparation and analysis of disinfectants and insecticides.
- Chapin, Prof. W(illiam) H(enry)**, Oberlin, Ohio. *Chemistry*. Brownhelm, Ohio, Oct. 5, 72. A.B, Oberlin, 04; Ph.D, Pennsylvania, 09. Research fellow, Pennsylvania, 09-10; instr. *chem*, Oberlin, 06-07, *assoc. prof.*, 10- Chem. Soc. Molecular weights; tantalum; solubility and hydration of ions; salt effect.
- Chapline, W(illiam) R(idgely)**, U. S. Forest Service, Washington, D. C. *Forestry*. Lincoln, Nebr, Jan. 10, 91. B.S, Nebraska, 13. Grazing asst, U. S. Forest Service, 13-16, grazing examiner, 15-20, *inspector grazing in charge grazing studies*, 20- A.A; Soc. Foresters; Ecol. Soc; Bot. Soc; Wash. Bot. Soc. Forest range plants; grasses; range management; livestock production.
- Chapman, Albert K(inkade)**, Eastman Kodak Co, Rochester, N. Y. *Physics*. Marysville, Ohio, May 31, 90. A.B, Ohio State, 12, fellow, 11-13, A.M, 13; Princeton, 13-14, fellow, 14-15, Ph.D. Physical Soc; Optical Soc. Spectra of compounds; Corbino effect in metals and alloys.
- Chapman, Frank M(ichler)**, American Museum of Natural History, New York, N. Y. **Ornithology, Mammalogy*. Englewood, N. J, June 12, 64. Academy; Sc.D, Brown, 13. Asst. curator, dept. ornith. and mammal, *Am. Museum Nat. Hist.*, 88-01, *assoc. curator*, 01-08, *curator ornith.*, 08- Assoc. ed, 'The Auk,' 94-; ed. and founder, 'Bird-Lore,' 98- Soc. Nat; fel. Ornith. Union (pres, 11); fel. N. Y. Acad. (v. pres, 08, 09); N. Y. Linnean Soc. (pres, 97); hon. mem. N. Y. Zool. Soc; Wash. Biol. Soc; hon. mem. British Ornith. Union. Birds; geographic distribution; systematic relationships; life histories; popularization of natural history studies.
- Chapman, George H(enry)**, Massachusetts Agricultural College, Amherst, Mass. *Plant physiology*. New Britain, Conn, March 29, 86. B.S, Mass. Col, 07; M.S, 09, Ph.D, 16; B.S, Boston, 09; Prague, 13. Asst. botanist, *Mass. Col.*, 07-12, *research physiologist*, 13- Bot. Soc. Effects of surface tension on enzyme activity; surface tension and protein coagulation; physiological plant diseases.
- Chapman, Prof. J(ames) Crosby**, Yale University, New Haven, Conn. *Experimental education*. Nottingham, England, 89. B.Sc, London, 09, D.Sc, 13; B.A, Cambridge, 12; Ph.D, Columbia, 14. Asst. demonstrator physics, London, 09; asst. prof. exp. educ, Western Reserve, 14-16, *assoc. prof.*, 16-19; asst. prof. *educ. psychol.*, Yale, 19-20, *assoc. prof.*, 20- Psychol. Ass; London Physical Soc. X-rays.
- Chapman, Dr. J(ames) W(ittenmeyer)**, Silliman Institute, Dumaguete, P. I. *Entomology*. Peebles, Ohio, Oct. 28, 80. A.B, Park, 07, A.M, 08; Harvard, 08-11, Sc.D, 13. Instr. chem, Park, 07-08; biol, Tufts, 10-11; entomologist, Boston, 11-14; asst. bur. entom, U. S. Dept. Agr, 14-16; *head, dept. science, Silliman Inst.*, 16- A.A; Ass. Econ. Entom; Cambridge Entom. Club. Forest and shade tree pests; endoparasites of insects.
- Chapman, Prof. Royal N(orton)**, 2610 Thomas Ave, N, Minneapolis, Minn. *Entomology*. Morristown, Minn, Sept. 17, 89. A.B, Minnesota, 14, A.M, 15; fellow, Cornell, 15-16, Ph.D, 17. Teaching fellow *animal biol.*, Minnesota, 16-17, instr, 17-18, *asst. prof.*, and *asst. entomologist*, *Exp. Sta.*, 18- A.A; Entom. Soc; Ass. Econ. Entom; Ecol. Soc. Animal ecology; wood-boring beetles; wings of insects; insects in stored food products; pelvis of burrowing mammals.
- Charles, Prof. Grace M(iriam)**, University of Kansas, Lawrence, Kans. *Botany*. Chicago, Ill, Aug. 29, 76. A.B, Oberlin, 00; A.M, Chicago, 05, Ph.D, 10. Asst. biol, Wyoming, 05-07; *instr. bot.*, Kansas, 11-15, *asst. prof.*, 15- A.A; Bot. Soc; Ecol. Soc; Kans. Acad. Anatomy of ferns; development of fern prothallia; flora of Kansas.
- Charles, Prof. E(ollin) L(andis)**, 528 Avenue H, Bethlehem, Pa. *Physics*. South Bethlehem, Pa, Nov. 26, 85. A.B, Lehigh, 07, A.M, 10. Instr. *physics*, *Lehigh*, 07-12, *asst. prof.*, 12-19, *assoc. prof.*, 19- Instr. physics, Columbia, summer, 12. A.A; Physical Soc; Eng. Educ.
- Charlton, O(rlando) C(larke)**, 1736 Bennett Ave, Dallas, Tex. *Botany*. Pleasant, Ind, April 2, 54. B.S, Hanover, 72, A.M, 85; Sheffield Sci. Sch, Yale, 75-76; Chicago, 05-06, summers, 95-97, 01-05. Teacher, pub. schools, Ind, 76-85; prof. nat. science, Ottawa (Kans), 85-91; Tex. Nor. Col, 91-93; biol. and geol, Baylor, 93-02; Kalamazoo, 02-05; pres, Tex. Woman's Col, 07-09; instr. biol, high sch, Dallas, Tex, 09-14; city forester, Dallas, 17-19, *asst. city forester*, 19-20. South. Forestry Cong. (v. pres, 17-). A.A; Tex. Acad. (v. pres, 02); Tex. State Forestry Ass. (v. pres, 16-19); Kans. Acad; Mich. Acad. Pteridophytes; municipal forestry.
- Charters, Mrs. W. W. (Dr. Jessie Allen)**, 5839 Morrowfield Ave, Pittsburgh, Pa. *Psychology*. Canton, Tex, Sept. 23, 80. A.B, Washington (Seattle), 99, A.M, 01; Ph.D, Chicago, 04.

- Teacher *psychol.*, State Nor. Sch., Los Angeles, Calif., 04-07; *lecturer*, *Carnegie Inst. Tech.*, 20-
Psychol. Ass. Educational psychology; morale.
- Chase, Mrs. Agnes**, U. S. Department of Agriculture, Washington, D. C. *Botany*. Iroquois Co., Ill., April 20, 69. Asst. bot., Field Museum Nat. Hist., 01-03; agrost. artist, *U. S. Dept. Agr.*, 03-07, asst. syst. agrost., 07-18, agrost., 18- A.A.; Bot. Soc.; Wash. Biol. Soc.; Chicago Acad. Cyperaceae; Gramineae.
- Chase, Dr. F(rederick) L(incoln)**, Boulder, Colo. *Astronomy*. Boulder, June 28, 65. A.B., Colorado, 86; Ph.D., Yale, 01. Asst. astronomer, Yale Observatory, 90-10, director, 10-13. Lalande prize, Paris Acad., 08. A.A.; Astron. Soc. Stellar parallax and proper motion; parallaxes of 35 selected stars.
- Chase, Prof. H(arry) W(oodburn)**, Chapel Hill, N. C. *Psychology*. Groveland, Mass., April 11, 83. A.B., Dartmouth, 04, A.M., 08; Ph.D., Clark, 10. Prof. philos. of educ., *North Carolina*, 10-15, psychol., 15-19, *pres.*, 19- In charge, clinic for subnormal children, Clark, 10. A.A.; Psychol. Ass.; Soc. Col. Teachers Educ.; S. Soc. Philos. and Psychol. (councilor, 13). Theoretical and educational psychology.
- Chase, Prof. H(arvey) D(urell)**, Kendall College, Tulsa, Okla. *Biology*. Kilgore, Ohio, April 12, 84. A.B., Ohio Wesleyan, 14; A.M., Ohio State, 15. Prof. biol. Christian, 15-17; *Kendall*. A.A.; Ohio Acad. Insects injurious to grasses and cereals of Ohio; Lepidoptera of Missouri.
- Chase, Prof. L(eon) W(ilson)**, University of Nebraska, Lincoln, Nebr. *Agricultural engineering*. Jacksonville, Vt., Aug. 27, 77. B.S. (M.E.), Nebraska, 04. Asst. mech., *Nebraska*, 01-03, instr. forge and foundry, 04-05, adj. prof. *farm mech.*, 05-06, asst. prof., 06-07, assoc. prof., 07-08, *prof.*, 08-, chairman, agr. and mech. eng. dept., 19-20. Major, ordnance dept., 18; *pres.*, Chase-Tinsman Plow Co., 20- With Fairbanks and Morse, 05. Eng. Educ.; assoc. Mech. Eng. Farm machinery and structures; tile drainage.
- Chase, March F.**, 140 Nassau St., New York, N. Y. *Chemistry*. Alton, Ill., Dec. 12, 76. B.S., Trinity (Conn.), 97. Chemist, Mineral Point Zinc Co., 98-01; expert, N. J. Zinc Co., 01-05; supt., acid dept., Mineral Point Zinc Co., 05-06, gen. supt., 06-12, gen. manager, 12-15; v. *pres.*, Commercial Acid Co., 15-17; asst. director, U. S. Explosive Plants, 17; director, div. explosives, W. I.B., 18; *partner*, L. I. Summers Co., 18- A.A.; Chem. Soc.; Soc. Chem. Indust.; Electrochem. Soc.; Ceramic Soc. Contact process manufacturing of sulphuric acid.
- Chase, Dr. Martin R(ist)**, 2431 S. Dearborn St., Chicago, Ill. *Anatomy*. Toulon, Ill., April 9, 86. B.S., Northwestern, 07, fellow, 07-08, M.S., 08, M.D., 12. Asst. anat., *Northwestern*, 10-12, *instr.*, 12- Ass. Anat. Histology of sensory ganglia; structure of vagus nerve.
- Chatburn, Prof. George R(ichard)**, 2850 P St., Lincoln, Nebr. *Mechanics, Civil engineering*. Near Magnolia, Iowa, Dec. 24, 63. B.C.E., Iowa State, 84; A.M., Nebraska, 97; C.E., Iowa State, 10. Principal, high sch., Plattsmouth, Nebr., 85-89; supt. schools, Humboldt, 89-91; Wymore, 91-94; instr. and later asst. prof. civil eng., *Nebraska*, 94-05, assoc. prof. *applied mech.* and *machine design*, 05-06, prof., 06-09, *head prof.*, 09- Consulting engineer. A.A.; Eng. Educ. (pres., 16); Soc. Test. Mat.; Nebr. Eng. Soc. (sec'y); Nebr. Acad. Portland cement; strength of materials; analytic mechanics; roads and pavements.
- Chauvenet, Regis**, Argonaut Hotel, Denver, Colo. *Chemistry*. Philadelphia, Pa., Oct. 7, 42. A.B., Washington (St. Louis), 62, A.M., 66, LL.D., 00; B.S., Harvard, 67; Sc.D., Colorado, 20. *Pres.*, *Colo. Sch. Mines*, 83-02, *emer. pres. and special lecturer*, 12- Min. Eng.; Colo. Sci. Soc. Chemical arithmetic; calculation of furnace charges.
- Chauvenet, William Marc**, University Club, St. Louis, Mo. *Mining, Chemistry*. Annapolis, Md., March 4, 55. Chemist, Mo. Blast Furnace Co., 79; div. mining geol., tenth census, 79-83; U. S. Geol. Surv., 82-85; *consulting chemist and mining engineer*, 85- A.A.; Min. Eng.; Am. Geog. Soc.; Forestry Ass. Chemistry of ores; field work in structural and mining geology.
- Cheever, Prof. David**, 193 Marlboro St., Boston, Mass. *Surgery*. Boston, June 25, 76. A.B., Harvard, 97, M.D., 01. Asst. prof. surg., *Harvard Med. Sch.*, 13- Surgeon, Peter Bent Brigham Hosp., 13. A.A.; Ass. Anat. Anatomy applied to surgery.
- Cheney, Prof. L(ellen) S(terling)**, Barron, Wis. *Botany*. Essex, Ohio, Dec. 4, 58. B.S., Wisconsin, 91, fellow, 91-92, M.S., 96. Instr. pharmacog. and pharmaceut. bot., Wisconsin, 92-96, asst. prof. pharmaceut. bot., 96-03. A.A.; Forestry Ass.; Bot. Cent. States; Wis. Acad. (treas., 95-99); Wis. Forestry Ass. (sec'y, 95, and treas., 96-00). The forest flora and Bryophyta of Wisconsin.
- Chernoff, Dr. Lewis H(ill)**, 418 E. Fifth Ave., Denver, Colo. *Chemistry*. Russia, Jan. 1, 90. Ph.B., Yale, 11, Ph.D., 14. Asst. chem., Yale, 10-14; prof. chem. and physics, Charleston, 14-15; *org. chemist, bur. chem.*, *U. S. Dept. Agr.*, 15- Chem. Soc. Organic chemistry; pyrimidins; saponins; proteins; carbohydrates; butter and cream.
- Cherrie, Geo(rge) E(ruck)**, Newfane, Vt. *Ornithology*. Knoxville, Iowa, Aug. 22, 65. Iowa State, 81-83. Curator birds, mammals and reptiles and taxidermist, Nat. Museum of Costa Rica, 89-93; asst. curator ornith., Field Museum Nat. Hist., 93-97; curator birds, museum, Brooklyn Inst., 99-11. Exploration in Orinoco Valley for Zool. Museum of Tring, England, 97-99, 05, 07; French Guiana, 02-03. Mem. Ornith. Union. Birds of Costa Rica and Santo Domingo; nesting habits and distribution of birds of the Orinoco region; birds of Long Island, New York.
- Cherry, Louis Bond**, Republic Building, Kansas City, Mo. *Engineering*. Parsons, Kans., June 10, 73. High sch. *Consulting elec. engineer and electrochemist*, C. and C. Developing Co., 15- A.A.; Elec. Eng.; Electrochem. Soc. Electrochemistry; metallurgy; ceramics; synthetic hydrocarbons; forcing molecular vibration.
- Chesney, Dr. Alan M(ason)**, Washington University Medical School, St. Louis, Mo. *Medicine*. Baltimore, Md., Jan. 17, 88. A.B., Hopkins, 08, M.D., 12. Asst. med., Hopkins, 12-14; asst. res. physician, Rockefeller Inst. Hosp., 14-17; *assoc.*

- med.*, Washington (St. Louis), 17- Soc. Clin. Invest. Bacteriology; chemotherapy.
- Chesney, C(ummings) C**, Dawes Ave, Pittsfield, Mass. *Electrical engineering*. Selinsgrove, Pa., Oct. 28, 63. B.S. Pa. State, 85. Chemist, Pa. State, 85-86; prof. chem. and math, Doylestown Sem, 86-88; chief elec. engineer, Stanley Elec. Mfg. Co, 91-01, v. pres. and chief engineer, 01-06; *manager and chief engineer, Pittsfield works, Gen. Elec. Co*, 06- Consulting elec. engineer, Northern Elec. Mfg. Co, 00- Elec. Eng; London Soc. Arts. Design of electrical machinery; methods of transmission of energy by electricity.
- Chesnut, V(ictor) K(ing)**, U. S. Department of Agriculture, Washington, D. C. **Phytochemistry*. Nevada City, Calif, June 28, 67. B.S. California, 90; Chicago, 93. Instr. chem, California, 93; botanist in charge poisonous plant investigations, U. S. Dept. Agr, 94-04; chemist, Mont. Exp. Sta. and chemist and geologist, Mont. Col, 04-07; *asst. chemist, div. drugs and phytochem. lab, bur. chem, U. S. Dept. Agr*, 07- Collaborator poisonous plant investigations, U. S. Dept. Agr, 04-07. A.A.; Chem. Soc; Agr. Chem; Wash. Acad; Wash. Chem. Soc. (pres, 01-); Wash. Bot. Soc. Poisonous plants; plants used by Indians; active constituents of plants; enzymes; fruit odors; analysis of patent medicines and plants.
- Chessin, Prof. Alexander S**, 13-21 Park Row, New York, N. Y. **Mathematics*. St. Petersburg, Russia, Dec. 11, 65. A.M, Imperial Inst. Hist. and Philol, Petrograd, 84; Ph.D, St. Petersburg, 89; C.E, Polytech, Zürich, 92. Lecturer celestial mech, Hopkins, 94-95, assoc. prof. math. and astron, 95-99; prof. math, Washington (St. Louis), 01-10; *consulting engineer*, 10- Lecturer, Harvard, 94; Lowell Inst, Boston, 95; Columbia, Cooper Union, N. Y. and the Chauteauqua Assembly, 00; Columbia, 09. Gold medal, Russian Ministry of Pub. Instruction, 88; special envoy to Italy, 89. Mechanics; astronomy; theory of functions; infinite series; differential equations; Bessel's functions; relative motion, Foucault pendulum; development of perturbative function; effect of the earth's rotation on gyroscopes; strains and stresses in a rapidly moving disc; gyroscopic devices.
- Chester, Rear Admiral C(olby) M(itchell)**, U.S.N., 1736 K St, N. W, Washington, D. C. *Astronomy, Naval science*. New London, Conn, Feb. 29, 54. Grad, U. S. Naval Acad, 63. Instr. seamanship and naval archit, U. S. Naval Acad, 74-77; in charge parties, hydrog. dept, U. S. Coast and Geod. Surv, 77-80, in charge dept, 80-85; commandant cadets, U. S. Naval Acad, 90-94; *supt, U. S. Naval Observatory*, 02- In charge, U. S. China and Corea Surveys, 71-73; lecturer, U. S. Naval War Col, 01-02; in charge U. S. eclipse exped. to Europe, 05; U. S. inspector, European astron. observatories, 08-11; prof. naval science and int. law, Yale, 17-18. A.A. Naval architecture; hydrography; international law.
- Chester, Prof. Frederick D(ixon)**, Chester Springs, Pa. *Bacteriology*. Santo Domingo, Haiti, Oct. 8, 61. Washington (St. Louis), 76-78; B.S, Cornell, 82, M.S, 85. Prof. geol. and bot, Del. Col, 82-92; bacteriologist and mycologist, Del. Exp. Sta, 89-07; director, State Bacter. Lab, Del, 99-07. Soc. Bact. (v. pres, 05); Soc. Prom. Agr. Sci. Mycology.
- Chester, Prof. W(ayland) M(organ)**, Hamilton, N. Y. *Biology*. Noank, Conn, March 10, 70. A.B, Colgate, 00; A.M, Harvard, 08. Instr. hist, *Colgate*, 94-97, instr. *biol*, 97-00, assoc. prof, 00-04, prof, 04- A.A; Soc. Zool; Wash. Biol. Soc. Comparative anatomy of animals.
- Chester, Prof. Webster**, 47 Winter St, Waterville, Maine. *Zoology*. Noank, Conn, Oct. 31, 76. A.B, Colgate, 00; A.M, Harvard, 08. Instr. science and math, Colby Acad, New London, N. H, 00-02; *prof. biol, Colby*, 03- Instr. invert. zool, Woods Hole, 08. Lecturer biol. and evolution, Bangor Theol. Sem, 14- A.A.
- Chickering, Prof. A(rthur) M(erton)**, Albion, Mich. *Zoology*. North Danville, Vt, March 23, 87. Ph.B, Yale, 13; M.S, Wisconsin, 16. Asst. *biol*, Beloit, 13-16, instr, 16-18; *prof, Albion*, 18- Micros. Soc; Mich. Acad. (v. pres, sect. zool, 19, 20). Chromosomes of *Belostoma fluminea* and of *Ranatra*; tentacles of *Hydra fusca*.
- Chidester, Dr. F(loyd) E(arle)**, University of West Virginia, Morgantown, W. Va. *Zoology*. Chicago, Ill, Oct. 13, 84. Ph.B, Syracuse, 07; fellow, Chicago, 08-09; A.M, Clark, 08, fellow, 10-11, Ph.D, 11. Instr. *biol*, DePauw, 09-10; Rutgers, 11-13, asst. prof, 13-15, assoc. prof. zool, 15-16, prof. zool. and chairman biol. and sanit. science, Rutgers and New Jersey, 16-18; *lieut, Pub. Health Service*, 18-19, *capt, (reserve)*, 19-; *assoc. prof. zool, West Virginia*, 19- With Bur. Fisheries, Woods Hole, summers, 10, 11, 19; research assoc, Carnegie Institution, summer, 12. A.A; Ass. Anat; Soc. Exp. Biol; N. B. Sci. Soc. (v. pres, 14, pres, 16). Embryology; experimental zoology.
- Chilcott, Prof. E(lliery) Channing**, U. S. Department of Agriculture, Washington, D. C. *Agriculture, Geology, Agronomy*. East Hamburg, N. Y, April 8, 59. M.S, S. Dak. Col, 88. Prof. agr, S. Dak. Col, 93-97, geol. and agron, 95-05; *agriculturist in charge of dry land agr. investigations, bur. plant indust, U. S. Dept. Agr*, 05- U. S. deputy surveyor and compassman, 82-90; agriculturist, S. Dak. Exp. Sta, 93-05, v. director, 97-05; collaborator, U. S. Dept. Agr. A.A. Soil physics; mechanical analysis of soils; crop rotation and adaptation; plant breeding and selection; animal nutrition; conservation and movement of soil moisture; cultivation methods; dry land agriculture investigations in the great plains area.
- Child, Dr. C(harles) M(anning)**, University of Chicago, Chicago, Ill. **Zoology*. Ypsilanti, Mich, Feb. 2, 69. Ph.B, Wesleyan, 90, M.S, 92; Ph.D, Leipzig, 94. Asst. *biol*, Wesleyan, 90-92; *zool, Chicago*, 95-96, assoc, 96-98, instr, 98-05, asst. prof, 05-09, assoc. prof, 09-16, *prof*, 16- Instr, Woods Hole, 95-97; holder, Agassiz table, Naples Zool. Sta, 94, Smithsonian table, 02-03. A.A; Soc. Nat; Soc. Zool; Ecol. Soc; Chem. Soc; Ass. Anat. Sense organs of insects; cell lineage of annelids; form regulation; occurrence and significance of amitosis; physiology of polarity and symmetry; physiological correlation and integration.

- Child, Prof. C(lement) D(exter)**, Hamilton, N. Y. **Physics*. Madison, Ohio, May 15, 68. A.B., Rochester, 90; Ph.D., Cornell, 97; Berlin and Cambridge, 97-98. Instr. high schools, 90-92; *physics*, Cornell, 92-97; *prof*, Colgate, 98-Physical Soc. Electrical discharge produced by hot bodies; radiation from mercury vapor; the electric arc.
- Childs, Prof. D(avid) H.**, 261 Huntington Ave., Buffalo, N. Y. *Chemistry*. Toronto, Can., Aug. 6, 72. B.S., Lehigh, 98. Furnace foreman, Mazapil Copper Co., 99; chemist, Aluminum Co. of Am., 99-07; *prof. chem. and physics*, Alfred, 07; *principal, Tech. High Sch.*, Buffalo. Chem. Soc. Smoke prevention; aluminum manufacture and use.
- Childs, Leroy**, Hood River, Oregon. *Entomology, Plant pathology*. Alhambra, Calif., Aug. 8, 88. A.B., Stanford, 13. Asst. sec'y, Calif. State Commission Hort., 13-14; entomologist, Hood River Exp. Sta., 14-16, *entomologist, plant pathologist and supt.*, 16- Asst. forest disease investigations, bur. plant indust., U. S. Dept. Agr., 13. A.A.; Entom. Soc.; Ass. Econ. Entom.; Phytopath. Soc. Apple diseases; insect and disease control; spraying.
- Chillingworth, Prof. F(elix) P(ercy)**, Tufts College Medical School, Boston, Mass. *Physiology*. New Haven, Conn., Sept. 17, 82. M.D., Yale, 07. Asst. *prof. physiol.*, Kansas, 12-13; *physiol. and pharmacol.*, Tulane, 13-20; Tufts, 20- Keese prize, Yale, 07. *Physiol. Soc.*; Am. Med. Ass.; Ass. Anat.; New Orleans Acad. Pharmacology; shock; respiratory and blood gases.
- Chittenden, Prof. A(lfred) K(night)**, East Lansing, Mich. *Forestry*. New Haven, Conn., Oct. 23, 79. M.F., Yale, 02. *Prof. forestry*, Mich. Agr. Col., 14- Soc. Foresters. Silviculture; rate of growth of timber; maple syrup yield; sand dune fixation.
- Chittenden, Dr. E(dward) W(ilson)**, Iowa City, Iowa. **Mathematics*. Waterville, Minn., Aug. 3, 85. A.B., Missouri, 09, A.M., 10; Ph.D., Chicago, 12. Inst. *math.*, Illinois, 12-18; asst. *prof.*, Iowa, 19-20, *assoc. prof.*, 20- Mem. staff, Chicago, summer, 20. *Math. Soc.*; Circolo Mat. di Palermo. General analysis; theory of functions of a real variable.
- Chittenden, Dr. F(rank) H(urlbut)**, U. S. Department of Agriculture, Washington, D. C. *Entomology*. Cleveland, Ohio, Nov. 3, 58. Mt. Union, 75-76; licentiate, Cornell, 81; hon. Sc.D., Pittsburgh, 04. Asst. entomologist, *bur. entom.*, U. S. Dept. Agr., 91-02, *entomologist*, 02- Asst. ed., 'Entomologica Americana,' 89-90. A.A.; Entom. Soc.; Ass. Econ. Entom.; Wash. Entom. Soc.; Brooklyn Entom. Soc. Insects injurious to vegetable crops and greenhouse plants; Coleoptera.
- Chittenden, Prof. J(onathan) Brace**, Harvard Club, New York, N. Y. *Mathematics*. Milford, Conn., May 13, 64. B.S., Brooklyn Polytech, 84; M.E., C.E., Worcester, 88; A.B., Harvard, 89, A.M., 90; Ph.D., Königsberg, 92; mem. N. Y. Bar, 02. Instr. *math.*, Princeton, 92-94; tutor, Columbia, and instr., Barnard, 94-99; *prof.*, Brooklyn Polytech, 00- A.A.; Math. Soc.; Brooklyn Inst. (sec'y, math. sect). The functions of Lamé; binary forms.
- Chittenden, Prof. Russell H(enry)**, 83 Trumbull St., New Haven, Conn. **Physiological chemistry, Physiology*. New Haven, Feb. 18, 56. Ph.B., Yale, 75, Ph.D., 80; Heidelberg, 78-79; LL.D., Toronto, 03; Birmingham, 11; Washington (St. Louis), 15; Sc.D., Pennsylvania, 04. *Prof. physiol. chem.*, Yale, 82-, *director, Sheffield Sci. Sch.*, 98- Lecturer *physiol. chem.*, Columbia, 98-03. Nat. Acad.; A.A.; Soc. Nat. (pres, 93); *Physiol. Soc.* (pres, 95-04); Soc. Biol. Chem. (pres, 07); Philos. Soc.; Am. Acad.; assoc. mem. Soc. Royale des Sciences Med. et Nat. de Bruxelles. Physiology of nutrition.
- Chivers, Prof. Arthur Houston**, Balch St., Harver, N. H. *Botany*. Amesbury, Mass., July 5, 80. A.B., Dartmouth, 02; A.M., Harvard, 04, Thayer fellow, 09-10, Ph.D., 14. Austin teaching fellow *bot.*, Harvard, 05-06, instr., Radcliffe, 05-06; Dartmouth, 06-10, asst. *prof.*, 10-20, *prof.*, 20- Instr. *bot.*, Cold Spring Harbor, 04-06. A.A.; Bot. Soc.; Phytopath. Soc. Ascomycetes.
- Christensen, Prof. Frederick Waldemar**, Agricultural College, N. Dak. *Biochemistry*. Randolph, Kans., Jan. 23, 79. B.S., Kansas State, 00; M.S., Pa. State, 08. Asst. animal nutrition, inst. animal nutrition, Pa. State, and bur. animal indust., U. S. Dept. Agr., 04-10; *assoc. prof. agr. chem.*, N. Mex. Col., and nutrition chemist, Exp. Sta., 11-16; *prof. animal nutrition*, N. Dak. Col., 16- Chem. Soc. Animal nutrition; protein requirements of growing cattle; vitamins.
- Christian, Dr. Henry A(sbury)**, Peter Bent Brigham Hospital, Boston, Mass. **Medicine*. Lynchburg, Va., Feb. 17, 76. A.B., A.M., Randolph-Macon, 95; M.D., Hopkins, 00; A.M., Harvard, 03. Asst. pathologist, Boston City Hosp., 00-02; instr. *path.*, Harvard, 02-05, *theory and practise of physics*, 05-07, asst. *prof.*, 07-08, *Hersey prof.*, 08-, dean, Harvard Med. Sch., 08-12; *physician-in-chief*, Peter Bent Brigham Hosp., 12- *Physician-in-chief*, Carney Hosp., 07-12. Ass. Path. and Bact.; Am. Physicians; Soc. Exp. Path.; Am. Acad.; Soc. Clin. Invest.; Am. Med. Ass. Dermoid cysts and teratomata; leucocytotoxins; myeloma.
- Christie, Prof. A(lexander) G(raham)**, Johns Hopkins University, Baltimore, Md. *Mechanical engineering*. Manchester, Ont., Nov. 19, 80. B.E., Toronto, 01, M.E., 13. Engineer, Westinghouse Machine Co., 01-04; instr. *mech. eng.*, Cornell, 04-05; *mech. engineer*, Allis-Chalmers Co., 05-07; West. Can. C. & C. Co., 07-09; asst. *prof. steam eng.*, Wisconsin, 09-13, *assoc. prof.*, 13-14; *mech. eng.*, Hopkins, 14-20, *prof.*, 20- Mech. Eng.; Gas Ass. Steam turbines; gas measurement; steam transmission and losses; public utilities.
- Christie, Arthur W(illiam)**, University of California, Berkeley, Calif. *Chemistry*. San Francisco, Calif., Jan. 2, 92. B.S., California, 15, M.S., 16. Instr. *fruit products*, California, 16- Asst. mil. science and tactics, California, 17-18. Horticultural products; soils; fertilizers; waters; dehydration of fruits and vegetables.
- Chrysler, Prof. M(intin) A(sbury)**, University of Maine, Orono, Maine. *Botany*. Berlin, Ont., Aug. 25, 71. B.A., Toronto, 94; fellow, Chicago, 03-04, Ph.D., 04. Asst. *bot.*, Harvard, 04-05, instr., 05-07; *assoc. prof.*, Maine, 07-10, *prof.*,

- 10-11, *biol*, 11- Asst. Bot. Surv, Md, 04, 05; Woods Hole, 04; instr. bot, summer sch, Harvard, 06-09. A.A.; Soc. Nat; Bot. Soc; New Eng. Bot. Club; Josselyn Bot. Soc. Plant morphology; phloem of conifers; anatomy of monocotyledons and gymnosperms.
- Chupp, Prof. Charles**, Cornell Agricultural College, Ithaca, N. Y. *Plant pathology*. Millersburg, Ind, June 2, 86. A.B, Wabash, 12; Ph.D, Cornell, 16. Asst, Cornell, 12-14, instr, 14-16; acting prof. bot, Wabash, 17; *asst. prof. plant path, Cornell*, 18- Phytopath. Soc. Vegetable diseases.
- Church, Dr. Archibald**, Northwestern University Medical School, Chicago, Ill. *Neurology*. Fond du Lac, Wis, 61. Wisconsin; M.D, Col. Physicians and Surg, Chicago, 84. *Prof. mental and nervous diseases, Northwestern*, 94- Neurologist, St. Luke's, Mercy, Wesley and Michael Reese Hospitals. Am. Med. Ass; Neur. Ass. Nervous diseases.
- Church, Prof. I(rving) P(orter)**, 9 South Ave, Ithaca, N. Y. *Applied mechanics and hydraulics*. Ansonia, Conn, July 22, 51. C.E, Cornell, 73, M.C.E, 78. Asst. prof. civil eng, Cornell, 76-91, assoc. prof, 91-92, *prof. applied mech. and hydraul*, 92-16, *emer. prof*, 16- Assoc. mem. Civil Eng; Cornell Ass. Civil Eng. Applied mechanics and hydraulics (mathematical and experimental).
- Church, Prof. J(ames) E(dward), Jr**, 358 Washington St, Reno, Nev. *Meteorology*. Holly, Mich, Feb. 15, 69. A.B, Michigan, 92, 98-99; Ph.D, Munich, 01. *Prof. Latin, Nevada*, 92-18, *classics*, 18-, observer meteorol. and climat, Exp. Sta, 06-16, *director, Mt. Rose Weather Observatory*, 06- In charge, Nev. Cooperative Snow Surv, 19- Fel. Meteorol. Soc; Royal Meteor. Soc. Forestry; climatology; the conservation, measurement and evaporation of snow; frost forecasting; instruments for the measurement of water content of snow and of snow evaporation.
- Church, Dr. Margaret B(rooks)**, U. S. Department of Agriculture, Washington, D. C. *Botany*. Providence, R. I, March 13, 89. A.B, Brown, 12, A.M, 14, Ph.D, 18. Collaborator, bur. plant indust, U. S. Dept. Agr, 13-15, *mycologist, bur. chem*, 15- Bot. Soc. Plant anatomy; mycology.
- Church, S(umner) R(ollin)**, 17 Battery Place, New York, N. Y. *Chemistry*. Brooklyn, N. Y, 79. Grad, Pratt Inst, 04. *Manager, research dept, Barrett Mfg. Co*, 11- Non-res. lecturer highway eng, Columbia, 14- Alumni Ass. medal, Pratt Inst, 04. A.A.; Chem. Soc; Soc. Chem. Indust. (chairman, Am. sect); Soc. Test. Mat; R. R. Eng; Road Ass; Am. Gas Inst; Soc. Munic. Improv. Wood preservation; bitumens; protective coatings and bituminous binders.
- Churchill, Dr. E(dward) P(erry)**, University of South Dakota, Vermilion, S. Dak. *Zoology*. Allerton, Iowa, July 19, 82. A.B, Iowa, 07; fellow, Hopkins, 15-16, Ph.D, 16. Asst. zool, Iowa, 12-13; Hopkins, 13-15; in charge shellfish investigations, Bur. Fisheries, 16-20; *asst. prof. zool, South Dakota*, 20- Soc. Zool; Ecol. Soc. Nutrition of fresh-water mussels; goldfish; blue crab; development and distribution of oyster larvae.
- Churchill, Prof. Jesse B(riggs)**, British-American Chemical Corporation, Ridgefield, N. J. *Chemistry*. Chelsea, Mass, Nov. 17, 75. B.S, Harvard, 99; Göttingen, 06-07. Instr. chem, Pa. State, 00-06, *asst. prof. indust. chem*, 06-10, *assoc. prof*, 10-15; fellow, Mellon Inst, 15-18; *tech. director, British-Am. Chem. Corp*, 19- Physical chemistry; synthetic organic chemistry.
- Churchill, Prof. O(mar) O(rlando)**, Agricultural College, N. Dak. *Agronomy*. Mich, 79. B.S, Mich. Agr. Col. Instr. agron, Mich. Agr. Col, 03-04; N. Dak. Col, 04-11; prof, Okla. Col, 11-13, dean, 13-15; *prof. agron, N. Dak. Col*, 15-A.A.; Soc. Agron. Soil physics; breeding of crops.
- Churchill, Dr. William**, Corning Glass Works, Corning, N. Y. *Psychology, Applied optics*. New Britain, Conn, Nov. 3, 76. A.B, Yale, 97, Ph.D, 01. Tutor philos, Yale, 02-04; *lens and color specialist, Corning Glass Works*, 04- A.A.; Psychol. Ass; Optical Soc; Philos. Ass. Orientation of tactual perceptions; standardization of lenses; signal colors and lenses on American railroads; physical properties of glass; spectrophotometric analysis.
- Churchman, Prof. J(ohn) W(oolman)**, 15 E. Tenth St, New York, N. Y. *Surgery*. Burlington, N. J, Jan. 8, 77. A.B, Princeton, 98, A.M, 01; M.D, Hopkins, 02; hon. A.M, Yale, 15. Hopkins Hosp, 02-05; *asst. Surg. Clinic, Breslau*, 05-06; Hopkins Hosp, 06-11; *instr. surg*, Hopkins, 09-11; *asst. prof, Yale*, 13-14, *prof*, 14-, *acting head of dept*, 17- Acting surgeon-in-chief, New Haven Hosp; *assoc. ed, 'Am. Rev. Tuber'*; major, M.R.C; chief, base hosp, France, 16. Officier de l'Instruction Pub, 19; Officier d'Acad, 20. Col. Surg; Ass. Mil. Surg; Soc. Exp. Biol; Ass. Path. and Bact; Soc. Bact. Clinical surgery; selective bactericidal property of gentian violet.
- Chute, H(oratio) N(elson)**, Ann Arbor High School, Ann Arbor, Mich. *Physics*. Grovesend, Ont, Dec. 26, 47. B.S, Michigan, 72, M.S, 75. Principal pub. schools, Aylmer, Ont, 66-69; *asst. prof. Latin, Woodstock (Can)*, 69-70; astron. work, Detroit Observatory, 72-73; *instr. physical science, high sch, Ann Arbor*, 73- Assoc. ed, 'School Science,' 00-04. A.A. Methods of teaching physics.
- Claassen, Prof. P(eter) W(alter)**, 102 Irving Place, Ithaca, N. Y. *Biology*. Hillsboro, Kans, March 17, 86. A.B, Kansas, 13, A.M, 15; Ph.D, Cornell, 18. Asst. state entomologist, Kans, 13-15; *instr. biol, Cornell*, 15-16; *asst. prof. entom*, Kansas, 16-17; *biol, Cornell*, 18- A.A.; Entom. Soc; Ass. Econ. Entom. Grasshopper control; insect inhabitants of cat-tail; Plecoptera of North America.
- Claghorn, Clarence R(aymond)**, 583 Lexington Ave, New York, N. Y. *Mining, Geology, Engineering*. Philadelphia, Pa, Aug. 10, 64. B.S, Pennsylvania, 84. Supt, Lackawanna Iron and Steel Co; *gen. manager, Northwestern Improv. Co*. Geol. Soc; Min. Eng; Min. and Metal. Soc; Franklin Inst; N. of England-Inst. Min. and Mech. Eng.
- Clapp, Prof. Charles H(oracle)**, State School of Mines, Butte, Mont. *Geology*. Boston, Mass, June 5, 83. B.S, Mass. Inst. Tech, 05, Ph.D, 10.

- Asst. state geologist and instr. geol, North Dakota, 05-07; instr. Mass. Inst. Tech, 07-10; geologist, Can. Geol. Surv, 08-13; *prof. geol.*, Arizona, 13-16; *Mont. Sch. of Mines*, 16-; *pres. and director*, *Mont. Bur. Mines*, 18- A.A; Geol. Soc; Min. Eng. Petrology and economic geology.
- Clapp, Prof. Cornelia M(aria)**, Mount Holyoke College, South Hadley, Mass. **Zoology*. Montague, Mass, March 17, 49. Ph.B, Syracuse, 88; Ph.D, Chicago, 96. *Prof. zool.*, *Mt. Holyoke*, 73-16, *emer. prof.*, 16- On staff, Woods Hole, 96-00, trustee, 97-01, 10. A.A; Soc. Zool. Lateral line system and embryology of *Batrachus* (*Opsanus*) tau; relation of the axis of the embryo to the first cleavage plane.
- Clapp, Earl H(art)**, U. S. Forest Service, Washington, D. C. *Forestry*. North Rush, N. Y, Oct. 15, 77. Cornell, 02-03; A.B, Michigan, 05. In *U. S. Forest Service*, 05-, *asst. forester in charge research*. A.A; Soc. Foresters (v. pres, 16).
- Clapp, F(rederick) G(ardner)**, 120 Broadway, New York, N. Y. *Geology*. Boston, Mass, July 20, 79. B.S, Mass. Inst. Tech, 01. Instr. geol. Mass. Inst. Tech, 01-02; *asst. geologist*, U. S. Geol. Surv, 02-08; consulting geol. engineer, 08-11; managing geologist, Ass. Geol. Eng, 11-18; *chief geologist*, *Ass. Petrol. Eng.*, 18- A.A; Geol. Soc; Min. Eng; W. Pa. Eng. Soc; Wash. Geol. Soc. Petroleum and natural gas.
- Clark, Prof. Albert Henry**, 701 S. Wood St, Chicago, Ill. *Chemistry*. Marengo, Ill, 71. Ph.G, Illinois, 04; B.S, Michigan, 15. Instr. and later *asst. prof. chem.*, *Illinois*, 06-19, *assoc. prof.*, 19-20, *prof.*, 20- A.A; Chem. Soc; Pharmaceut. Ass; London Chem. Soc; Chem. Gesell. Pharmaceutical and medical chemistry; alkaloidal assays of drugs and medicinal products.
- Clark, Prof. Arthur J(ohn)**, East Lansing, Mich. *Chemistry*. Chicago, Ill, Nov. 23, 80. A.B, Wisconsin, 05. Instr. *chem.*, *Mich. Agr. Col.*, 06-09, *asst. prof.*, 09-14, *assoc. prof.*, 14-16, *prof. and head of dept.*, 16- A.A; Chem. Soc.
- Clark, Prof. Arthur L(ewis)**, Queen's University, Kingston, Can. *Physics*. Worcester, Mass, Feb. 19, 73. B.S, Worcester, 94; Clark, 96-98, Ph.D, 04. Instr. math. and physics, Bridgton Acad, 95-96; Worcester Acad, 98-00; instr. *physics*, Bates, 00-01, *prof.*, 01-07; *Sch. Mining*, *Kingston, Can.*, 07-, *dean, faculty applied science*, 19- A.A; Physical Soc; Meteorol. Soc; Refrig. Eng; Royal Soc. Can; Soc. de Physique; Int. Ass. du Froid. Dielectric properties of oils; angle of lag; viscosity of ether at critical temperature; critical constants of air; contact resistance of carbon; capillary electrometer.
- Clark, Austin H(obart)**, Smithsonian Institution, Washington, D. C. *Zoology*. Wellesley, Mass, Dec. 17, 80. A.B, Harvard, 03. Acting naturalist, 'Albatross,' 06; hon. collaborator, *U. S. Nat. Museum*, 08-09, *asst. curator*, div. marine invert, 09-20, *curator, div. echinoderms*, 20- A.A; Soc. Nat; Ornith. Union; Nuttall Ornith. Club; Ass. Geog; Wash. Acad; Wash. Biol. Soc. (past sec'y); Cambridge Entom. Soc. (past sec'y); Harvard Nat. Hist. Soc.; fel. Royal Geog. Soc. Oceanography; echinoderms; insects; crinoids; the birds of northern Asia and the West Indies; Lepidoptera; classification of Peripatus.
- Clark, Dr. Bertha M**, William Penn High School, Philadelphia, Pa. *Physics*. Baltimore, Md, May 3, 77. A.B, Goucher, 00, Alumnae Ass. fellow, 03-04, Southern Women Ass. fellow, 04-05; fellow, Pennsylvania, 05-07, Ph.D, 07. Instr. physics, Goucher, 01-03; *director science, high sch.*, *Phila.*, 07- Advisory Board, 'Gen. Science Quarterly,' 16- A.A; Physical Soc; Franklin Inst. Physical chemistry; general science texts.
- Clark, Dr. Bruce Lawrence**, University of California, Berkeley, Calif. *Paleontology*. Humboldt, Iowa, May 29, 80. B.S, Pomona, 08; M.S, California, 09, fellow, 09-11, Ph.D, 13. *Asst. paleont.*, *California*, 10-11, *instr. and later asst. prof.*, 11- A.A; Geol. Soc; Paleont. Soc; Soc. Mammal; West. Soc. Nat; Calif. Acad. The fauna of the San Pablo group (upper Miocene), of middle California, and of Oligocene and Eocene of California; marine invertebrates.
- Clark, Dr. Cha(rl)e(s) F(rederick)**, U. S. Department of Agriculture, Washington, D. C. *Horticulture*. Glover, Vt, Aug. 13, 73. B.S, Vermont, 97; M.S.A, Cornell, 07, Ph.D, 09. *Asst. agronomist*, Cornell Exp. Sta, 06-07, *asst. plant breeding*, 07-10; *asst. agronomist, bur. plant indust.*, *U. S. Dept. Agr.*, 10-20, *horticulturist*, 20- A.A; Soc. Agron; Soc. Hort. Sci; Wash. Bot. Soc. Potato breeding and selection; timothy and sorghum breeding; cultural methods for sugar beets.
- Clark, Charles H(enry)**, U. S. Department of Agriculture, Washington, D. C. *Agronomy*. Tower City, N. Dak, Aug. 6, 87. B.S, N. Dak. Col, 08. *Asst. agriculturist*, Dickinson, N. Dak, 09-10; *asst. plant breeder*, *Ariz. Exp. Sta.*, 10-11; crop acclimatization, adaptation and cotton breeding investigations, *bur. plant indust.*, *U. S. Dept. Agr.*, 11-13, *asst. agronomist in charge flax and cereal investigations*, 13- A.A; Soc. Agron; Am. Geog. Soc; Wash. Bot. Soc. Alfalfa, cotton and flax breeding.
- Clark, Prof. Elbert**, University of Chicago, Chicago, Ill. *Anatomy*. Cleveland Co, Ark, Aug. 21, 82. B.S, Arkansas, 03; Chicago, 05-07, Ph.D, 18, M.D, Rush Med. Col, 16. Lab. *asst. anat.*, Chicago, 07-08, *asst.*, 08-09; *asst. prof.*, Philippine Med. Sch, 09; *assoc. prof.*, *Chicago*, 20- Capt, Red Cross, 17; capt. and major, M.C, 18-19. The glands of the frontal sinus of the sheep; the frontal sinus; the pancreas; degeneration and regeneration of nerves; influenza; pneumonia.
- Clark, Prof. Elias Treat**, University of Washington, Seattle, Wash. *Forestry*. Woodbridge, Conn, Sept. 1, 86. Ph.B, Yale, 07, M.F, 08. Forest *asst.*, U. S. Forest Service, 08-09, *dept. forest supervisor*, 09-10; *supt.*, Const. Stand. Ry. and Timber Co, 10-11; *assoc. prof. forestry*, *Washington (Seattle)*, 11- Soc. Foresters. Lumbering; forest mensuration; logging engineering.
- Clark, Dr. E(liot) R(ound)**, University of Missouri, Columbia, Mo. **Anatomy*. Shelburne, Mass, Nov. 13, 81. A.B, Yale, 03; M.D, Hopkins, 07. *Asst. anat.*, Hopkins, 07-08, *instr.*, 08-11, *assoc.*, 11-14; *prof.*, *Missouri*, 14- A.A; Ass. Anat; Physiol. Soc; Am. Med. Ass; Ass. Prof. Development of lymphatic vessels; development of bone and of blood vessels.

- Clark, Dr. Ernest D(unbar)**, L. C. Smith Building, Seattle, Wash. *Biological chemistry*. Boston, Mass, May 4, 86. A.B. Harvard, 08; A.M. Columbia, 09, fellow, 09-10, Ph.D., 10. Asst. chem. Harvard, 07-08; instr. biol. chem. Columbia, 10-12; med. col. Cornell, 12-13; food chemist and asst. to chief, bur. chem. U. S. Dept. Agr., 13-19, investigator fish and fish products, 14-19; *director, Pacific fisheries investigations and salmon cannery inspection service, Nat. Canners Ass.*, 19- Research scholar, N. Y. Bot. Garden, 12. A.A.; Chem. Soc. (assoc. ed., 'Chem. Abstracts'); Soc. Biol. Chem. Proteins of fish; plant oxidases; poisonous fungi; starch; isolation of new substances from plants and fungi; enzymes in moulds; decomposition of cellulose; fish and oysters in cold storage; food value of fish; decomposition products.
- Clark, Dr. Friend E(benezer)**, West Virginia University, Morgantown, W. Va. *Chemistry*. New Martinsville, W. Va, Aug. 21, 76. B.S. West Virginia, 98; Ph.D. Hopkins, 02; Berlin, 08. Instr. chem. West Virginia, 02-03; indust. chem. Pa. State, 03-05; *prof. chem.* Cent. Univ. of Ky, 05-14; *West Virginia*, 14- Prof. geol. summer sch. West Virginia, 03. A.A.; Chem. Soc.; Electrochem. Soc.; Soc. Chem. Indust.; fel. London Chem. Soc. Organic chemistry.
- Clark, Prof. George L(indenberg)**, Vanderbilt University, Nashville, Tenn. *Chemistry*. Anderson, Ind, Sept. 6, 92. A.B. DePauw, 14; M.S. Chicago, 14, Ph.D. 18. Instr. chem. DePauw, 14-16; *prof. physical chem.* Vanderbilt, 19- A.A.; Chem. Soc.; Ind. Acad. Physical and inorganic chemistry.
- Clark, Dr. Guy W(endell)**, 1148 Sutter St, Berkeley, Calif. *Biochemistry, Pharmacology*. Keene, N. H., May 25, 87. A.B. Colo. Col, 12, A.M., 14; Ph.D. California, 18. Instr. chem. Colo. Col, 12-16; *pharmacol.* California, 19- Control chemist, West. Meat Co., 18-19; chemist in charge, media dept, Cutter Biol. Laboratories, 19. Chem. Soc. Soil fertility; ratio of blood proteins; oocytin; culture medium for Gonococcus.
- Clark, Harold H.**, 25 Cherryvale Ave, Springfield, Mass. *Electrical engineering*. Ellsworth, Maine, 76. B.M.E. Maine, 99, E.E., 03. Elec. engineer, U. S. Bur. Mines, 09-18; *chief engineer, Wico Elec. Co.*, 19- Major, C.W.S., 18. Elec. Eng. Electrical and mechanical devices and machines; magneto ignition devices.
- Clark, Dr. Harry**, Rockefeller Institute, New York, N. Y. *Physics*. Roxbury, N. Y., June 2, 85. B.S. N. Y. Univ, 07, M.S., 08; A.M. Harvard, 11, fellow, in France, summer 14, Ph.D., 14. Asst. physics and math, N. Y. Univ, 05-07; *physics*, Stevens, 09; Harvard, 11-17; instr. Radcliffe, 14-17; prof, Victoria Col. Wellington, New Zealand, 17-19; assoc. prof, Oberlin, 19-20; *assoc. mem. Rockefeller Inst.*, 20- Morse gold medal, N. Y. Univ. Physical Soc. Longitudinal vibrations in wires; radioactivity.
- Clark, Harry Willard**, North Andover, Mass. *Sanitary chemistry and engineering*. Melrose, Mass, Sept. 15, 63. Cornell, 86; Mass. Inst. Tech, 87. Asst. chemist, *Lawrence Exp. Sta.*, 87-93, *chemist in charge*, 93-; *chief chemist, State Board of Health, Mass.*, 97- Soc. Bact; Chem. Soc; Pub. Health Ass; New Eng. Water Works Ass; Boston Soc. Civil Eng. Purification of water and sewage and allied subjects.
- Clark, Dr. Helen**, 31 Prospect St, Cortland, N. Y. *Psychology*. Cortland, N. Y., Feb. 20, 90. A.B. Vassar, 13; fellow, Illinois, 14-16, Ph.D., 16. Instr. psychol. Vassar, 16-18; *Reed*, 19- Instr. psychol. Rutgers, summers, 14-17. Psychol. Ass. Experimental and social psychology.
- Clark, Dr. H(erbert) A(nthony)**, 136 Elmdorf Ave, Rochester, N. Y. *Physics*. Darlington, Wis, June 20, 75. B.S. Kansas, 98; fellow, Nebraska, 04-05, A.M., 05; Ph.D. Columbia, 13. Instr. physics, Syracuse, 05-07, asst. prof, 07-10, assoc. prof, 10-13, prof, 13-19; *physicist, Taylor Instrument Companies*, 19- Asst. physics, Columbia, 08-09, Barnard lecturer, 09-10. A.A.; assoc. Physical Soc.; Optical Soc.; Am. Geog. Soc.; Ass. Prof. Heat radiation; spectrophotometry.
- Clark, H(oward) Walton**, Biological Station, Fairport, Iowa. *Zoology*. Allen Co, Ind, Sept. 9, 70. A.B. Indiana, 96, A.M., 01. Preparator, Field Museum Nat. Hist, 01-04; *asst.* U. S. Bur. Fisheries, 04-09; *U. S. Biol. Sta.*, 10- A.A.; Soc. Zool; Wash. Biol. Soc. Flora of Eagle Lake; plankton of Lakes Atitlan and Amatitlan, Guatemala; fresh-water mussels; dwarf shore floras.
- Clark, Dr. H(ubert) L(yman)**, Museum of Comparative Zoology, Cambridge, Mass. **Zoology*. Amherst, Mass, Jan. 9, 70. A.B. Amherst, 92; Ph.D. Hopkins, 97. Instr. biol. Amherst, 97-99; prof, Olivet, 99-05; asst. invert. zool. *museum comp. zool.* Harvard, 05-11, *curator echinoderms*, 11-; *acting prof. zool.* Williams, 20- Investigator, U. S. Fish Commission, 99, 02. A.A.; Soc. Nat; Soc. Zool; mem. Ornith. Union; New Eng. Bot. Club; Boston Soc. Nat. Hist. Embryology, taxonomy, morphology and distribution of echinoderms; pterylography of birds; variation in snakes.
- Clark, Dr. Hugh**, Aluminum Co. of America, New Kensington, Pa. *Chemistry*. Wapakoneta, Ohio, Oct. 20, 84. A.B. Ohio State, 09, A.M., 10; Ph.D. Pittsburgh, 13. Fellow, Mellon Inst, 11-16; *research chemist, Aluminum Co. of Am.*, 16- Chem. Soc. Petroleum; aluminum; fixation of nitrogen.
- Clark, Dr. Janet Howell**, 232 W. Lanvale St, Baltimore, Md. *Physics, Physiology*. Baltimore, Jan. 1, 89. A.B. Bryn Mawr, 10; A.M. Hopkins, 12, Ph.D., 13; Sarah Berliner fellow, Mt. Wilson Solar Observatory, 15-16. Lecturer physics, Bryn Mawr, 14-15; instr. Smith, 16-17; asst. path. Hopkins, 17-18, *instr. physiol. hygiene, sch. hygiene and pub. health*, 18- Physical Soc. Spectroscopy; biological effect of light.
- Clark, John A(nson)**, Commercial High School, Brooklyn, N. Y. *Physics*. Newark Valley, N. Y., Jan. 9, 74. B.S. Cornell. *Teacher physics*, high sch, Ithaca, N. Y., 96-03; *Commercial High Sch., Brooklyn*, 03- Physical Soc. Effects of an electrostatic change on surface tension; conductivity of electrolytes in gelatinous solutions; ultra-violet photography.
- Clark, Prof. John D(ustin)**, Albuquerque, N. Mex. *Chemistry*. Nashua, N. H., June 23, 82. B.S. N. H. Col, 06, M.S., 07; Ph.D. Stanford, 14. Asst. prof. chem. *New Mexico*, 07-08, assoc.

- prof, 08-13, *prof*, 13-, *dean*, *grad. sch.*, 19-A.A.; Chem. Soc; Min. and Metal. Soc; Min. Cong; N. Mex. Ass. Science (past pres.). Enrichment of copper sulphid ores.
- Clark, Dr. John G(oodrich)**, 2017 Walnut St, Philadelphia, Pa. *Surgery*. Economy, Ind, June 4, 67. M.D. Pennsylvania, 91; Hopkins, Leipzig and Prague. Assoc. *gynec*, Hopkins, 98-99; *prof*, Pennsylvania, 00- Am. Med. Ass. (chairman, board pub. educ. and sect. obstet. and gynec); Gynec. Soc. (pres, 18); Cong. Surg. Life history of the ovary; function of the peritoneum and of the omentum; elimination of pathogenic germs from the peritoneal cavity; therapeutic action of radium.
- Clark, Prof. Judson F(reeman)**, 285 W. Mountain St, Pasadena, Calif. Vancouver, B. C. *Forestry*. Bay View, P. E. Island, July 27, 70. B.S.A. Ont. Agr. Col, 96; A.M. Cornell, 99, fellow, 00-01, Ph.D, 01. Asst. bot. Cornell, 99-00, prof. forestry, 01-03; provincial forester, Ont, 05-06; *consulting forest engineer*, 06- Gold medal, Ont. Agr. Col, 05. A.A.; Forestry Ass; Soc. Foresters; Can. Soc. Foresters; Can. Forestry Ass. The effect of toxic agents; forest taxation, management and mensuration; forest problems in the Pacific Northwest.
- Clark, Myron H(enry)**, 1790 Broadway, New York, N. Y. *Chemistry*. Bedford, Mass, July 25, 81. B.S. Mass. Inst. Tech, 03. Chemist, Boston Rubber Shoe Co, 03-07, asst. supt, 07-13; gen. supt, Goodyear's M. R. Shoe Co, 14; *gen. factory manager, footwear div*, U. S. Rubber Co, 14- A.A.; Chem. Soc; Soc. Chem. Indust; Mech. Eng.
- Clark, Orton L(oring)**, Massachusetts Agricultural College, Amherst, Mass. *Botany*. Boston, Mass, April 18, 87. Mass. Col, 08; B.S. Columbia, 10; Rostock, 10-11; Munich, 11; Strasbourg, 11-13. Teacher nature study, Ethical Culture Sch, N. Y. City, 08-10; asst. bot, Strasbourg, 12-13; *asst. botanist*, Mass. Exp. Sta, 13-, *asst. prof. bot*, Mass. Col, 15- A.A. Plant physiology.
- Clark, Prof. Paul F(ranklin)**, University of Wisconsin, Madison, Wis. *Bacteriology*. Portland, Maine, May 9, 82. Ph.B. Brown, 04, A.M, 05, Ph.D, 09; Hopkins, 13-14. Asst. zool. Brown, 04-05, bacter, 05-06; asst. bacteriologist, R. I. State Board of Health, 06-07; fellow bacter, Rockefeller Inst, 09-10, asst., 10-12, *assoc. path*, 12-14; *assoc. prof*, Wisconsin, 14-18, *prof*, 18- A.A.; Soc. Bact; Soc. Exp. Biol; Soc. Exp. Path; Pub. Health Ass; Harvey Soc. Relation of diphtheria and pseudodiphtheria bacillus; poliomyelitis; bacillary dysentery; morphology of bacteria.
- Clark, Robert W(atson)**, 814 E. 12th St, Okmulgee, Okla. *Mineralogy*. West Branch, Mich, Aug. 17, 84. A.B. Michigan, 08, A.M, 13; Munich, 08-09. Asst. miner, Michigan, 07-08, instr. petrog, 09-16; *consulting geologist*, 16- A.A.; Ass. Petrol. Geol. Paleogeography and stratigraphy of Pennsylvanian in eastern Oklahoma.
- Clark, Thomas H(enry)**, Harvard University, Cambridge, Mass. *Paleontology*. London, England, Dec. 3, 93. A.B. Harvard, 17. Asst. *geol*, Harvard, 15-20, *instr*, 20- Paleont. Soc. Carboniferous of the Rocky Mountains; Ordovician of northeastern United States.
- Clark, W(ayland) Blair**, U. S. Department of Agriculture, Washington, D. C. *Chemistry*. Clermont Co, Ohio, Jan. 2, 75. B.S. Denison, 97, M.S, 00; fellow, Chicago, 04-05. Instr. chem, Denison, 98-04, treas. and business manager, 06-07; sugar chemist, Ensenada de Mora, Cuba, 09-11; asst. chemist, bur. plant indust, U. S. Dept. Agr, 11-14, supt, fed. potato quarantine, fed. hort. board, 14-16, *biochemist*, bur. plant indust, 16- Chem. Soc. Plant materials; plant diseases and their control.
- Clark, Dr. W(illiam) Mansfield**, Hygienic Laboratory, Washington, D. C. *Chemistry*. Tivoli, N. Y, Aug. 17, 84. A.B. Williams, 07, A.M, 08; fellow, Hopkins, 09-10, Ph.D, 10. Asst. chemist, Williams, 07-08; chemist, bur. animal indust, U. S. Dept. Agr, 10-20; *prof. chem*, *hygienic lab*, U. S. Pub. Health Service, 20- Asst. chemist, Woods Hole, summers, 08, 09. A.A.; Chem. Soc; Soc. Bact; Wash. Acad. Gas production of bacteria; influence of hydrogen ion concentrations on bacterial metabolism; Swiss cheese; osmotic pressure; hydrogen electrode; determination of hydrogen ions.
- Clarke, Prof. Elbert H(oward)**, Hiram, Ohio. *Mathematics*. Edinburg, Ind, March 15, 87. A.B. Butler, 09; Chicago. Instr. *math*, Purdue, 10-16; *prof*, Hiram, 17- Math. Soc; Math. Ass; Ind. Acad. Calculus of variations.
- Clarke, Prof. F(rank) W(igglesworth)**, U. S. Geological Survey, Washington, D. C. *Chemistry*. Boston, Mass, March 19, 47. B.S. Harvard, 67; hon. Sc.D. George Washington, 99; Victoria Univ, England, 03; LL.D. Aberdeen, 06; Cincinnati, 14. Instr. chem, Cornell, 69; *prof*, Howard, 73-74; Cincinnati, 74-83; *chief chemist*, U. S. Geol. Surv, 83- Mem. jury awards, Paris Expos, 00; govt. board at seven expositions; chairman, Int. Committee on Atomic Weights. Chevalier Légion d'honneur, 00; Wilde medal and Wilde lecturer, Manchester (England) Lit. and Philos. Soc, 03. Nat. Acad; A.A. (sec'y, subsect. chem, 75, v. pres, 78); Chem. Soc. (pres, 01); Philos. Soc; Wash. Acad. (v. pres, 08, pres, 11); Wash. Philos. Soc. (pres, 96); hon. mem. London Chem. Soc; cor. mem. British Ass; hon. mem. London Miner. Soc; cor. mem. London Geol. Soc; cor. mem. Edinburgh Geol. Soc; hon. mem. Manchester Lit. and Philos. Soc; hon. mem. Russian Miner. Soc; Moscow Imp. Soc. Nat. Inorganic chemistry; mineralogy; recalculation of atomic weights; data of geochemistry; constitution of silicates; thermo-chemical constants.
- Clarke, Dr. H(ans) T(hacher)**, Eastman Kodak Co, Rochester, N. Y. *Chemistry*. Harrow, England, Dec. 27, 87. 1851 Exhibition scholar, London, 11-13, D.Sc, 14. Lecturer, Univ. Col, London, 10-11; *org. chemist*, Eastman Kodak Co, 14- Chem. Soc; Inst. Chem. Gt. Britain and Ireland; London Chem. Soc; Chem. Gesell. Residual affinity and chemical constitution; preparation of rare organic chemicals.
- Clarke, Prof. Helen M(aud)**, University of Kansas, Lawrence, Kans. *Psychology*. Lawrence, Aug. 26, 79. A.B. Kansas, 03, fellow, 06-08, A.M, 07; fellow, Cornell, 08-10, Ph.D, 10. Teacher, pub. schools, Enid, Okla, 03-05; high

sch, Perry, 05-06; asst. psychol, Kansas, 06-08; instr. and later asst. prof. cor. study, Kansas, 10-

Clarke, Dr. John M(ason), State Museum, Albany, N. Y. **Paleontology, Geology*. Canandaigua, N. Y., April 15, 57. A.B., Amherst, 77, A.M., 82, LL.D., 02; Hopkins, 15; Göttingen, 82-84; hon. A.M. and Ph.D., Marburg, 98; hon. Sc.D., Colgate, 09; Chicago, 16; Princeton, 19. Instr. geol., Amherst, 79; prof. geol. and zool., Smith, 81-85; lecturer zool., Mass. Col., 85; asst. state paleontologist, N. Y., 86; *prof. geol., Rensselaer*, 94-; state paleontologist, N. Y., 98-04, *state geologist and paleontologist, and director, state museum and science div., Educ. Dept.*, 04-See'y, N. Y. State Board Geog. Names; Wampum keeper, Iroquois Nation; trustee, Dudley Observatory; Schuyler Mansion; chairman, div. geol., Nat. Research Council; Spindiaroff prize, Int. Geol. Cong.; gold medal, Permanent Wild Life Protection Fund, 19; Hayden gold medal, 08. Nat. Acad. (co-editor, 'Proc'); A.A. (v. pres, 10); Geol. Soc. (v. pres, 09, pres, 16); Philos. Soc.; Paleont. Soc. (pres); Am. Acad.; hon. mem. Brooklyn Inst.; Buffalo Acad.; Rochester Acad.; Onondaga Acad.; Wash. Acad.; cor. Phila. Acad.; for. cor. London Geol. Soc.; Göttingen Königl. Gesell.; Natur-hist. Verein d. preussisch. Rheinlande; Royal Prussian Acad.; Geol. Gesell.; Miner. Soc. Russia. Bird protection; ceramics; history, composition, evolution and migration of Paleozoic faunas; origin, classification and cartography of Paleozoic rocks; structure of Paleozoic organisms; geological history of parasitism.

Clarke, Prof. S(amuel) F(essenden), Williamstown, Mass. **Biology*. Geneva, Ill., June 4, 51. Ph.B., Yale, 78; fellow, Hopkins, 76-79, Ph.D., 79; A.M., Williams, 91. Asst. zool., Yale, 73-76; Hopkins, 79-81; *prof. nat. hist., Williams*, 81-16, *emer. prof.*, 16- Asst., U. S. Fish Commission, 74-76. A.A.; Soc. Nat.; Soc. Zool.; Am. Acad. Hydroids of the American coast; embryology of the American alligator.

Clarke, Prof. Warren T(hompson), 2317 Le Conte Ave., Berkeley, Calif. *Entomology, Horticulture*. San Francisco, Calif., March 15, 63. B.S., California, 03. Asst. entom., California, 04-06; *prof., Ala. Polytech.*, 06-07; asst. *prof. hort., California*, 07-12, *prof.*, 12-, *supt., univ. exten. agr.*, 07- A.A.; Entom. Soc.; Pacific Coast Entom. Soc. Almond pollination.

Clausen, Prof. Roy E(lwood), University of California, Berkeley, Calif. *Genetics*. Randall, Iowa, Aug. 21, 91. B.S., Okla. Col., 10; California, 12, Ph.D., 14. Instr. *genetics, California*, 14-16, *asst. prof.*, 16- In mil. service, 17-19. A.A. Genetics of Nicotiana.

Clausen, Dr. Samuel Wolcott, 500 S. Kingshighway, St. Louis, Mo. *Biological chemistry*. Canaseraga, N. Y., Oct. 17, 88. A.B., Williams, 10; M.D., Hopkins, 15. Intern., Hopkins Hosp., 15-16, asst. res., 16-17; instr. *pediat., Washington (St. Louis)*, 17-20, *assoc.*, 20- Chemical problems in diseases of children.

Clawson, Prof. B(enjamin) J(unior), University of North Dakota, University, N. Dak. *Bacteriology*. Dixonville, Pa., Jan. 9, 81. B.S., Kansas, 09, A.M., 11; M.D., Rush Med. Col., 17, Ph.D., Chicago, 19. Asst. prof., Okla. Col., 11-12; instr.,

asst. prof. and later assoc. prof. bacter., Kansas, 12-17; instr., Chicago, 17-19; *prof. path. and bacter., North Dakota*, 19- Soc. Bact. Pathology.

Clayberg, Prof. Harold D(udley), University of Minnesota, Minneapolis, Minn. *Biology*. Chicago, Ill., Jan. 92. A.B., Illinois, 13, fellow, 16-17; M.S., Chicago, 14, Ph.D., 17. Instr. science and math, high sch., Monroe, La., 14-15; asst. bot., Illinois, 16-17; asst. prof., Washburn, 17-18; prof. biol., Davidson, 18-19; *zool.*, Beloit, 19-20; *instr., Minnesota*, 20- Ecol. Soc. Physiographic ecology; reactions of fishes to chloroform and ether; Compositae.

Claycomb, Prof. George B., Mitchell, S. Dak. *Biology*. La Harpe, Ill., Dec. 25, 86. Ph.B., Adrian, 09; M.S., Chicago, 14. Teacher, high sch., Geneseo, Ill., 10-16; Missoula, Mont., 16-18; asst. zool., Illinois, 18-19; *prof. biol., Dakota Wesleyan*, 19- A.A.; Cent. Ass. Sci. and Math. Ecology; distribution, habits and life histories of animals.

Clayton, Prof. Charles Yancey, Rolla, Mo. *Metalurgy*. Hannibal, Mo., Jan. 29, 91. B.S., Mo. Sch. Mines, 13, Met.E., 16. Assoc. prof. and later *prof. metal. and ore dressing, Mo. Sch. Mines*, 13- Metallographist, U. S. Bur. Mines, 18-19. Min. and Metal. Eng.; British Iron and Steel Inst.; British Inst. Metals. Metallography; flotation; complex ores.

Clayton, H(enry) H(elm), 974 Paseo Colon, Buenos Aires, Argentina. *Meteorology*. Murfreesboro, Tenn., March 12, 61. Private and pub. schools. Student asst., astron. observatory, Michigan, 84-85; asst., Harvard Col. Observatory, Blue Hill Meteorol. Observatory, 86-91; local forecast official, U. S. Weather Bur., 91-93; meteorologist, Blue Hill Meteorol. Observatory, 94-09; *chief, forecast div., Argentine Weather Service*, 13- In charge, Teisserene and Roth exped. to explore tropical Atlantic with kites and balloons, 05. Am. Acad.; Boston Sci. Soc. (pres, 99-03). Clouds; relation of solar changes to world weather; explorations of the air with balloons-sounds.

Claytor, Dr. Thomas A(sh), 1826 R St., N. W., Washington, D. C. *Medicine*. West River, Md., July 14, 69. M.D., Pennsylvania, 91. *Clin. prof. med., George Washington*, 98-, *prof. therapeut. and physician, hosp.*, 02- Physician, Garfield Mem. Hosp., 98- Am. Med. Ass.; Climat. Ass.

Cleland, Prof. Herdman F(itzgerald), Williamstown, Mass. *Geology*. Milan, Ill., July 13, 69. A.B., Oberlin, 94; Ph.D., Yale, 00; Cornell, 01. Instr. nat. science, Gates, 95-98; geol. and bot., Williams, 01-04, asst. *prof. geol. and miner.*, 04-05, *prof.*, 05- Instr. geol., summer sch., Cornell, 00-02; Tennessee, 04. A.A.; Geol. Soc.; Paleont. Soc. (see'y, 09); Min. Eng.; Seismol. Soc.; Am. Acad. Physical and historical geology; fossil faunas of the Hamilton formation; Calciferous of the Mohawk Valley; Wisconsin Devonian; natural bridges of North America and their origins; geology and physiography of the coastal plain.

Cleland, Dr. Ralph E(rskine), Goucher College, Baltimore, Md. *Botany*. Le Claire, Iowa, Oct. 20, 92. A.B., Pennsylvania, 15, M.S., 16, Ph.D.,

19. Instr. biol, *Goucher*, 19-20, *asst. prof. bot.*, 20- A.A; Bot. Soc. Red algae.
- Clemens, Mrs. Lucy (Wright) Smith**, 215 Davenport Road, Toronto, Ont, Can. *Zoology*. Sheffield, Mass, Jan. 3, 87. A.B, Mt. Holyoke, 09; A.M, Cornell, 11, Ph.D, 14. Scientific asst. sta. for exp. evolution, Carnegie Institution, 09-10; asst. biol, Cornell, 11-12; instr. zool, Mt. Holyoke, 12-18. A.A; Soc. Zool; Entom. Soc; Ont. Entom. Soc. Entomology; vertebrate morphology.
- Clemens, Prof. Wilbert A(mie)**, University of Toronto, Toronto, Can. *Biology*. Millbank, Ont, 87. B.A, Toronto, 12, M.A, 13; Ph.D, Cornell, 15. Demonstrator *biol*, Toronto, 12-13; asst. instr, Cornell, 13-15; instr, Maine, 15-16; lecturer, *Toronto*, 16-19, *asst. prof.*, 19- First Walker prize, Boston Soc. Nat. Hist, 16. A.A; Ecol. Soc; Ont. Entom. Soc; Can. Inst. Limnobiology.
- Clement, Dean Fred Moore**, University of British Columbia, Vancouver, B. C, Can. *Horticulture*. Niagara, Ont, Nov. 21, 84. B.S.A, Ont. Agr. Col, 11. Co. representative, Dutton, Ont, 11-12; lecturer hort, Macdonald, 12-14; director, Vine-land Exp. Sta, 14-16; *prof. hort. and dean, faculty of agr, British Columbia*, 16- Soc. Hort. Sei.
- Clement, Major J(ohn) K(ay)**, U. S. A, Nitrate Plant No. 2, Muscle Shoals, Ala. *Physics*. Sunbury, Pa, Nov. 5, 80. B.S, Trinity (Conn), 00; Ph.D, Göttingen, 04. Asst, geophys. lab, Carnegie Institution, 04-07; asst. physicist, *technol. branch, U. S. Geol. Surv.*, 07-08, *physicist*, 08- Physical Soc; Chem. Soc; Wash. Philos. Soc. Experimental physics; formation of ozone; gas thermometer; physical properties of rock-forming minerals; application of physical chemistry to processes of the gas producer; thermal conductivity of fire clays and other refractory materials at high temperatures; velocity of water-gas reaction; fixation of atmospheric nitrogen.
- Clements, Prof. Frederic E(dward)**, 530 E. First St, Tucson, Ariz. **Botany*. Lincoln, Nebr, Sept. 16, 74. B.S, Nebraska, 94, A.M, 96, Ph.D, 98. Asst. bot, Nebraska, 94-97, instr, 97-99, adj. prof, 99-03, asst. prof, 03-05, assoc. prof. plant physiol, 05-06, prof, 06-07; bot, Minnesota, 07-17; *assoc. ecol, desert lab, Carnegie Institution*, 17- Ecology; paleoecology; histogenesis.
- Clements, Mrs. Frederic E. (Dr. Edith)**, University of Minnesota, Minneapolis, Minn. *Botany*. Albany, N. Y. A.B, Nebraska, 98, Ph.D, 06. Asst. bot, Nebraska, 04-07; instr, Minnesota, 09-13. Ecol. Soc; Micros. Soc. Ecology; experimental evolution.
- Clements, Dr. G(uy) R(oger)**, 4 Murray Ave, Annapolis, Md. *Mathematics*. Ravenna, Ohio, March 5, 85. A.B, Hiram, 05; A.M, Chicago, 07; Ph.D, Harvard, 13. Instr. math, Williams, 07-09; Harvard, 08-10; substitute prof. pure math, North Carolina, 10-11; instr. math, Wisconsin, 11-17; *U. S. Naval Acad.*, 17-19, asst. prof, 19-20, *assoc. prof.*, 20- A.A; Math. Soc. Functions of several variables; implicit function theory; singular transformations; resultants; dynamical meteorology.
- Clements, Dr. J(ulius) Morgan**, 12 Broad St, New York, N. Y. *Mining, Geology*. Montgomery, Ala, Feb. 12, 69. A.B, Alabama, 87; Ph.D, Leipzig, 90; Bergakad, Freiberg, 90; Munich, 90-91; Heidelberg, 91; Col. de France, Paris, 91-92. Asst, Ala. Geol. Surv, 92-93; asst. prof. geol, Wisconsin, 93-03; asst. geologist, U. S. Geol. Surv, 93-03; *consulting geologist and mining engineer, N. Y. City*, 03- A.A; Geol. Soc; Min. Eng; Min. and Metal. Soc. Structural and economic geology; iron-bearing districts of Michigan and Minnesota; copper deposits of Bisbee, Ariz.
- Clendenin, W(illiam) W(allace)**, 120 Vista Place, Mt. Vernon, N. Y. *Geography, Geology*. Audrain Co, Mo, April 5, 62. B.S, Missouri, 86, M.S, 89; Morgan fellow, Harvard, A.M, 92; J.D, N. Y. Univ, 09. Asst. geol, Missouri, 87-93; prof. geol, Louisiana, and geologist, La. Agr. Surv, 93-98; supt, Bles Mil. Acad, 99-00; *teacher physiog, Wadleigh High Sch, N. Y. City*, 00- Teacher physiog, summer sch, Cornell, 08, 09. Am. Geog. Soc. Volcanoes and glaciers of Europe; ancient high-level beaches about the Great Lakes; Louisiana geology; origin of the 'pimpled prairies' of Louisiana and Texas.
- Cleveland, Prof. Alfred A(lexander)**, State College of Washington, Pullman, Wash. *Psychology*. Astoria, Oregon, Feb. 29, 76. A.B, Oregon, 98, A.M, 03; Ph.D, Clark, 06. Asst. prof. psychol, *Wash. State*, 07-08, prof, 08, head, dept. educ, 08-17, *dean, sch. educ.*, 17- A.A; Psychol. Ass. Educational psychology.
- Clevenger, G(alen) H(owell)**, 29 W. 39th St, New York, N. Y. *Metallurgy*. Pike, N. Y, Sept. 1, 79. B.S, S. Dak. Sch. Mines, 01, E.M, 08; A.M, Columbia, 03; Met.E, Stanford, 06. Assayer and chemist, Dak. Mining and Milling Co, 01-02; research metallurgist, Nat. Smelting Co, 03-04; supt, gold mill, Horseshoe Mining Co, 04-05; instr. metal, Stanford, 05-06; consulting metallurgist, 06-09; asst. prof. metal, Stanford, 09-10, assoc. prof, 10-17, research prof, 17-18; metallurgist and director metal. investigations, 18-19; *v. chairman, div. eng, Nat. Research Council*, 19- Consulting metallurgist; gold and silver medals and mem. committee, metal. exhibits, Panama-Pacific Expos, 15. A.A. Gold extraction; electric smelting; manganese-silver ores.
- Clevenger, Prof. J(oseph) F(ranklin)**, 3927 Fifth St, Washington, D. C. *Botany*. Sidney, Ohio, Nov. 30, 74. B.S, Ohio State, 03, A.M, 05. Instr. science, high sch, Columbus, Nebr, 03-04; prof. science, Cedarville, 05-06; biol, Wheaton, 06-09. A.A; Ohio Acad. Physiological botany; Phyllachora; effect of certain gases on heliotropism in etiolated seedlings.
- Clifford, C(harles) W(illiam)**, 2301 S. Columbine St, Denver, Colo. *Chemistry*. Stoughton, Mass, Dec. 22, 93. A.B, Denver, 14; M.S, Wisconsin, 16. Asst. chemist, Great West. Sugar Co, 16-17; Bur. Standards, 18-19; Great West. Sugar Co, 19-20; *Goodyear Tire and Rubber Co*, 20- Lieut, C.W.S, 17-18. Chem. Soc. Organic chemistry; organic analysis.
- Clifford, Prof. Harry E(llsworth)**, Newton Center, Mass. **Electrical engineering*. Lowell, Mass,

- April 21, 66. B.S., Mass. Inst. Tech, 86; Harvard, 86-87, 88-89, 91-92. Instr. theoret. physics, Mass. Inst. Tech, 86-95, asst. prof, 95-02, assoc. prof. theoret. elec, 02-04, prof, 04-09; *Gordon McKay prof. elec. eng, Harvard, 09-*; consulting engineer. A.A; Am. Acad; Elec. Eng. (past chairman, Boston branch); Nat. Elec. Light Ass; Illum. Eng. Soc; Eng. Educ; Circolo Mat. di Palermo. High voltage cables.
- Clifford, Dr. O (liver) C (haries)**, Armour Institute, Chicago, Ill. *Physics*. Wadsworth, Ohio, Feb. 4, 70. Pennsylvania, 90-91; Cornell, 92-93, 95; A.B., Oberlin, 93; fellow, Chicago, 04-06, Ph.D, 07. Prof. physics and chem, Tientsin, China, 95-04; instr. physics, *Armour*, 06-08, asst. prof, 08-10, *elec. eng*, 10-14, *assoc. prof*, 14- Nan Yang Col, Shanghai, 01-02. Mech. Eng. Susceptibility of copper and tin alloys; hysteresis of Huesler alloys; magnetic properties.
- Climenko, Dr. H (yman)**, 252 E. Broadway, New York, N. Y. *Neurology*. Nemiroff, Russia, 75. Gymnasium; M.D. Attending neurologist, Neur. Hosp, Blackwell's Isl, N. Y. City; neurologist, Montefiore Home and Hosp; *chief of clinic, Mt. Sinai Hosp*. Instr. neur, N. Y. Post-Grad. Med. Sch. A.A; Am. Med. Ass; N. Y. Neur. Soc; N. Y. Acad. Med. Brain and spinal cord tumors; dystrophies; epilepsy; neuralgias; internal secretions; encephalitis lethargica; dystonia.
- Clinton, Dr. G (eorge) P (erkins)**, Agricultural Experiment Station, New Haven, Conn. **Botany*. Polo, Ill, May 7, 67. B.S., Illinois, 90, M.S., 94; M.S., Harvard, 01, Sc.D, 02. Asst. botanist, Ill. Exp. Sta, and asst. bot, Illinois, 90-02; *botanist, Conn. Exp. Sta, 02-* Botanist, Conn. Board of Agr, 02- A.A. (v. pres, 15); Soc. Nat; Bot. Soc; Phytopath. Soc; Am. Acad; New Eng. Bot. Club; Conn. Bot. and Pomol. Societies. Fungi, especially Ustilagineae; economic fungi of Connecticut.
- Clinton, Prof. L (ouis) A (delbert)**, 79 Lawrence Ave, New Brunswick, N. J. *Agronomy*. Grand Rapids, Mich, Feb. 13, 68. B.S., Mich. Agr. Col, 89, M.S., 02; Cornell, 00-02. Asst. to director, Mich. Exp. Sta, 90-93; asst. prof. agr, Clemson, 93-95; asst. agriculturist, Cornell Exp. Sta, 96-02; director, Storrs Exp. Sta, and prof. agron, Conn. Col, 02-12; agriculturist, office of farm management, U. S. Dept. Agr, 12-14; asst. chief, exten. office, 14-18; *director, agr. exten, New Jersey*, 18- Soc. Prom. Agr. Sci. Soil physics and crop production; effect of tillage upon crop production.
- Clo, Prof. J. H (arry)**, University of Pittsburgh, Pittsburgh, Pa. *Physics*. Cincinnati, Ohio, May 2, 81. Fellow, Kentucky, 02-05, B.S., 04, M.S., 05; fellow, Chicago, 08-09, Ph.D, 11. Instr. *physics*, Kentucky, 02-05; Wash. State, 05-07; Virginia, 07-08; asst. Chicago, 09-11; asst. prof. and head of dept, Tulane, 11-13, assoc. prof, 13-17, prof, 17-19; *prof. and head of dept, Pittsburgh, 20-* A.A; Physical Soc; Ass. Prof; New Orleans Acad. (pres, 17-19). Electricity; electron theory in physics.
- Close, Prof. C (haries) P (hillip)**, U. S. Department of Agriculture, Washington, D. C. *Horticulture*. New Buffalo, Mich, Jan. 21, 68. B.S., Mich. Agr. Col, 95, M.S., 97. Asst. hort, N. Y. Exp. Sta, Geneva, 95-99; prof. hort, bot. and entom, Utah Col, 99-01; hort, Del. Exp. Sta, 01-07; state horticulturist, Md. Col, 07-11; *pomologist, U. S. Dept. Agr, 11-* A.A; Soc. Hort. Sci. (sec'y-treas); North. Nut Growers' Ass; Pomol. Soc. Propagating nut trees; apple breeding; commercial fertilizers in apple orchards; identification of fruits; improving wild fruits.
- Clough, H (omer) W (oodworth)**, 1412 29th St, N. W., Washington, D. C. *Meteorology*. Arcade, N. Y., May 18, 69. Rochester, 89-93. *With U. S. Weather Bur, 93-* A.A. Periodic variations in solar and terrestrial atmospheres; meteorological cycles; solar radiation.
- Clough, Dr. Mildred Clark**, Johns Hopkins Hospital, Baltimore, Md. *Bacteriology*. Newtonville, Mass, Sept. 14, 88. A.B., Wellesley, 10; M.D., Hopkins, 14. Intern, Hopkins Hosp, 14-15, asst. res, 15-16; asst. *med, Hopkins*, 16-17, *instr*, 17- Serology; pneumococcus; blood agglutinins; hemolysins; rouleaux formation.
- Clough, Dr. Paul W (iswall)**, 24 E. Eager St, Baltimore, Md. *Internal medicine*. Portage, Wis, Sept. 27, 82. B.S., Wisconsin, 03; M.D., Hopkins, 07. Intern, asst. resident and resident physician, *Hopkins Hosp*, 07-16, *asst. visiting physician*, 16-, asst, inst, assoc, and assoc. prof. *med, Hopkins*, 08-19, *assoc. clin. med*, 19- Soc. Clin. Invest. Serology; immunity; pneumococcus; epinephrin reaction.
- Clover, Dr. A (lphonso) Morton**, Parke, Davis and Co, Detroit, Mich. *Chemistry*. Galion, Ohio, April 25, 75. B.S., Michigan, 99, Parke, Davis and Co. fellow, 99-00, Ph.D, 04. Instr. chem, Michigan, 01-04; chief, div. chem, Bur. Science, P. I, 04-07; *research chemist, Parke, Davis and Co*, 09- Chemotherapeutics; peroxids; periodids.
- Clowes, Dr. George H (enry) A (lexander)**, Eli Lilly and Co, Indianapolis, Ind. **Chemistry*. Ipswich, Suffolk, England, Aug. 27, 77. Royal Col. Science, London, 93-96; Ph.D, Göttingen, 99; Paris, 99-00. Asst. chem. dept, N. Y. State Cancer Lab, Buffalo, N. Y, 01-18; research div, C.W.S., Am. Univ. Exp. Sta, 18-19; biochemist, *Eli Lilly and Co*, 19-20, *research director*, 20- Delegate, Int. Cancer Cong, Berlin, 08; Brussels, 13. A.A; Chem. Soc; Physiol. Soc; Soc. Biol. Chem; Soc. Exp. Biol. (pres, Buffalo sect, 07, 09); Ass. Path. and Bact; Ass. Immunol; Soc. Cancer Research; London Chem. Soc; Chem. Gesell. Sugar and fermentation chemistry; metabolism; cancer; emulsions; colloids and adsorption; protoplasmic equilibrium; pharmacology of war gases; adsorbed alkaloids.
- Clute, Willard N (elson)**, Flower Technical High School, Chicago, Ill. *Botany*. Painted Post, N. Y., Feb. 27, 69. High sch. Asst. herbarium, Columbia, 96-97; curator, N. Y. Bot. Garden, 97-99; *pres, W. N. Clute and Co*, 97-; *instr. biol*, township high sch, Joliet, Ill, 03-10; Curtis High Sch, Chicago, 10-11; *Flower Tech. High Sch*, 11- Founder and ed, 'Ornith. and Bot,' 90; publisher and part owner, 'Plant World,' 97-99; 'Bryologist,' 98-99; ed. and publisher, 'Fern Bul,' 93-12; 'Am. Botanist,' 01- A.A; Fern Soc. (founder and first pres, 93); Ecol. Soc; Joliet Bot. Club (director); Binghamton Acad. (sec'y, 93-96, 01). Ecological and economic botany.

- Clutz, Dr. F(rank) H(ollinger)**, Gettysburg, Pa. *Mathematics, Engineering*. Newville, Pa, June 29, 73. A.B, Midland, 92; Ph.D, Hopkins, 97. Prof. math, Carthage, 98-99; practising civil engineer, 99-18, *prof. civil eng, Gettysburg, 18-*
- Coad, B(ert) R(aymond)**, Tallulah, La. *Entomology*. Murphysboro, Ill, July 4, 90. Illinois. Asst. to state entomologist, Ill, 08-11; in charge boll weevil investigations, *bur. entom, U. S. Dept. Agr, 11-* A.A; Ass. Econ. Entom; Entom. Soc; Ill. Acad; Wash. Entom. Soc. Boll weevil and cotton culture.
- Coates, Prof. Charles E(dward)**, Baton Rouge, La. *Chemistry*. Baltimore, Md, Aug. 13, 66. A.B, Hopkins, 87, Ph.D, 91; Freiberg, 88; Heidelberg, 89. *Prof. chem, St. John's (Md), 91-93; Louisiana, 93-*, dean, *Audubon Sugar Sch, 03-* A.A; Chem. Soc; Chem. Eng; Soc. Chem. Indust; Chem. Gesell. Anil and anilids of orthosulphobenzoic acid; pure and applied chemistry in connection with sugar cane and cotton; hydrocarbons in Louisiana petroleum; chemistry of cane juice.
- Cobb, Prof. Collier**, Chapel Hill, N. C. *Geology, Geography*. Near Goldsboro, N. C, March 21, 62. Wake Forest, 78-80; North Carolina, 80-81; A.B, Harvard, 89, A.M, 94; hon. Sc.D, Wake Forest, 17. Supt. schools, Wilson, N. C, 85-86; lecturer, N. C. state nor. schools, 84-88; asst. *geol, Harvard, 88-90; instr, Mass. Inst. Tech, 90-92; asst. prof, North Carolina, 92-93, prof, 93-*, *Kenan research prof, 20-* Asst, U. S. Geol. Surv, 86-91; summer sch, Harvard, 91; North Carolina, 94-01, 03-04; Knoxville, 02, 09; Biltmore Forest Sch, 05-12, 14-20. A.A; Geol. Soc; Ass. Geog; Min. and Metal. Soc; Boston Soc. Nat. Hist; N. C. Acad. (pres, 07); Elisha Mitchell Sci. Soc. River and valley development; mineral analysis of dune sands and beach sands; geology in relation to forestry and crops; mineral analysis of rocks and their residual soils; shore line processes in relation to harbor development.
- Cobb, Prof. John N(athan)**, University of Washington, Seattle, Wash. *Ichthyology*. Oxford Furnace, N. J, Feb. 20, 68. Pub. schools. Field agent, Bur. Fisheries, 95-04, asst. agent, salmon fisheries, Alaska, 04-12; ed, 'Pacific Fisherman,' 14-17; *prof. fisheries and director, col. fisheries, Washington (Seattle), 19-* A.A; Fisheries Soc; Pacific Fisheries Soc. (pres, 20); West. Soc. Nat. Fisheries of Hawaii, Alaska, Canada, Mexico and the United States; fishery products.
- Cobb, Dr. N(athan) A(ugustus)**, U. S. Department of Agriculture, Washington, D. C. **Natural science*. Spencer, Mass, June 30, 59. B.S, Worcester, 81; Ph.D, Jena, 88. Teacher, pub. schools, Spencer; *prof. nat. science, Williston Sem, Easthampton, Mass, 81-87; acting prof. biol, Sydney Univ, N. S. W, 90; pathologist, Dept. Agr, Sydney, 91-98; special commissioner to the U.S.A. and Europe for the govt. of N.S.W, 98-01; pathologist, Dept. Agr, Sydney, 01-05; director, div. path. and physiol, Sugar Planters' Exp. Sta, Honolulu, 05-07; agr. technologist, bur. plant indust, U. S. Dept. Agr, 07-* Hon. mem. Med. Cong. of Australasia. A.A; Wash. Bot. Soc; Hawaiian Entom. Soc; Australasian A.A.S; New South Wales Linnean Soc. Biology; physiology; pathology; chemistry; photography; the prevention and cure of crop blights; parasites of domestic animals; nematology.
- Cobb, Dr. Percy W(ells)**, Western Reserve University, Cleveland, Ohio. *Physiology*. Cleveland, May 20, 73. B.S, Case, 94; M.D, Western Reserve, 02. House officer, Lakeside Hosp, Cleveland, 02-03; demonstrator *physiol, Western Reserve, 03-16, instr, 16-* Physiologist, Nela Research Lab, 09-18; capt, M.C, 18-20. A.A; Physiol. Soc; Illum. Eng. Soc; Psychol. Ass. Sense physiology; vision in relation to light.
- Coble, Dr. A(rthur) B(yron)**, University of Illinois, Urbana, Ill. **Mathematics*. Williams-town, Pa, Nov. 3, 78. A.B, Gettysburg, 97, A.M, 00; fellow, Hopkins, 01-02, Ph.D, 02. Student asst. math, Hopkins, 00-01; instr, Missouri, 02-03; Carnegie research asst, 03-04; instr. math, Hopkins, 04-06, assoc, 06-09, assoc. prof, 09-18; *prof, Illinois, 18-* Math. Soc. (assoc. ed, 'Trans,' 15-19, mem. editorial committee, 19, mem. council, 11-14, v. pres, 17); Math. Ass. Theory of invariants, groups and correspondences; the quintic and sextic equations; symmetric binary forms and involutions; restricted systems of equations; point sets and cremona groups; theta and theta modular functions; special point sets; porisms.
- Cobleigh, Prof. W(illiam) M(erriam)**, Montana State College, Bozeman, Mont. *Chemistry*. Haverstraw, N. Y, Sept. 7, 72. E.M, Montana, 94; A.M, Columbia, 99. Chemist, Anaconda Copper Mining Co, 92-93; asst. chemist, Mont. Exp. Sta, 94-99, instr. *chem. and physics, Mont. Col, 94-97, asst. prof, 97-00, prof, 00-* Chemist, Mont. State Board of Health, 10-; state chemist, 19- A.A; Chem. Soc; Pub. Health Ass; Water Works Ass; Mont. Acad. Alkali soils; estimation of starch; the cyanid process; the Hubl number of oils; the water supplies of Montana; effects of alkali waters.
- Coblentz, Prof. V(irgil)**, Deal Beach, N. J. **Chemistry*. Springfield, Ohio, March 12, 62. Wittenberg, 78; Phila. Col. Pharmacy, 82, hon. Pharm.M, 96; Göttingen, 87; Strasbourg, 88; Ph.D, Berlin, 91; Würzburg, 95; Munich, 97, 99. Prof. mat. med. and toxicol, Cincinnati Col. Pharmacy, 84-86; chem, dept. pharmacy, Columbia, 91-11; chief chemist, E. R. Squibb and Sons, 12-17. Sub-chairman, commission of revision, U. S. Pharmacopœia, 00, 10. Ebert prize, 97. A.A; Chem. Soc; Soc. Chem. Indust. (chairman, N. Y. sect, 02-04, v. pres, 05); Pharmaceut. Ass; fel. London Chem. Soc; Chem. Verein. Medical and pharmaceutical chemistry; newer synthetic medicinals.
- Coblentz, Dr. William Weber**, Bureau of Standards, Washington, D. C. **Physics*. North Lima, Ohio, Nov. 20, 73. B.S, Case, 00; A.M, Cornell, 01, Ph.D, 03. Carnegie research asst. and hon. fellow, Cornell, 03-05; *physicist, Bur. Standards, 05-* A.A; Physical Soc; Optical Soc. Optical properties of iodine; infra-red emission, absorption and reflection spectra; instruments and methods used in radiometry; radiation constants; visibility of radiation; photoelectric constants.
- Coca, Dr. Arthur F(ernandez)**, 477 First Ave, New York, N. Y. *Pathology*. Philadelphia, Pa,

- March 20, 75. A.B., Haverford, 96, A.M., 99; M.D., Pennsylvania, 00. Asst. demonstrator path, Pennsylvania, 00-02, histol, 02-03, demonstrator path, 03-05; asst., Cancer Inst., Heidelberg, 07-09; bacteriologist, Bur. Science, P. I., 09-11; *instr. path. med. col., Cornell*, 10-17, *bacter*, 17- Pathologist, N. Y. Hosp., 15-17. A.A.; Ass. Immunol. (sec'y-treas, 17-, ed, 'Jour,' 16); Soc. Exp. Biol. Hypersensitiveness; influenza.
- Cochel, Wilber A.**, 801 Houston St., Manhanttan, Kans. *Animal husbandry*. Tipton, Mo, Aug. 7, 77. A.B., Missouri, 97, B.S., 05. Asst. animal husbandry, Purdue, 05-09; prof., Pa. State, 09-12; Kansas State, 12-18; *field representative, Am. Shorthorn Breeders' Ass.*, 19- Mem. advisory commission on beef production, Food Ad. A.A.; Soc. Animal Production (pres). Beef production; use of food; breeding cattle; tuberculosis and contagious abortion in cattle.
- Cochran, Prof. C(arlos) B(ingham)**, 514 S. High St., West Chester, Pa. *Chemistry*. Albion, Mich, July 1, 54. A.B., Michigan, 77, med. dept, 78-79, A.M., 82, Sc.D., 07. Teacher chem. and physical science, 79-03, chem, 03-09; *chemist*, Pa. Board Agr, 85-00; Phila. Milk Exchange, 89-05; to dairy and food commissioner, Pa. State Dept. Agr, 95-18; *Charles E. Hires Co.*, 18- A.A.; Chem. Soc.; Franklin Inst. Food products.
- Cochrane, Prof. D(onald) C(ameron)**, State College, Pa. *Chemistry*. Verona, Pa, Oct. 9, 85. B.S., Pa. State, 08. *Assoc. prof., inst. animal nutrition, Pa. State*, 08- Lieut. Sanit. C, 17-19. Animal nutrition; calorimetry; nitrogen metabolism.
- Cockerell, Prof. T(heodore) D(ru) A(lison)**, 908 10th St., Boulder, Colo. **Biology*. Norwood, Surrey, England, Aug. 22, 66. English private schools; Middlesex Hosp. Med. Sch., London; British Museum Nat. Hist; hon. Sc.D., Colo. Col, 13. Curator, pub. museum, Kingston, Jamaica, 91-93; entomologist, N. Mex. Exp. Sta., 93-01; prof. entom. and zool., N. Mex. Col, 93-96, 98-00; teacher biol., N. Mex. Univ., 00-03; consulting entomologist, Ariz. Exp. Sta., 01-09; curator, Colo. Col. Museum, 03-04; lecturer entom., *Colorado*, 04-06, *prof. zool.*, 06- Lecturer biol., Colo. State Prep. Sch. Medal for hort. varieties of sunflowers, San Francisco Expos, 15. A.A.; Ass. Econ. Entom.; Entom. Soc.; Soc. Mammal; Wash. Biol. Soc.; Wash. Entom. Soc.; cor. mem. Phila. Acad.; Ont. Entom. Soc.; London Zool. Soc.; London Entom. Soc. Entomology (Coccidae, Hymenoptera); geographical distribution of life; variation of animals and plants; Mollusca; natural history of Rocky Mountains; botany, especially the genus *Helianthus*; problems of evolution; fossil insects and plants; fishes, especially their scales.
- Cocks, Prof. R(eginald) Wodehouse) S(omers)**, Tulane University, New Orleans, La. *Botany*. Worcester, England, Aug. 31, 63. M.A., Cambridge, 89. *Prof. bot.*, Louisiana, 06-07; *Tulane*, 07- A.A.; La. Nat. Soc. (pres, 00-04); New Orleans Acad. (sec'y, 11, pres, 20-). Flora of Louisiana.
- Coddington, Prof. E(dwin) F(oster)**, Ohio State University, Columbus, Ohio. *Mechanics*. Con-
- over, Ohio. C.E., Ohio State, 96, Emerson Mc-Millan fellow, 96-97, M.S., 97; fellow, Lick Observatory, 97-00; Ph.D., Berlin, 02. Asst. prof. math., *Ohio State*, 02-06, *mechanics*, 06-12, *prof.*, 12- A.A. Astronomy.
- Coe, Prof. George A(ibert)**, 606 W. 122d St., New York, N. Y. *Psychology*. Mendon, N. Y., March 26, 62. A.B., Rochester, 84, A.M., 88, LL.D., 09; S.T.B., Boston, 87, Ph.D., 91. Prof. philos., Southern California, 88-90; acting prof., Northwestern, 91-93, *prof.*, 93-09; *relig. educ. and psychol., Union Theol. Sem.*, 09- Lecturer relig. educ., Harvard; prof. pro tem, Yale. A.A.; Psychol. Ass.; Relig. Educ. Ass. (pres, 09); Philos. Ass. Psychology of religion; educational theory.
- Coe, Prof. Wesley R(oswell)**, 175 Bishop St., New Haven, Conn. **Comparative anatomy, Genetics*. Middlefield, Conn, Nov. 11, 69. Conn. Col, 88; Ph.B., Yale, 92, Ph.D., 95; Würzburg, 95-96; Naples, 96. Asst. biol., *Yale*, 92-95, *instr. comp. anat.*, 96-01, *asst. prof.*, 02-09, *prof. biol.*, 09- Mem. Harriman exped. to Alaska, 99. A.A.; Soc. Nat.; Soc. Zool. (sec'y, mem. exec. committee); Ass. Anat.; Conn. Acad. Cytology; echinoderms; nemerteans; embryology.
- Coffey, Dr. George N(elson)**, Urbana, Ill. *Agriculture*. Patterson, N. C., Jan. 17, 75. Ph.B., North Carolina, 00; M.S., George Washington, 07, Ph.D., 11. Asst. geol., North Carolina, 99-00; asst., soil surv., bur. soils, U. S. Dept. Agr, 00-04, in charge, 04-05, in charge soil classification, 05-08, in charge Great Plains sect, 09-11; assoc. soils, Ohio Exp. Sta., 11-15; asst. state leader, *farm advisers, Illinois*, 15-18, *state leader*, 18- Lecturer on soils, North Carolina, 05-10. Soc. Agron. (pres, 09). Classification and character of soils of the United States.
- Coffey, Prof. W(alter) C(astella)**, 607 W. Oregon St., Urbana, Ill. *Animal husbandry*. Hartsville, Ind, Feb. 1, 77. B.S., Illinois, 06. M.S., 09. *Instr. animal husbandry, Illinois*, 06-07, *assoc.*, 07-11, *asst. prof.*, 11-12, *prof.*, 13- Special agent, Fed. Tariff Board, 11. A.A.; Soc. Animal Production. Animal nutrition; sheep husbandry.
- Coffin, Prof. Fletcher B(arker)**, Lake Forest, Ill. *Chemistry*. Acton, Mass, Jan. 9, 73. A.B., Harvard, 95, A.M., 96, LL.B., 98, Ph.D., 11. *Instr. chem.*, Haverford, 08-09; asst. prof., *Lake Forest*, 09-10, *prof.*, 10- A.A.; Chem. Soc. Inorganic chemistry; atomic weights of cobalt and arsenic.
- Coffin, Prof. J(oseph) G(eorge)**, U. S. Rubber Co, 561 W. 58th St., New York, N. Y. **Mathematical physics*. Pittsburgh, Pa, June 14, 77. Collège Cantonal, Switzerland, 90-92; Collège Chaptal, Paris, 92-94; B.S., Mass. Inst. Tech, 98; Ph.D., Clark, 03, hon. fellow, 03-06. Asst. physics, Mass. Inst. Tech, 98-00; Clark, 01-03, *instr.*, Clark Col, 02-05, *asst. prof.*, 05-06; *instr.*, Col. City of N. Y., 06-09, *asst. prof.*, 09-17, *assoc. prof.*, 17-18; director aeronaut. research and Curtiss wind tunnels, Curtiss Aero. and Motor Corp, 18-20; *physicist, U. S. Rubber Co*, 20- A.A.; Physical Soc.; Math. Soc.; Math. Ass.; Meteorol. Soc.; Aero Club (mem. scientific committee); Radio Eng. Vector analysis; high temperature standards; reflection of

light in the neighborhood of the critical angle; edge corrections in the calculation of absolute condensers; metallic deposits from kathode in vacua; the Bjerknes hydrodynamic analogy; self and mutual inductance; periodic and oscillatory currents in conductors; theory of dropped loads on elastic beams; airplane barographs; tandem propellers; wind tunnels; airplane ranges; ceiling air densities; aerodynamic balance and theory of head resistance.

Coggeshall, A(rthur) S(terry), Carnegie Museum, Pittsburgh, Pa. *Paleontology*. Bridgeport, Conn, July 17, 73. Pub. schools. With Am. Museum Nat. Hist, 96-99; *preparator-in-chief, dept. vert. paleont, Carnegie Museum*, 99-Officier de l'Instruction Pub; Caballero de Isabel la Catolica; Caballero de Alfonso XII; Order of the Crown, Italy; Order of St. Anne, Russia; Francis Joseph Order of Merit with Golden Crown, Austria. Ass. Mus. Vertebrate paleontology.

Coggeshall, Dr. G(eorge) W(hiteley), 2315 Tracy Place, Washington, D. C. *Physical chemistry*. Des Moines, Iowa, Dec. 21, 67. B.S, Grinnell, 90; Harvard, 91-92; Ph.D, Leipzig, 95. Asst. chem, Grinnell, 88-90; instr. physical chem, Harvard, 95-97; mfg. chemist, Boston, 98-10; *chief, chem. eng. div, Inst. Indust. Research*, 11-Instr, summer sch, Harvard, 92; in charge surfaces of concrete vessels, Emerg. Fleet Corp, 18. A.A; Chem. Soc; Chem. Eng; Electrochem. Soc; Min. Eng; Automotive Soc; Soc. Chem. Indust; Soc. de Chim. indust. Calomel electrodes; titanium mordants; potash from feldspathic rocks; development of industrial chemical processes; gasoline from heavier oils.

Coghill, Prof. G(eorge) E(lett), University of Kansas, Lawrence, Kans. *Comparative neurology*. Beaucoup, Ill, March 17, 72. A.B, Brown, 96, fellow, 01-02, Ph.D, 02; M.S, New Mexico, 99. Asst. prof. biol, New Mexico, 99-00; prof, Pacific (Oregon), 02-06; biol, col. of arts, and embryol. and histol. col. med, Willamette, 06-07; zool, Denison, 07-13; assoc. prof. *anat, Kansas*, 13-16, *prof, 16-, head, dept. anat, and sec'y, sch. of med*, 18- Sec'y, Kansas State Research Committee, 19; collaborator, 'Jour. Comp. Neur. and Psychol.' A.A; Soc. Nat; Soc. Zool; Ass. Anat; Micros. Soc. The cranial nerves of Amblystoma; nervous system of Amphibia; rhombencephalon and spinal cord of mammals before birth; intracellular digestion in amphibian embryos.

Coghill, Will(iam) H(awes), Golden, Colo. *Metalurgy*. Roseville, Ill, March 14, 76. E.M, Colo. Sch. Mines, 03. Mining engineer, 03-07; asst. prof. metal, Northwestern, 07-15; prof. mining and metal. and head, dept. chem. eng, Oregon Col, 14-17; *metallurgist, U. S. Bur. Mines*, 14-Chem. Soc; Min. and Metal. Eng. Cyaniding and flotation.

Cogshall, Prof. W(ilbur) A(delman), Bloomington, Ind. *Astronomy*. Mendon, Mich, Feb. 8, 74. B.S, Albion, 95; A.M, Indiana, 02; Yerkes Observatory, 03-04. Asst. Lowell Observatory, Flagstaff, Ariz, 96-97, 98-00; instr. mech. and astron, Indiana, 00-04, asst. prof. *astron*, 04-08, *assoc. prof*, 08- Astron. Soc; Ind. Acad. (pres,

16). Double stars; the annual parallax of certain stars; photography of comets.

Cogswell, W(illiam) B(rowne), Syracuse, N. Y. *Chemistry*. Oswego, N. Y, Sept. 22, 34. Rensselaer, 52, C.E, 84. In charge, mech. dept, Brooklyn Navy Yard, 61-65; La Motte Lead Mines, Mo, 74-79; founder, *v. pres. and managing director, Solvay Process Co, Syracuse and Detroit*, 81- A.A; Civil Eng; Min. Eng; Mech. Eng; Soc. Chem. Indust; Am. Geog. Soc.

Cohen, Dr. Abraham, 1744 Parke Ave, Baltimore, Md. *Mathematics*. Baltimore, Sept. 11, 70. Baltimore City Col, 83-88; A.B, Hopkins, 91, Ph.D, 94; Paris, 94-95. Instr. *math, Hopkins*, 95-98, *assoc*, 98-15, *assoc. prof*, 15- Co-editor, 'Am. Jour. Math.' 99-; 'Am. Math. Monthly', 16-18. A.A; Math. Soc; Math. Ass. Differential equations; Lie theory of one-parameter groups.

Cohen, Barnett, Hygienic Laboratory, Washington, D. C. *Biological chemistry*. Russia, Feb. 16, 91. B.S, Col. City of N. Y, 11; M.S, Yale, 18, C.P.H. Chemist and bacteriologist, Meriden, Conn, 12; chemist, Cheriton, Va, 13-14; chemist and bacteriologist, Savannah, Ga, 15-16; asst. pub. health, Yale, 18-20; *biol. chemist, hygienic lab, U. S. Pub. Health Service*, 20- Research chemist, U. S. A, 18-19. Chem. Soc; Soc. Exp. Biol; Soc. Bact; Pub. Health Ass. Physiology; nutrition; physical chemistry in relation to biological problems; gases in blood; immunity; disinfection.

Cohen, Prof. Louis, 1656 Euclid St, Washington, D. C. **Physics*. Kiev, Russia, Dec. 16, 76. B.S, Armour, 01; Chicago, 01-02; Columbia, 03-05, Ph.D, 19; fellow, Hopkins, 07-08. Asst. Bur. Standards, 05-09; asst. prof. physics, George Washington, 07-09; chief, research dept, Nat. Elec. Sig. Co, 09-12; *prof. physics, George Washington*, 17- Consulting engineer, 13-; lecturer, Bur. Standards, 17-18. Radio telegraphy; high frequency currents.

Cohen, Dr. Seymour J(erome), 4637 Prairie Ave, Chicago, Ill. *Pharmacology, Physiology*. South Bend, Ind, Jan. 7, 96. B.S, M.S, Chicago, 17, M.D, Rush Med. Col, 19. Asst. physiol, Chicago, 17; pharmacol, Illinois, 17-19. Res. physician, Michael Reese Hosp, 19-21. Gastric secretion; protean fever; respiration; diastases in the body.

Cohen, Dr. S(olomon) Solis, 1525 Walnut St, Philadelphia, Pa. *Medicine, Therapeutics*. Philadelphia, Sept. 1, 57. A.B, Cent. High Sch, Phila, 72, A.M, 77; M.D, Jefferson Med. Col, 83. Demonstrator path. and micros, Phila. Polyclinic, 83-85; chief, med. clinic, and lecturer special therapist, *Jefferson Med. Col*, 85-89, clin. lecturer med, 89-02, senior asst. prof, 02-04, *prof. clin. med*, 04- Prof. med. and therapist, Phila. Polyclinic and Col. for Graduates, 87-02; physician, Jewish Hosp, 87-; ed. staff, 'Med. News,' 87-95; physician, Phila. Hosp, 89-; lecturer therapist, Dartmouth, 90-92; ed. staff, 'Universal Annal Med. Sciences,' 90-94; 'Am. Jour. Med. Sciences,' 90-96; ed, 'Physiol. Therap,' 01-05; physician, Rush Hosp. for Consumptives, 93-20; ed, 'Phila. Polyclinic,' 95-99; ed. staff, 'Am. Med,' 01-05; physician, Jefferson Med. Col. Hosp, 02- A.A; Am. Physicians (recorder, 01-15); Am. Med. Ass. (chair-

- man, sect. therapist, 03); hon. mem. Md. Med. and Chirurg. Faculty; fel. Phila. Col. Physicians (ed, 91-93). Autonomic and endocrine disturbances; tuberculosis; pneumonia.
- Cohn, Dr. A(fred) E(instein)**, 315 Central Park West, New York, N. Y. *Medicine*. New York, April 16, 79. A.B., Columbia, 00, M.D., 04, fellow, 09-11; Freiburg, 07-09; Vienna, summer, 08; London, summer, 09. Assoc. path, Mt. Sinai Hosp, 09-11; med, *Rockefeller Inst*, 11-14, assoc. mem, 14-20, mem, 20- Lieut. col, M.C., A.E.F., 18. A.A.; Am. Med. Ass.; Am. Physicians; Ass. Anat.; Ass. Path. and Bact; Soc. Clin. Invest; Physiol. Soc; Soc. Pharmacol; Harvey Soc; N. Y. Acad. Med. Physiology and pharmacology of the heart and circulation.
- Cohoe, Dr. B(enson) A(mbrose)**, 805 Highland Building, Pittsburgh, Pa. *Internal medicine*. Canboro, Ont, Dec. 10, 74. B.A., Toronto, 98, M.B., 01. Asst. biol, Toronto, 99-01; instr. anat, Cornell, 01-03; assoc, Chicago, 03-06; asst. res. physician, Hopkins Hosp, 06-08, res. physician, 08, asst. med, Hopkins, 06-08; *visiting physician, St. Francis Hosp, Pittsburgh, 09-*; prof. anat, *Pittsburgh, 09-11*, assoc. prof. *therapeut, 11-20, prof, 20-* A.A.; Ass. Anat. Protein metabolism; structure of the submaxillary gland; the placental transmission of B. typhosus; influenzal meningitis; Addison's disease.
- Cohoe, Prof. Wallace P(atten)**, 111 Broadway, New York, N. Y. *Chemistry*. Norwich, Ont, Feb. 22, 75. B.A., McMaster, 96, M.A., 98; A.M., Harvard, 99. Demonstrator chem, dental dept, Toronto, 97-98; lecturer, McMaster, 01-02, prof, 02-06; pres, chem. laboratories, Toronto, 07-12; *consulting chemist and engineer, 12-* Chem. Soc; Soc. Chem. Indust. (v. chairman, Can. sect, 08); Electrochem Soc. Plant design; intermediates; cellulose; textiles; paper.
- Coit, Dr. James Milnor**, Konrad Str, Munich, Germany. *Physics, Chemistry*. Harrisburg, Pa, Jan. 31, 45. A.B., Hobart, 65, A.M., 69, Sc.D., 03; hon. Ph.D., Dartmouth, 81. Master nat. science, *St. Paul's Sch, 77-04, v. rector, 04-* A.A.; Chem. Soc; Electrochem. Soc; Social Sci. Ass. Relation of the X-rays to medical and surgical diagnosis; liquid air; compensation theory.
- Coit, Dr. J(ohn) Eliot**, 1225 S. Normandie Ave, Los Angeles, Calif. *Pomology*. San Antonio, Tex, March 9, 80. B.Agr, N. C. Col, 03; M.S.A., Cornell, 05, fellow, 05-06, Ph.D., 07. Horticulturist, Ariz. Exp. Sta, 07-09; asst. prof. pomol, California, 09-12, prof. citriculture, 12-20; *consulting horticulturist, 20-* Ed, 'Cornell Countryman,' 05-06. A.A.; Soc. Hort. Sci; Pacific Coast Ass. Econ. Entom. (v. pres, Ariz). Paeonia; citrus culture; olives and olive oil; life history and varieties of the date palm in the arid southwest; physiological diseases of citrus trees; semi-tropical fruits; breeding new fruits.
- Coit, Prof. Judson B(oardman)**, 688 Boylston St, Boston, Mass. *Astronomy*. Central Square, N. Y. June 5, 49. A.B., Syracuse, 75, A.M., 78, Ph.D., 82. Prof. math, Dickinson Sem, 75-79; student asst, Ann Arbor Observatory, 79-80; teacher math, high sch, Cleveland, Ohio, 80-82; asst. prof. math. and astron, Boston, 82-84, prof, 84-15, astron, 15-, acting dean, grad. sch, 11-12. A.A.; Astron. Soc.
- Coit, Dr. W(ilbur) A(lden)**, Wolfville, N. S. Can. *Mathematics*. Syracuse, N. Y., July 25, 76. Ph.B., Boston, 00, fellow, 06-07, Ph.D., 13; A.M., Harvard, 07. Instr. math, Vermont, 00-07, asst. prof, 07-08; prof, Acadia, 08-, *observer in charge, meteorol. sta, 10-* A.A.; Meteorol. Soc; Astron. Soc.
- Coker, Dr. R(obert) E(rvin)**, U. S. Bureau of Fisheries, Washington, D. C. *Zoology*. Society Hill, S. C., June 4, 76. South Carolina, 92-93; B.S., North Carolina, 96, M.S., 97; Hopkins, 01-02, 04-06, fellow, 05-06, Bruce fellow, Ph.D., 06. Asst. biol, North Carolina, 95-97; principal pub. schools, Goldsboro, N. C., 98-01; biologist, N. C. Geol. Surv. and custodian, U. S. Fisheries Lab, Beaufort, N. C., 02-04; investigation of fisheries for Peruvian Govt, 06-08; scientific asst, *Bur. Fisheries, 09*, director, U. S. Biol. Sta, Fairport, Iowa, 10-15, *head, div. scientific inquiry, 15-* Instr. biol, summer sch, North Carolina, 97, 99. Delegate from Peru to Int. Fisheries Cong, 08. A.A.; Ecol. Soc. (v. pres, 18); Fisheries Soc; Wash. Biol. Soc; cor. mem. Davenport Acad. Fisheries; cirripedes; turtles; fresh-water mussels; guano birds.
- Coker, Dr. W(illiam) C(hambers)**, Chapel Hill, N. C. **Botany*. Hartsville, S. C., Oct. 24, 72. B.S., South Carolina, 94; Ph.D., Hopkins, 01; Bonn, 01-02. Assoc. prof. bot, North Carolina, 02-08, prof. and director of arboretum, 08- Asst. bot, Cold Spring Harbor, 00; chief of bot. staff, Baltimore Geog. Soc. exped. to Bahamas, 03. A.A.; Soc. Nat; Bot. Soc; N. C. Acad. (pres, 09); Elisha Mitchell Sci. Soc. (ed, 'Jour'). Fertilization and embryology of gymnosperms and monocotyledons; tropical botany; flora of the Carolinas; lower fungi; morphology of monocotyledons; agarics of North Carolina; trees of North Carolina; clavarias of the eastern United States; Saprolegniaceae of the United States.
- Colaw, J(ohn) M(arvin)**, Box 160, Monterey, Va. *Mathematics*. Monterey, March 16, 60. Roanoke, 78-79; A.B., Dickinson, 82, A.M., 92; Virginia, 83-84. Instr. math, high sch, Monterey, 92- Assoc. ed, 'Am. Math. Monthly,' 84-02. Algebraic analysis.
- Colby, Albert Ladd**, 447 Lehigh St, Bethlehem, Pa. *Chemistry, Metallurgy*. New York, June 26, 60. Col. City of N. Y.; Ph.B., Columbia, 81. *Steel metallurgist, 86-* Mem. jury, Paris Expos, 00; commissioner, La. Purchase Expos, 04. Chem. Soc; Mech. Eng; Min. Eng; Civil Eng; Soc. Chem. Indust; Am. Foundrymen's Ass; Ass. Steel Mfrs. (sec'y, 97-); Franklin Inst; Int. Ass. Test. Mat; British Iron and Steel Inst. Metallurgy of steel.
- Colby, Dr. Arthur S(amuel)**, Urbana, Ill. *Botany*. July 4, 87. B.S., N. H. Col, 11; M.S., Illinois, 15, Ph.D., 19. Instr. agr, Pinkerton Acad, Derry, N. H., 11-13; asst. pomol, Illinois, 13-15, instr, 15-18, assoc, 18- Ed. diseases of trees, 'Am. Fruit Grower.' A.A.; Phytopath. Soc; Soc. Hort. Sci. Horticulture; cultural problems in pomaceous and small fruits.
- Colby, Prof. Charles C(arlyle)**, University of Chicago, Chicago, Ill. *Geography*. Romeo, Mich,

- April 13, 84. B.S. Chicago, 09, fellow, 13-14, Ph.D. 17. Asst. geog. Mich. State Nor. Col. 06-08; Chicago, 09; head, dept. geog. State Nor. Sch. Winona, Minn. 10-13; assoc. prof. *geog.* Peabody Col. for Teachers, 14-16; asst. prof. *Chicago*, 16- Special expert, div. planning and statist. U. S. Shipping Board, 18-19. A.A.; Am. Geog. Soc.; Tenn. Acad. Geography of southeastern Minnesota; economic geography of North America.
- Colby, Prof. W(alter) F(rancis)**, 322 N. State St. Ann Arbor, Mich. *Physics*. Rockford, Mich. 80. A.B. Michigan, 01, Ph.D. 09; Vienna, 02-04; Munich, 12-13. Instr. *physics*, Michigan, 09-14, asst. prof. 15- Mem. staff, Mt. Wilson Observatory, 14-15. A.A.; Physical Soc. Magnetic critical points; optical dispersion; series in the infra-red.
- Cole, Prof. Alfred D(odge)**, Ohio State University, Columbus, Ohio. **Physics*. Rutland, Vt. Dec. 18, 61. A.B. Brown, 84, A.M. 87; Hopkins, 84-85; summer sch. Harvard, 87; Berlin, 94-95, 13; summer sch. Cornell, 97; Chicago, summers, 98, 99, 00, 04. Instr. *physics* and *chem.* Denison, 85-87, acting prof. 87-88, prof. 88-01; *physics*, Ohio State, 01-07; Vassar, 07-08; *prof. and head of dept.* Ohio State, 08- Prof. *physics*, Chicago, summer, 04; trustee, Denison, 01-07, 11-; war work, U.S.N. lab. and Bur. Standards, summers, 17, 18. A.A. (sec'y, B. 06-11, v. pres, 13-14); Physical Soc. (sec'y, 13-17, ed. board, 18-20; Radio Eng; Ohio Acad. Electric oscillations; electric waves; capillary electrometer; impact excitation; infra-red radiation; electron relays.
- Cole, Dr. Fay-Cooper**, Field Museum of Natural History, Chicago, Ill. *Ethnology*. Plainwell, Mich. Aug. 8, 81. B.S. Northwestern, 03; Chicago, 03-05; Columbia, 05-06, Ph.D. 14; Berlin, 06. Ethnologist, *Field Museum Nat. Hist.* 06-12, asst. curator *Malayan ethnol. and physical anthrop.* 12- Archeol. exped. to Am. Southwest, 99-04; special investigator, Bur. Science, P. I. 06-12. A.A.; Anthropol. Ass. (mem. council, 15, 19). Philippine ethnology; the Tinggian; distribution of non-Christian tribes of northern Luzon; wild tribes of Davao, Mindanao; Chinese pottery in the Philippines.
- Cole, Prof. F(rank) N(elson)**, Columbia University, New York, N. Y. **Mathematics*. Ashland, Mass. Sept. 20, 61. A.B. Harvard, 82, Ph.D. 86; Leipzig and Göttingen, 83-87. Lecturer *math.* Harvard, 85-87; instr. Michigan, 88-89, asst. prof. 89-95; *prof.* Columbia, 95- Math. Soc. (sec'y, 95-20, ed. 97-20). Theory of groups; theory of numbers; mathematical organization.
- Cole, Harry N(ewton)**, 702 Forest Ave. Ann Arbor, Mich. *Chemistry*. Cuba, N. Y. March 27, 70. A.B. Michigan, 01, B.S. (Ch.E.), 06, M.S. 15. Instr. *anal. chem.* Michigan, 07- A.A.; Chem. Soc.
- Cole, Prof. Howard Irving**, University of Oregon, Eugene, Oregon. *Chemistry*. New Rochelle, N. Y. April 12, 92. B.Chem. Cornell, 14, Ph.D. 17. *Prof. chem.* Oregon, 19- Capt. C. W. S. 17-19. Chem. Soc. Chemical microscopy.
- Cole, Prof. L(awrence) W(ooster)**, Boulder, Colo. *Comparative psychology*. Toledo, Ohio, May 15, 70. B.Ped. Southwest Kansas, 93; A.B. Oklahoma, 99; A.M. Harvard, 04, Ph.D. 10. Supt. schools, El Reno, Okla. 97-00; instr. *psychol.* and *philos.* Oklahoma, 00-03, prof. 03-08; instr. *exp. psychol.* Wellesley, 08-09; *prof. psychol.* Colo, 10- Capt. Sanit. C. 18-19. A.A.; Psychol. Ass. The intelligence of raccoons; visual discrimination of raccoons; relation of strength of stimulus to rate of habit formation in the chick; reactions of frogs to chlorids; mental age and school entrance.
- Cole, Prof. Leon J(acob)**, University of Wisconsin, Madison, Wis. **Zoology*. Allegany, N. Y. June 1, 77. Mich. Agr. Col. A.B. Michigan, 01; Ph.D. Harvard, 06. Asst. zool. Michigan, 98-02; Austin teaching fellow, Harvard, 03-06; chief, div. animal breeding and path. R. I. Exp. Sta. 06-07; instr. zool. Sheffield Sci. Sch. Yale, 07-10; assoc. prof. *exp. breeding*, *col. agr.* Wisconsin, 10-14, *prof.* 14-18, *genetics*, 18- Mem. Harriman exped. to Alaska, 99; zool. exped. to Yucatan, 04; investigator, U. S. Bur. Fisheries, summers, 01-06. A.A.; Soc. Nat.; Soc. Zool.; assoc. mem. Ornith. Union; Soc. Exp. Biol.; Wis. Acad. Genetics; animal behavior; inheritance in pigeons; function of eyes; Pycnogonida; Vertebrata of Yucatan.
- Cole, Dr. Rufus**, 65 E. 77th St. New York, N. Y. **Medicine*. Ashland Co. Ohio, April 30, 72. B.S. Michigan, 96; M.D. Hopkins, 99. Instr. med. Hopkins, 00-04, assoc. 04-08; *director*, *Rockefeller Inst. Hosp.* 08- A.A.; Soc. Pharmacol.; Soc. Exp. Path.; Am. Physicians; Ass. Path. and Bact.; Soc. Exp. Biol.; Soc. Clin. Research. Infectious diseases; immunity.
- Coleman, Prof. A(rthur) P(hilemon)**, University of Toronto, Toronto, Can. *Geology*. Que. April 4, 52. B.A. Victoria, 76; Ph.D. Breslau, 81. *Prof. geol. and nat. hist.* Victoria, 82-91; *geol. sch. of practical science*, Toronto, 91-01, Toronto, 01-, *dean, faculty arts*, 19- Geologist, Bur. of Mines of Ont. 93-09. Murchison medal, 10. A.A.; Geol. Soc.; fel. Royal Soc. Can.; Can. Inst. (pres, 02); fel. Royal Soc. Archean and glacial geology; physiography; economic geology; Sudbury nickel deposits; Iroquois beach; explorations in the Rocky Mountains.
- Coleman, Geo(rge) A(lbert)**, 924 Spruce St. Berkeley, Calif. *Entomology*. London, Nebr. Sept. 24, 66. A.B. Stanford, 03, A.M. 05; B.E. Nebr. State Nor. Sch. 06. Forester and entomologist, Pacific Improv. Co. 03-06; forest supervisor, U. S. Forest Service, 06-08; biologist, Calif. State Fish Commission, 08-09; horticulturist and entomologist, 09-11; curator apiculture, museum, California, 11-13, *instr. entom. apiculture*, 14- A.A.; Entom. Soc. Agriculture.
- Coleman, H(arry) S(hipp)**, Mellon Institute, Pittsburgh, Pa. *Mechanical technology*. Colony, Kans. July 30, 86. B.S. Kansas, 09. Draftsman, A. T. and S. F. R. R. 09-11; engineer, Jacobs-Shupert Firebox Co. 11-17; Lukens Steel Co. 17-18; *asst. director*, Mellon Inst. 18- Mech. Eng. Locomotive boiler design.
- Coleman, Prof. J(ames) B(ruce)**, University of South Carolina. *Physics*. Aiken, S. C. Feb. 2, 86. B.S. South Carolina, 06, A.M. 10; Columbia, 14. Instr. Ga. Tech. 07-08; *physics*, South Carolina, 09-11, adj. prof. 11-12; asst. Columbia, 12-13; asst. prof. South Carolina, 12-15,

- prof. math*, 15- Lecturer physics, Columbia, 19. A.A.; assoc. mem. Physical Soc; Math. Ass. Electron theory; plane curves.
- Coleman, Major J(ames) T(homas)**, 17 Atlantic St, Charleston, S. C. *Physics*. Marion, S. C, Jan. 10, 66. B.S, S. C. Mil. Acad, 86; Chicago, summers, 97, 99. Asst. prof. chem. and physics, S. C. Mil. Acad, 88-96, prof. physics, 96-06; *manager, Prudential Ins. Co. of Am*, 08- Mem. jury on sci. instruments and superior jury, S. C. Interstate and W. I. Expos, 02. Gold medal, S. C. Interstate and W. I. Expos, 02. Mem. Int. Elec. Cong. St. Louis, 04. Physical Soc; Metrol. Soc; Elliott Soc. (v. pres).
- Coleman, Dr. Thomas D(avies)**, 936 Hickman Road, Augusta, Ga. *Medicine*. Augusta, Jan. 13, 65. A.B, Kentucky, 85, hon. A.M, 03; Hopkins, 87-88; M.D, N. Y. Univ, 90; Georgia, 93. Asst. physiol, Hopkins, 88-89; N. Y. Univ, 89-90; *prof. physiol, Georgia*, 93-95, physiol. and path, and director, path. lab, 95-01, med, 01-03, *principles and practise of med*, 03- Consulting physician, University, Wilhenford and U. S. Psychopathic Hospitals. Am. Med. Ass; Climat. Ass. (pres, 08); Ass. Tuber. Internal medicine; cardio-renal diseases.
- Coleman, Dr. Warren**, 58 W. 55th St, New York, N. Y. *Medicine*. Augusta, Ga, Jan. 19, 69. A.B, Transylvania, 88, A.M, 99; Hopkins, 88-89; M.D, N. Y. Univ, 91. Prof. clin. med. and applied pharmacol, med. col, Cornell, 09-18; *asst. prof. med, Univ. and Bellevue Hosp. Med. Col*, 18- Visiting physician, Bellevue Hosp. A.A.; Am. Physicians; Soc. Exp. Biol; Am. Med. Ass; N. Y. Acad. Med. Bacteriology of blood and protein metabolism in typhoid fever; diet in typhoid fever.
- Coley, Dr. William B(radley)**, 6 W. 50th St, New York, N. Y. *Surgery*. Westport, Conn, Jan. 12, 62. A.B, Yale, 84, hon. A.M, 10; M.D, Harvard, 88, A.M, 11. Instr. surg, Post-Grad. Med. Sch. and Hosp, 90-97; clin. lecturer, Columbia, 98-08, assoc, 08-09; *prof. clin. surg. and later clin. cancer research, med. col, Cornell*, 09- Chairman, Collis P. Huntington Fund for Cancer Research; attending surgeon, Mem. Hosp. and Hosp. for Ruptured and Crippled. A.A.; fel. Surg. Ass; Col. Surg; Am. Med. Ass; S. Surg. and Gynec. Soc; fel. Am. Acad; N. Y. Acad. Med; Int. Soc. Cancer Research. The radical cure of hernia; malignant tumors.
- Collett, Dr. Mary E(lizabeth)**, Atchison, Kans. *Physiology*. Atchison, July 30, 88. A.B, Wellesley, 10; fellow, Pennsylvania, 17-19, Ph.D, 19. Instr. biol, Carnegie Inst, 12-17; fellow *physiol*, Clark, 19-20; *instr, Buffalo*, 20- Membrane permeability; toxicity of acids alone and in combination with salts.
- Colley, Reginald H(unter)**, U. S. Department of Agriculture, Washington, D. C. *Forest pathology*. Canso, N. S, May 27, 87. A.B, Dartmouth, 09; A.M, Harvard, 12; Ph.D, George Washington, 18. Instr. biol, Dartmouth, 09-10; scientific asst. to Mass. State Forester, 10-12; Austin teaching fellow bot, Harvard, 10-12; instr, Dartmouth, 12-16; *pathologist, bur. plant indust, U. S. Dept. Agr*, 16- Instr. bot, Woods Hole, 13-15. Phytopath. Soc. Fungous diseases of trees and of the brown-tailed moth caterpillar; white pine blister rust; staining technique.
- Collie, Prof. George L(ucius)**, 48 Sherwood Drive, S, Beloit, Wis. *Geology*. Delavan, Wis, Aug. 11, 57. B.S, Beloit, 81; Ph.D, Harvard, 93. Principal, high sch, Delavan, 86-90; *prof. geol, Beloit*, 93-, dean, 00-18. A.A; Geol. Soc; Mus. Ass; Wis. Acad; Wis. Archeol. Soc. (v. pres). Physiography; drift of southern Wisconsin; physiography of Rift Valley; British East Africa.
- Collins, A(rchie) Frederick**, 600 Riverside Drive, New York, N. Y. *Electrophysics*. South Bend, Ind, Jan. 8, 69. Chicago, 84-86. Engineer, Collins Wireless Telephone Co, 02-10. Electric oscillations and electric waves; wireless telephone.
- Collins, G(uy) N, Lanham**, Md. *Botany*. Mertenstia, N. Y, Aug. 9, 72. Asst. botanist, *bur. plant indust, U. S. Dept. Agr*, 01-10, *botanist*, 10- Mem. Nat. Research Council, 18- A.A; Soc. Nat. (v. pres, 18); Bot. Soc; Wash. Bot. Soc. Tropical cultures; genetics of maize.
- Collins, Prof. H(enry) H(omer)**, University of Pittsburgh, Pittsburgh, Pa. *Biology*. Kewanee, Ind, Dec. 10, 85. B.S, California, 15, Le Conte fellow, 15-16, A.M, 16, Ph.D, 19. Instr. hist, Rochester Nor. Sch, 05-06; supt. schools, Philomath, Oregon, 08-10; Alsea, 10-13; teaching fellow zool, California, 14-15, research asst, Scripps Inst, 16-19; head, dept. biol, high sch. and junior col, Fresno, Calif, 19-20; *asst. prof. biol, Pittsburgh*, 20- A.A; Soc. Mammal; West. Soc. Nat; S. Calif. Biol. Club. Moults, regeneration of pelage, color inheritance and ecology in mice; autotomy of the tail in rodents; pure line inheritance in Paramecium.
- Collins, Prof. J(ames) Franklin**, 468 Hope St, Providence, R. I. *Botany*. North Anson, Maine, Dec. 29, 63. Pub. schools; hon. Ph.B, Brown, 96. Curator, herbarium, *Brown*, 94-11, instr. *bot*, 99-05, asst. prof, 05-11, *demonstrator*, 13-; *forest pathologist, U. S. Dept. Agr*, 11- Collaborator and agent, U. S. Dept. Agr, 07-11; scientific exploration, Gaspe Peninsula, 04-07. A.A; Bot. Soc; Forestry Ass; Phytopath. Soc; Sullivant Moss Soc; Josselyn Bot. Soc; New Eng. Bot. Club; R. I. Field Nat. Club (pres, 11-13). Forest pathology; plant pathology; bryology; trees.
- Collins, J(ohn) R(obinette)**, Royal Astronomical Society, Toronto, Ont, Can. *Astronomy*. Toronto, 65. Gen. sec'y, *Royal Astron. Soc. Can*, 04-16, second v. pres, 14-19, first v. pres, 19-20, pres, 20- Mem. Can. Govt. eclipse exped, 05. Astron. Soc; Royal Astron. Soc. Can; Soc. astron. de France; Soc. Astron. de Mex. Theories of gravitation; physical optics.
- Collins, Dr. Joseph**, 37 W. 54th St, New York, N. Y. *Neurology, Medicine*. Brookfield, Conn, Sept. 22, 66. Michigan, 84-85; M.D, N. Y. Univ, 88. *Physician, N. Y. City Hosp*, 94-; *N. Y. Neur. Inst*, 09- Alvarenga prize, Phila. Col. Physicians, 97. Neur. Ass. (pres, 02); Am. Physicians; Am. Med. Ass. Sympathetic nervous system; the location and function of the cells in the spinal cord; the faculty of speech.
- Collins, Prof. Jos(eph) V(ictor)**, Stevens Point, Wis. *Mathematics*. Wooster, Ohio, Dec. 26, 58. Ph.B, Wooster, 79, Ph.D, 86; Hopkins, 80-81,

- 82-83. Tutor *math*, Wooster, 79-80; *prof*, Hastings, 84-88; Miami, 88-93; *State Nor. Sch., Stevens Point, Wis.*, 94-; *Math. Soc.*; *Int. Ass. Prom. Quaternions*. Vector analysis; teaching of elementary algebra and geometry.
- Collins, Julius L(oyd)**, University of California, Berkeley, Calif. *Genetics*. Kewanna, Ind, Feb. 16, 89. B.S., California, 17. Principal, high sch., King's Valley, Oregon, 12-14; asst. *genetics*, California, 18, *instr.*, 18-; *Soc. Nat.*; Calif. Bot. Soc. Plant breeding; *Drosophila*; xenia in hybrids; Crepis technique.
- Collins, Dr. Katharine R(ichards)**, Buffalo City Hospital, Buffalo, N. Y. *Bacteriology*. New Albany, Ind, March 23, 63. M.D., Michigan, 93. Practising physician, Atlanta, Ga, 94-02; fellow, Rockefeller Inst., 02-03; bacteriologist and asst. director, research lab, Dept. Health, N. Y. City, 03-08; asst. director, Ga. State Board Health, 08-18; research worker, dept. path., Western Reserve, 18-19; *instr. path. and bacter.*, Buffalo, 19-; *exec. director, div. laboratories, Buffalo City Hosp.* A.A.; *Ass. Path. and Bact.*; *Soc. Exp. Biol.*; *Soc. Bact.*; *Soc. Immunol.*; *Ass. Tuber.*; *Am. Med. Ass. Immunology*; *dysentery*; *glanders*; *pneumococci*; *agglutinins*; *periapical abscesses*; *eeczema marginatum*.
- Collins, Dr. R(ussell) J(ohnson)**, Balfour Sanatorium, Balfour, B. C. Can. *Medicine*. Conneaut, Ohio, Oct. 3, 91. A.B., Western Reserve, 11, M.D., 15, A.M., 16; Chicago, 16. *Instr. pharmacol.*, 15-16; *asst. med. supt.* N. S. Sanatorium; *med. supt.*, Balfour Sanatorium. *Soc. Pharmacol.*; *Ass. Tuber.*; *Can. Med. Soc.*; *Can. Soc. Prev. Tuber.* Pharmacology; biochemistry; tuberculosis; veratrin; determination of mercury in animal tissues; hexamethylene; absorption of iodine; X-ray in tuberculosis.
- Collins, W(illiam) D(ennis)**, U. S. Geological Survey, Washington, D. C. *Chemistry*. Malden, Mass, Sept. 4, 75. A.B., Harvard, 95, A.M., 97. *Prof. chem. and physics*, Earlham, 97-06; *chemist*, U. S. Geol. Surv., 06-08; *bur. chem.*, U. S. Dept. Agr., 08-20; *U. S. Geol. Surv.*, 20-; *Chem. Soc.*; *Wash. Acad. Water*; *metals in foods*; *analytical methods*; *reagents*.
- Collins, W(illiam) H(enry)**, Haverford College, Haverford, Pa. *Astronomy*. Peekskill, N. Y., Oct. 22, 59. B.S., Haverford, 81, A.M., 92. Director, astron. observatory, Haverford, 92-04; prefect of college, 97-19, retired, 19. *Astron. Soc.* Double star measurements.
- Collins, Dr. W(illiam) H(enry)**, 15 Rosedale Ave, Ottawa, Can. *Geology*. Chatsworth, Ont, Oct. 26, 78. B.A., Toronto, 04; Ph.D., Wisconsin, 11. *Geologist*, *Can. Geol. Surv.*, 06-20, *director*, 20-; *Royal Soc. Can.*; *Can. Min. Inst.* Petrology; Pre-Cambrian geology.
- Colony, R(oy) J(ed)**, Columbia University, New York, N. Y. *Geology*. St. Louis, Mo, March 5, 70. Grad., Cooper Union, 00, B.Ch., 06; Columbia, 05. Various commercial positions, 90-00; *instr. chem.*, Cooper Union, 00-05, *asst. prof. metal. and miner.*, 06-16; *instr. geol.*, Columbia, 16-; Consulting engineer cement research, Board of Water Supply, N. Y. City, 14-16. A.A.; *Min. Eng.*; *N. Y. Acad.* High silica rock for glass and abrasives; magnetic ore deposits in southeastern New York; petrography of cement.
- Colpitts, E(dwain) H(enry)**, Western Electric Co., 463 West St., New York, N. Y. *Electrical engineering*. Point de Bute, N. B., Jan. 19, 72. A.B., Mt. Allison, 93; Harvard, 96, A.M., 97. Principal, grammar sch., Carbonear, Newfoundland, 93-95; *asst. physics*, Harvard, 97-99; *telephone engineer*, Am. Telephone and Telegraph Co., 99-07; *Western Elec. Co.*, 07-; *Elec. Eng.*; *Physical Soc.*; *assoc. Radio Eng.*; *Soc. Automotive Eng.* Telephone engineering; radio telephony.
- Colton, Prof. C(harles) A(dams)**, Pleasant Valley, N. Y. *Chemistry*. New York, N. Y., March 29, 52. E.M., Columbia, 73; hon. Sc.D., Newark Tech. Sch., 19. Asst. miner. sch. mines, Columbia, 73-82; *prof. chem. and miner.*, Rose, 82-84; *director*, *Newark Tech. Sch.*, 84-18, *emer. director*, 18-; *Min. Eng.*; *Chem. Soc.* Mineralogy.
- Colton, Prof. Harold S(ellers)**, University of Pennsylvania, Philadelphia, Pa. *Zoology*. Philadelphia, Aug. 29, 81. B.S., Pennsylvania, 04, A.M., 06, fellow, 07-08, Ph.D., 08; Carnegie Institution table, Naples Zool. Sta., 08-09. *Asst. zool.*, Pennsylvania, 09-12, *instr.*, 12-18, *asst. prof.*, 19-; *Capt.*, intelligence div., 18-19. A.A.; *Soc. Nat.*; *Soc. Zool.*; *Anthrop. Ass.*; *Ecol. Soc.*; *Phila. Acad.*; *Am. Geog. Soc.* Geography; ecology of fresh-water and marine Mollusca; excretion in Ascidians; geography and archeology of central Arizona; educational statistics related to zoology.
- Colvin, Prof. Stephen S(heldon)**, Brown University, Providence, R. I. *Psychology*, *Education*. Phenix, R. I., March 29, 69. Ph.B., Brown, 91, A.M., 94; Ph.D., Strassbourg, 97; Clark, 97-01. *Instr. rhetoric*, Brown, 92-95; *English High Sch.*, Worcester, 97-01; *asst. prof. psychol.*, Illinois, 01-03; *philos.*, Brown, 03-04; *assoc. prof. psychol.*, Illinois, 04-07, *prof.*, 07-12; *educ. psychol.*, Brown, 12-; A.A.; *Psychol. Ass.* The philosophical phases of psychology; the interests of adolescence as shown in school compositions; color perception of animals; ideational types of school children; the psychology of learning; psychology of high school subjects; semi-character tests; mental tests; educational advice and direction.
- Comey, Dr. Arthur M(essinger)**, Upland Ave, Chester, Pa. *Chemistry*. Boston, Mass, Nov. 10, 61. A.B., Harvard, 82; Ph.D., Heidelberg, 85. *Instr. chem. and director*, summer sch. of chem., Harvard, 85-89; *prof.*, Tufts, 89-93; *anal. and consulting chemist*, 93-06; *director, east. lab.*, E. I. duPont de Nemours Powder Co., 06-; *Chairman explosives sub-committee*, Nat. Research Council, 17-19. A.A.; *Chem. Soc. Am. Acad.*; *Soc. Chem. Indust.*; *Chem. Gesell.* Analytical and technical chemistry.
- Compton, Dr. Arthur H(olly)**, Washington University, St. Louis, Mo. *Physics*. Wooster, Ohio, Sept. 10, 92. B.Sc., Wooster, 13; fellow, Princeton, 13, A.M., 14, Ph.D., 16. *Asst. physics*, Wooster, 10-11, *chem.*, 11-12; *instr. physics*, Princeton, 14-15; Minnesota, 16-17; research physicist, Westinghouse Lamp Co., 17-19; *Nat. Research fellow*, 19-20; *prof. physics and head of dept.*, Washington (St. Louis), 20-; A.A.; *Physical Soc.* The earth's rotation; specific

heat of solids; size, shape and distribution of electrons in atoms.

Compton, Prof. Karl T(aylor), 30 Linden Lane, Princeton, N. J. **Physics*. Wooster, Ohio, Sept. 14, 87. Ph.B., Wooster, 08, M.S., 09; fellow, Princeton, 11-13, Ph.D., 12. Instr. physics, Wooster, 07-09, chem, 09-10; teaching fellow, Princeton, 10-11; instr. *physics*, Reed, 13-15; asst. prof., *Princeton*, 15-19, *prof.*, 19- A.A.; Physical Soc; Optical Soc. Wehnelt interrupter; photoelectric effect; contact difference of potential and Peltier effect; structure of crystals by X-ray photography; wireless thermionic detectors; thermal effects produced by stretching of wires; ionization, fluorescence and dissociation of gases; low voltage arcs; spectral radiation.

Comstock, Dr. Charles W(orthington), 76 Grant St, Denver, Colo. *Engineering, Mathematical physics*. Maroa, Ill, Feb. 10, 70. E.M., C.E., Colo. Sch. of Mines, 90; M.C.E., Cornell, 94, Ph.D., 98. Instr. civil eng, Cornell, 90-92; asst. to Geo. S. Morison, civil engineer, 92-93; instr. civil eng, Cornell, 93-97; prof. mining eng, Colo. Sch. Mines, 97-02; practising civil and mining engineer, 02-09; state engineer, Colo., 09-13. A.A. (sec'y, D, 01); Civil Eng; Min. Eng; Mech. Eng; assoc. Elec. Eng; Colo. Sci. Soc. (sec'y, 98-00); Int. Ass. Prom. Quaternions; London Inst. Min. and Metal; N. of England Inst. Min. and Mech. Eng. Elasticity of solids, especially in its engineering applications.

Comstock, Prof. Clarence E(imer), Bradley Polytechnic Institute, Peoria, Ill. *Mathematics*. Galesburg, Ill, May 5, 66. A.B., Knox, 88, A.M., 91; Hopkins, 92-93, 94-95; Chicago, 95-96. Instr. math. and English, Blackburn, 88-89; math, Knox, 89-92, 93-94; Princeton-Yale Sch, Chicago, 96-97; *Bradley Polytech. Inst.*, 97-02. *prof.*, 02- A.A.; Math. Soc; Math. Ass; British Math. Ass; Eng. Educ; Cent. Ass. Sci. and Math. Teachers (pres, 06).

Comstock, Prof. D(aniel) F(rost), 110 Brookline Ave, Boston, Mass. **Physics*. Newport, R. I., Aug. 14, 83. B.S., Mass. Inst. Tech. 04, Savage fellow, 05-07; Berlin, Zürich and Basel, Ph.D., Basel, 06; Cambridge, England, 06-07. Asst. physics, Mass. Inst. Tech. 04-05, instr. theoret. physics, 05-10, asst. prof., 10-15, assoc. prof., 15-17; exp. director submarine detection, U.S.N. 17-19; v. *pres.*, *Kalmus, Comstock and Wescott, Inc.*, 14- Director, various corporations. A.A.; Physical Soc; Chem. Soc; Electrochem. Soc; Optical Soc; Am. Acad; Inst. Social Sci. Theoretical physics; electromagnetic theory; magnetism; theory of matter; relativity theory; electromagnetic mass and its relation to energy; theory of radiation; magnetic properties of saturated iron; theory of light; color motion picture photography; nature of matter and electricity; theory of optics.

Comstock, Prof. Elting H(oughtaling), University of Minnesota, Minneapolis, Minn. *Mathematics*. Milwaukee, Wis, June 26, 76. B.S., Wisconsin, 97; fellow, Cornell, 97-98; fellow, Chicago, 98-99; hon. fellow, Wisconsin, 99-00; M.S., Minnesota, 07. Instr. math, Blaine High Sch, West Superior, Wis, 00-01; principal, high sch, Houghton, Mich, 01-03, supt. schools, 03-06; instr. math, *sch. mines, Minnesota*, 06-07,

asst. prof., 07-08, *prof. mech. and math.*, 08- A.A.; Math. Soc; Eng. Educ. Harmonic curves of three frequencies; Abelian functions; higher geometry.

Comstock, Prof. F(rank) M(ason), 2085 Cornell Road, Cleveland, Ohio. *Natural history*. LeRoy, N. Y., May 20, 55. A.B., C.E., Union, 76, fellow, 76-77, A.M., 79, hon. Ph.D., 91. Instr. science, LeRoy Acad. Inst, 78-79, principal, 79-91; *prof.* nat. hist. and English, *Case*, 91-02; *nat. hist. and descriptive geom.*, 02-, acting pres, 12-13. Asst., Adirondack Surv, 76. Forestry Ass; Ohio Acad; Rochester Acad; Can. Forestry Ass. Glacial geology.

Comstock, Prof. Geo(rge) C(ary), Observatory Hill, Madison, Wis. **Astronomy*. Madison, Feb. 12, 55. Ph.B., Michigan, 77, hon. Sc.D., 07; LL.B., Wisconsin, 83; LL.D., Illinois, 07. *Prof.* math. and astron, Ohio State, 85-87; *astron.*, *Wisconsin*, 87-, assoc. director, *Washburn Observatory*, 87-89, *director*, 89-, dean, grad. sch, 06-12. Recorder and asst, U. S. Lake Surv, 74-77; asst. engineer, Improv. Mississippi River, 78-79. Nat. Acad; A.A. (sec'y, A, 89, v. pres, 94); Astron. Soc. (sec'y, 99-08, v. pres, 08-13); Am. Acad. Astronomy of position; double stars; proper motions; refraction; aberration.

Comstock, Prof. J(ohn) H(enry), 123 Roberts Place, Ithaca, N. Y. **Entomology*. Janesville, Wis, Feb. 24, 49. B.S., Cornell, 74. Instr. and prof. *entom.*, Cornell, 74-14, *emer. prof.*, 14- Entomologist, U. S. Dept. Agr, 79-81; non-res. prof. entom, Stanford. A.A.; Soc. Nat; hon. fel. Entom. Soc. (pres, 07); Soc. Zool; Philos. Soc; Calif. Acad; hon. fel. Ont. Entom. Soc; Soc. Belge d'Entom; London Entom. Soc; Soc. entom. de France. Coccidae; manual of insects; classification of Lepidoptera; skeleton of the head of insects; manual of North American Arachnida; the wings of insects.

Comstock, Mrs. J. H. (Anna Botsford), Ithaca, N. Y. *Entomology, Nature study*. Otto, N. Y., Sept. 1, 54. B.S., Cornell, 85. Asst. to Prof. J. H. Comstock in his work on scale insects; asst. prof., exten. dept., Cornell, 99; lecturer, Stanford, 99-00; *prof.*, *nature study*, *Cornell*. Bronze medal, Pan-Am. Expos, 01. Soc. Am. Wood Engravers. Entomological illustration and engraving; nature-study.

Comstock, William James, 43 Trumbull St, New Haven, Conn. *Chemistry*. Toledo, Ohio, June 15, 60. Ph.B., Yale, 79; fellow, Hopkins, 81-82; Munich, 82-87. *Instr. org. chem.*, *Sheffield Sci. Sch.*, *Yale*, 88- Organic chemistry.

Conant, Prof. J(ames) B(ryant), Cambridge, Mass. *Chemistry*. Boston, Mass, March 26, 93. A.B., Harvard, 13, Ph.D., 16. Instr. *chem.*, *Harvard*, 16-17, *asst. prof.*, 19- Major, research div, C.W.S., 17-18. Chem. Soc. Organic chemistry; addition reactions of unsaturated compounds.

Conard, Dr. Henry S(hoemaker), Grinnell, Iowa. *Botany*. Philadelphia, Pa, Sept. 12, 74. B.S., Haverford, 94, A.M., 95; Harrison fellow, Pennsylvania, 99-01, Ph.D., 01, senior fellow, 01-03; Johnston scholar, Hopkins, 05-06. Teacher science, Westtown Boarding Sch, 95-99; instr. *bot.*, Pennsylvania, 03-05; *prof.*, *Grinnell*, 06- Lecturer, Iowa State, summer, 13; Harvard, 16. A.A.; Bot. Soc; Phytopath. Soc; Iowa Acad.

- (pres, 14); Iowa Conservation Ass. Plant anatomy and taxonomy; Nymphaeaceae; hay-scented fern; *Secotium*; *Simblum*.
- Concepcion, Prof. Isabelo**, Insular Bureau, War Department, Washington, D. C. *Physiology*. Manila, July 8, 86. M.D., Univ. Philippines, 12. Asst. biol. lab, Bur. Science, P. I., 12-13; asst. *physiol.*, Univ. Philippines, 13-14, instr. 14-17, asst. *prof.*, 18- Lecturer bacter. hygiene, Univ. Philippines, 13-14. Am. Med. Ass.; *Physiol. Soc.*; P. I. Med. Ass. (sec'y, 19). Biochemistry; blood pressure, normal urine and nutrition of the Filipinos.
- Condit, D(aniel) Dale**, 47 Parliament St, London, England. *Geology*. Pataskala, Ohio, Feb. 28, 86. A.B., Ohio State, 09; A.M., Columbia, 10. *Geologist*, U. S. Geol. Surv. 12-19; *S. Pearson and Son*, 19- Geol. Soc; Wash. Acad. Oil geology; geological exploration of India.
- Condit, I(ra) J(udson)**, Cory Building, Fresno, Calif. *Horticulture*. Jersey, Ohio, Nov. 18, 83. B.S., Ohio State, 05. Florist, Ohio State, 05-06; scientific asst, bur. entom. U. S. Dept. Agr. 06-07; instr. Calif. Polytech, 07-12; *citriculture*, California, 13-16, asst. *prof.*, 16-19; *horticulturist and director*, Forkner Fig Exp. Sta, Fresno, 19-20; *dept. hort. Calif. Peach and Fig Growers Ass*, 20- Semi-tropical fruits.
- Condra, Prof. George E(vert)**, University of Nebraska, Lincoln, Nebr. *Geography. Geology*. Seymour, Iowa, Feb. 2, 69. B.S., Nebraska, 97, A.M., 98, Ph.D., 01. Head, science dept, Lincoln Nor. Sch. 92-96; high sch, Lincoln, 96-02; instr. *geog. and econ. geol.*, Nebraska, 02-03, asst. *prof.*, 03-04, *assoc. prof.*, 04-05, *prof.*, 05-, *head of dept.*, 08- Asst., Nebr. Geol. Surv. 96-02, asst. state geologist, 02-; *prof. geog.*, summer session, Cornell, 07-10; chairman, Nebr. Conservation Commission, 08- A.A.; Ass. Geog.; *Micros. Soc.*; Nebr. Acad. (pres, 09); Nebr. Sci. Teachers' Ass. (pres, 98). Coal measure Bryozoa of Nebraska; geography and agricultural geology of Nebraska; water supply; opening of the Indian Territory; sand and gravel resources; land erosion; soil areas of Nebraska; agricultural geography and geology of the Great Plains.
- Cone, Dr. Lee H(olt)**, Mountain Lakes, N. J. *Chemistry*. Harlan, Iowa, Feb. 19, 80. B.S., Pomona, 01; Ph.D., Michigan, 05; Berlin, 07-08. Instr. chem, Pomona, 01-02; Carnegie research asst, 03-05; instr. org. chem, Michigan, 05-10, asst. *prof.*, 10-13, *assoc. prof.*, 13-16; with Dow Chem. Co, 16-17; *Nat. Aniline and Chem. Co*, 17, *director of manufacture*, 20- A.A.; Chem. Soc; Chem. Gesell. Organic chemistry; the constitution of triphenylmethyl; quino-carbonium salts; derivatives and the constitution of histidin; constitution of salts of acridin.
- Conel, Prof. J(esse) L(eroy)**, 338 E. 26th St, New York, N. Y. *Anatomy*. Mt. Auburn, Ill, Jan. 31, 83. A.B., James Millikin, 12; A.M., Illinois, 13, Ph.D., 16. Teaching fellow, Illinois, 13-16; instr. *anat.*, Univ. and Bellevue Hosp. Med. Col, 16-19, asst. *prof.*, 19- Ass. Anat. Comparative anatomy.
- Congdon, Prof. Leon A(bel)**, Syracuse University, Syracuse, N. Y. *Chemistry*. Owego, N. Y., May 8, 85. B.S., Syracuse, 08; M.S., Colgate, 16; Paris, 19. Chemist, N. J. Exp. Sta, 09-10; N. Dak. Exp. Sta, 10-14; chief, food and drug div, Kans. State Board of Health, 14-17; *asst. prof. chem.*, *Syracuse*, 19- Lecturer food, Washburn, 17; capt, Sanit. C, 17-19. Analytical and biological chemistry; food; nutrition.
- Conger, Prof. Allen C(lifton)**, 379 Forest Ave, East Lansing, Mich. *Zoology*. Zanesville, Ohio, Nov. 23, 87. B.S., Ohio Wesleyan, 08; A.M., Ohio State, 12. *Prof. biol.*, Wilmington Col, 09-12; instr. and later *assoc. prof. zool.*, Mich. Agr. Col, 12- A.A.; Soc. Mammal; *Micros. Soc.* Neurology; parasitology.
- Conklin, Prof. Edmund S(mith)**, University of Oregon, Eugene, Oregon. *Psychology*. New Britain, Conn, April 19, 84. B.II, Springfield, 08; A.M., Clark, 09, Ph.D., 11. Asst. *prof. psychol.*, Oregon, 11-13, *prof. and head of dept.*, 13- A.A. Motivations of conduct; test technique.
- Conklin, Prof. Edwin G(rant)**, Princeton University, Princeton, N. J. *Zoology*. Waldo, Ohio, Nov. 24, 63. B.S., Ohio Wesleyan, 85, A.B., 86, A.M., 89; Ph.D., Hopkins, 91; hon. Sc.D., Pennsylvania, 08. *Prof. biol.*, Ohio Wesleyan, 91-94; *zool.*, Northwestern, 94-96; Pennsylvania, 96-08; *Princeton*, 08- Instr., Woods Hole, 91-97, trustee, 97-; mem. advisory board, Wistar Inst; *assoc. ed.*, 'Jour. of Morph', 'Biol. Bul.' and 'Jour. Exp. Zool.' Seventh Int. Cong. Zool. (organizing sec'y for embryol); Int. Zool. Cong, Graz, 10; Int. Ass. Academies, Rome, 10. Nat. Acad; A.A. (v. pres, 07); Soc. Nat. (pres, 12); Soc. Zool. (pres, 99); Ass. Anat; Soc. Exp. Biol; Philos. Soc. (sec'y, 01-08); Am. Acad; Phila. Acad. (v. pres, 01-); for. mem. Bohemian Royal Soc; Soc. Belge de Biol; Soc. Royale de Med. de Bruxelles. Embryology of Gasteropoda, Brachiopoda, Tunicata and Coelenterata; cellular history of development; cytology, karyokinesis and cytokinesis; cell size and body size; organization of the egg; cause of inverse symmetry; organ-forming substances; mechanism of heredity; heredity and environment; mechanism of evolution; human evolution in retrospect and prospect.
- Conn, Dr. H(arold) J(oe)**, Agricultural Experiment Station, Geneva, N. Y. *Bacteriology*. Middletown, Conn, May 29, 86. Ph.B., Wesleyan, 08; Ph.D., Cornell, 11. Asst. soil tech, Cornell Exp. Sta, 08-11; *assoc. bacteriologist*, N. Y. Exp. Sta, Geneva, 11- Lecturer and instr. bacter, Hopkins, 15. Soc. Bact. (asst. ed, 'Abstracts,' 19-); Soc. Agron. Soil bacteriology; fungi in soils; methods of pure culture study.
- Connell, Prof. W(alter) T(homas)**, 11 Arch St, Kingston, Can. *Pathology*. Spencerville, Ont, Dec. 15, 73. M.D., Queen's (Can), 94; M.R.C.S., England, and L.R.C.P., London, 95; London, 95-96. *Prof. path. and bacter.*, Queen's (Can), 96- Bacteriologist, Dairy Sch, Kingston, Ont, 97-; asst. bacteriologist, Provincial Board of Health, Ont, 04- Lieut. col, C.A.M.C, 15-19. Ass. Path. and Bact; Pub. Health Ass; Can. Med. Ass; *assoc. Royal Sanit. Inst. Gt. Britain*. Bacteriology; tetanus bacillus; bacteria of cheese; bacterial water analysis; pasteurization of milk, whey and other factory by-products.
- Connell, W(illiam) H(enry)**, 1520 Spruce St, Philadelphia, Pa. *Highway engineering*. New York,

- N. Y. 78. Fordham. Asst. eng. corps, N. Y. City, 00-10; deputy commissioner, pub. works, Bronx, 10-12; chief, bur. highways and street cleaning, Philadelphia, 12-17; eng. exec. Day and Zimmerman, 17-19; on exec. staff, Phila. *Rapid Transit*, 19- Lecturer highway eng. Columbia; Franklin Inst. Civil Eng; Road Ass. (director); N. Y. Munic. Eng; Phila. Munic. Eng. (pres, 14); Phila. Eng. Club. Methods of construction, materials, cost and maintenance of highways.
- Conner, Arthur Benjamin**, College Station, Tex. *Agriculture*. Rosebud, Tex, Oct. 10, 82. B.S. Tex. Col. 04. *Chief, div. agron. and v. director, Tex. Col.* 11- Agronomy; crop improvement; grain sorghum inbreeding.
- Conner, Samuel D.**, Purdue University, La Fayette, Ind. *Chemistry*. Ind, 72. B.S. Purdue, 94, M.S., 07. Asst. prof. chem, *Purdue*, 04-11, *assoc. chemist soils and crops, Exp. Sta.* 11- A.A.; Chem. Soc; Soc. Agron; Ind. Acad. Soil fertility and acidity.
- Connolly, Rev. C(ornelius) J(oseph)**, Antigonish, N. S. Can. *Biology*. Stellarton, N. S. March 6, 83. A.B. St. Francis Xavier, 03; Ph.D. Munich, 11. *Prof. biol. St. Francis Xavier*, 11- N. S. Inst. (second v. pres, 18, first v. pres, 19); Bavarian Bot. Soc. The angler fish; Florideae.
- Connolly, Dr. Gerald C(harles)**, 1116 N. Eutaw St, Baltimore, Md. *Chemistry*. Baltimore Co, Aug. 7, 90. A.B. Rock Hill, 12; Ph.D. Hopkins, 16. Chemist, Davison Chem. Co. A.A.; Chem. Soc. Effect of neutral salts on the hydrolysis of acetic anhydrid.
- Conrad, Abram H.**, 4028 Jackson Boulevard, Chicago, Ill. *Botany*. Crawfordsville, Ind, 50. Wabash, 74; A.M. Wooster, 97; Chicago, 98-99. Teacher *biol.*, West. Nor. Col. 84-89; prof. Parsons, 89-96; head teacher, R. T. Crane High Sch, Chicago, 99-14, *Crane Junior Col.* 14- Iowa Acad; Chicago Acad. Plant morphology and physiology.
- Conradi, Prof. A(lbert) F(rederick)**, Clemson College, S. C. *Zoology*. New Bremen, Ohio, Aug. 27, 78. B.S.A. Ohio State, 01; M.S. N. H. Col. 02. Instr. zool. and entom. N. H. Col. 01-03; asst. state entomologist, Tex, 03-04, state entomologist and prof. entom. and zool. Texas, 04-07; Clemson, 07-08; *entomologist and zoologist, S. C. Exp. Sta.* 08- Entom. Soc; Ass. Econ. Entom; Ecol. Soc. Entomology; stronglyloid parasites of the digestive tract of ruminants; relation of temperature to insect activity.
- Conrey, Guy W(oolard)**, Ohio State University, Columbus, Ohio. *Soils*. Northboro, Iowa, Dec. 10, 87. A.B. Michigan, 08, A.M. 09. Asst. physical chem, Michigan, 08-09; div. soils, Wis. Geol. and Nat. Hist. Surv, 09-17, chemist, 10-17; *instr. soils*, Wisconsin, 14-17; *Ohio State*, 17- A.A. Soil physics and soil surveying.
- Constant, Prof. F(rank) H(enry)**, Princeton University, Princeton, N. J. *Civil engineering*. Cincinnati, Ohio, July 25, 69. C.E. Cincinnati, 91. Asst. engineer, King Bridge Co. 91-93; engineer, Osborn Engineering Co. 93-95; asst. prof. structural eng. Minnesota, 95-97, prof. 97-14; *prof. civil eng. and head of dept, Princeton*, 14- Consulting engineer. Civil Eng; Eng. Educ. (mem. council, 09-12). Structural engineering.
- Converse, Dr. Henry A(ugustus)**, State Normal School, Harrisonburg, Va. *Mathematics*. Louisville, Ky, June 3, 75. A.B. Hampden-Sidney, 93; Ph.D. Hopkins, 03. Instr. math, Shenandoah Val. Acad, 93-99; student asst, Hopkins, 02-03, instr. 03-04; Baltimore Polytech, 04-06; prof. math. and physics and dean of the faculty, Davis and Elkins, 06-08; instr. math, Baltimore Polytech, 08, head of dept, 09; *registrar, State Nor. Sch., Harrisonburg, Va.* A.A.; Math. Soc; Ass. Teachers Math. Middle States and Md. Geometry by means of vector analysis in the plane; sections of regular figures in n-dimensions in connection with the group theory; double parabola by means of vector analysis; methods of teaching mathematics.
- Conwell, Prof. G(eorge) M(acfeely)**, New York State College for Teachers, Albany, N. Y. *Mathematics*. Vineland, N. J, June 7, 83. A.B. Princeton, 05, A.M. 06, Ph.D. 08. Instr. *math.*, Yale, 08-15; *asst. prof., N. Y. State Col. Teachers*, 15- A.A.; Math. Soc; Math. Ass. Groups.
- Conwell, Prof. H(ermon) H(enry)**, Moscow, Idaho. *Mathematics*. Topeka, Kans, April 18, 86. B.S. Kansas State, 07; M.S. Kansas, 15. Assoc. prof. *math.*, New Mexico, 08-13; instr. Kansas, 13-15; *assoc. prof., Idaho*, 15- A.A.; Math. Soc; Math. Ass. Abelian functions.
- Cook, Prof. A(lfred) N(ewton)**, Vermilion, S. Dak. *Chemistry*. Cornell, Ill, Feb. 22, 66. B.S. Knox, 90; Chicago, 95; Ph.D. Wisconsin, 08. Prof. nat. science, Amity, 92-94; chem. and physics, Upper Iowa, 94-98; asst. chem, Wisconsin, 98-00; *prof., Morningside*, 00-04; *South Dakota*, 04- State food and drug commissioner, S. Dak, 09-13. A.A.; Chem. Soc. (pres, S. Dak. sect, 15-18); Iowa Acad; S. Dak. Acad. (pres); Chem. Gesell. Derivatives, preparation and properties of phenyl ethers; sulfonic acid derivatives of tolyl ethers.
- Cook, Dr. Cha(rlie)s G(ilpin)**, 227A Monroe St, Brooklyn, N. Y. *Chemistry*. Glenville, Md, Nov. 25, 66. B.S. Haverford, 92, A.M. 93; Ph.D. Hopkins, 98. Instr. Bridgewater Col, 93-94; principal, Aurora Acad, 94-95; *instr. chem, Boys' High Sch., Brooklyn*, 99- Chemist, Mathi, Inghram and Co, Baltimore, Md; lab. asst. chem, Haverford. Double halids of tin with aliphatic amins; practical chemistry.
- Cook, Cha(rlie)s W(ilford)**, 502 Elm St, Ann Arbor, Mich. *Geology, Mineralogy*. Fenton, Mich, Sept. 17, 82. A.B. Michigan, 04, M.S. 06, Ph.D. 13. Asst. miner, Michigan, 05-06; prof. chem, Pacific (Oregon), 06-08; asst. miner, Michigan, 08-09, *instr. econ. geol.* 09-14, asst. prof. 14-20, *assoc. prof.* 20- Asst. geologist, Mich. Geol. Surv, 10-13; expert asst. to appraiser of mines, Mich, summer, 11; special investigations in western and southern U. S. also in N. S. and P. Q. 17-18. Geol. Soc; Mich. Acad. American minerals; rare metals.
- Cook, Dr. F(rank) C(ummings)**, U. S. Department of Agriculture, Washington, D. C. *Chemistry*. Litchfield, Conn, July 14, 77. A.B. Yale, 00, M.S. 04; Ph.D. George Washington, 08. *Physiol. chemist, bur. chem., U. S. Dept. Agr.* 03- Int. Cong. Applied Chem, Rome, 06, London, 09.

- A.A.; Chem. Soc.; Soc. Biol. Chem.; Ass. Agr. Chem.; Wash. Acad. Metabolism experiments with organic and inorganic phosphorus; meat extracts and similar preparations; cold storage; metabolism; enzymes; insecticides; fungicides.
- Cook, Harold J(ames)**, Agate, Nebr. *Vertebrate paleontology, Geology*. Cheyenne, Wyo, July 31, 87. Nebraska, 07-08; Columbia, 09. *Mem. State Geol. Surv., Nebr.*, 06-; field staff, Am. Museum Nat. Hist., 09. A.A.; Paleont. Soc.; Ass. Petrol. Geol.; Min. and Metal. Eng.; Forestry Ass.; hon. life mem. Am. Mus. Nat. Hist.; assoc. mem. Archeol. Inst.; Nebr. Acad. New fossil vertebrates; Tertiary geology.
- Cook, Dr. Margaret H(arris)**, 122 W. Linn St, Bellefonte, Pa. *Zoology*. Bellefonte, May 14, 74. B.S., Pennsylvania, 04, Ph.D., 08. Instr. zool., Wellesley, 08-16. A.A.; Soc. Zool. Spermatogenesis in Lepidoptera; origin and distribution of taste buds in *Squalus acanthias*.
- Cook, Dr. Marjorie W(eston)**, University of California, Berkeley, Calif. *Bacteriology*. Woonsocket, R. I., July 16, 89. A.B., Mt. Holyoke, 11; A.M., Brown, 18, Ph.D., 19; fellow, Northwestern, 19. Research asst., H. K. Mulford Co, 12-17; asst. bacteriologist, board of health, Providence, R. I., 18-19; *research fellow bacter., California*, 19- Soc. Bact. Immunity; hemolytic action of *Streptococcus*.
- Cook, Prof. Mel(ville) T(hurston)**, New Brunswick, N. J. **Plant pathology*. Coffeen, Ill, Sept. 20, 69. A.B., Stanford, 94; A.M., De Pauw, 01; fellow, Ohio State, 01-02, Ph.D., 04. Principal, high sch., Vandalia, Ill, 94-95; instr. biol., De Pauw, 95-97, prof., 97-04; plant pathologist, Cuban Exp. Sta., Santiago, 04-07; Del. Exp. Sta., 07-11; *prof. plant path., Rutgers, and plant pathologist, N. J. Exp. Sta., and State Dept. Agr.*, 11- Lecturer human embryol., Central Col. Physicians and Surg., Indianapolis, 02-03; comp. anat., Med. Col. of Ind., 03-04. A.A. (sec'y, G, 18); Soc. Nat.; Bot. Soc.; Phytopath. Soc. (v. pres, 16, pres, 17); Ass. Econ. Entom.; Entom. Soc.; Ecol. Soc.; Ind. Acad. Vegetable galls; embryology; tannin; text books on botany.
- Cook, O(rator) F(uller)**, Lanham, Md. **Biology*. Clyde, N. Y., May 28, 67. Ph.B., Syracuse, 90. Instr., Syracuse, 90-91; special agent in Liberia, N. Y. State Colonization Soc., 91-98; special agent, *U. S. Dept. Agr.*, 98-01, botanist for tropical agr., 01-09, *bionomist in charge acclimatization and adaptation investigations*, 09- Asst. curator crypt. bot. and custodian myriapods, U. S. Nat. Museum. A.A.; Bot. Soc.; Ass. Geog.; Wash. Acad.; Wash. Biol. Soc.; Wash. Entom. Soc.; Wash. Anthropol. Soc.; Wash. Bot. Soc. Tropical agriculture; African colonization; taxonomy; evolution; Myriapoda; palms; origins and histories of tropical economic plants; heredity, acclimatization and adaptation, especially of cotton and corn.
- Cook, Dr. S(amuel) R(ichard)**, 755 Emry St, San Jose, Calif. *Experimental physics*. Minden, Can, Feb. 14, 65. B.S., Michigan, 95, M.S., 97; fellow, Nebraska, 97-99, A.M., 98; fellow, Cornell, 04-05, Ph.D., 05; Berlin, 06-07. Principal, high sch., Wahoo, Nebr., 99-01; instr. physics and chem., Washburn, 01-02; physics, Case, 02-04; *prof. physics, and astron., Allegheny*, 05-06; *physics and math, Pacific (Calif.)*, 07- A.A.; Physical Soc.; Nebr. Teachers Physics and Chem. (pres, 99). Escape of gases from planetary atmospheres; flutings in sound waves; permanency of planetary atmospheres; theory of the electric rectifier; velocity of sound at the temperature of liquid air.
- Cook, Prof. William Adelbert**, Vermilion, S. Dak. *Education*. Neponset, Ill, Aug. 31, 81. A.B., Illinois, 02, A.M., 11; fellow, Wisconsin, 11-13, Ph.D., 13. High sch. visitor, Colorado, 13-18; *prof. secondary educ., South Dakota*, 18-19, *educ.*, 19- Educational administration; ability in typewriting and stenography; spelling; school sanitation.
- Cooke, Dr. C(harles) Montague, Jr.**, P. O. Box 717, Honolulu, Hawaii. *Zoology*. Honolulu, Dec. 22, 74. A.B., Yale, 97, Ph.D., 01. *Curator Pulmonata, Bishop Museum*, 02- London Malacol. Soc. Hawaiian Pulmonata.
- Cooke, Dr. C(harles) Wythe**, U. S. Geological Survey, Washington, D. C. *Geology*. Baltimore, Md, July 20, 87. A.B., Hopkins, 08, fellow, 11-12, Ph.D., 12. *Geologist, U. S. Geol. Surv.*, 10- A.A.; Geol. Soc.; Paleont. Soc.; Wash. Acad.; Wash. Geol. Soc. Geology and paleontology of the Coastal Plain; Tertiary Mollusca of the West Indies; Mississippian of Maryland.
- Cooke, Prof. H(ereward) L(ester)**, Princeton University, Princeton, N. J. *Physics*. Montreal, Can, March 26, 79. A.B., McGill, 00, A.M., 03; 1851 Exhibition scholar, Cambridge, 03-06. Demonstrator *physics*, McGill, 02-03; asst. prof., *Princeton*, 06-19, *prof.*, 19- Physical Soc.; Soc. de Physique. Experimental physics; density of ice; radioactivity; thermionics; surveying with aeroplane photographs.
- Cooke, Prof. J(ean) V(aljean)**, Washington University Medical School, St. Louis, Mo. *Pediatrics*. Brownsville, Pa, June 19, 83. A.B., West Virginia, 03; Yale, 04; M.D., Hopkins, 08. Instr. path., Univ. and Bellevue Hosp. Med. Col., 08-10; res. pathologist, Pa. Hosp., Phila., 10-11; instr. path., Tulane, 11-12; asst. prof. path. and director, lab. animal exp., California, 12-17; assoc. *pediat., Washington (St. Louis)*, 18-20, *assoc. prof.*, 20- Asst. physician, St. Louis Child Hosp., 18- A.A.; Ass. Path. and Bact.; Soc. Bact.; Soc. Exp. Biol. (sec'y, Pacific Coast branch, 13-17); Cent. States Pediat. Soc. Bacteriology; metabolism after parathyroidectomy; intestinal obstruction; proteose intoxication; tuberculosis; hereditary syphilis.
- Cooke, Dr. Robert A(nderson)**, 375 Park Ave, New York, N. Y. *Medicine*. Holmdel, N. J. A.B., Rutgers, 00, A.M., 04; M.D., Columbia, 04. *Assoc. attending physician, N. Y. Hosp.*, 20-; *N. Y. Post-Grad. Hosp.*, 20-; *lecturer applied immunol., med. col., Cornell*, 20- Soc. Clin. Invest.; Harvey Soc. Human hypersensitiveness; allergy; anaphylaxis.
- Cooke, Prof. Thomas F(owke)**, 618 Delaware Ave, Buffalo, N. Y. *Physics*. New York, N. Y., Feb. 15, 83. M.E., Columbia, 04. Physicist, N. Y. State Inst. Study Malignant Diseases, 17-20; *asst. prof. physics, Buffalo*.
- Coolbaugh, M(elville) F(uller)**, Golden, Colo. *Chemistry*. Monroe Co, Pa, Feb. 8, 77. B.S.,

- Colo. Col, 02; A.M, Columbia, 05. Instr. chem, Colo. Col, 02-04; asst, Columbia, 05; prof, S. Dak. Sch. Mines, 05-14; asst. prof, Case, 15-17; prof, Colo. Sch. Mines, 17-19. With offense div, C.W.S., 18. Chem. Soc; Min. and Metal. Eng. The determination of antimony and lead; complex ore treatment.
- Cooley, Dr. J(acquelin) S(mith)**, U. S. Department of Agriculture, Washington, D. C. *Botany*. Middletown, Va, July 24, 83. A.B, Randolph-Macon, 06; M.S, Va. Polytech, 11; Lackland fellow, Washington (St. Louis), 12-14, Ph.D, 14. Asst. plant path, Va. Exp. Sta, 11-12; scientific asst, asst. pathologist and later *pathologist, bur. plant indust, U. S. Dept. Agr.* A.A; Bot. Soc; Wash. Bot. Soc. Plant pathology; plant physiology; effect of cedar rust upon the assimilation of CO₂ by apple leaves; apple foliage diseases; transpiration of sprayed plants; physiology of *Sclerotinia cinerea*.
- Cooley, Prof. M(ortimer) E(lwyn)**, University of Michigan, Ann Arbor, Mich. *Mechanical engineering*. Canandaigua, N. Y, March 28, 55. Grad, U. S. Naval Acad, 78; hon. M.E, Michigan, 84; asst. engineer, U.S.N., 80-85; *prof. mech. eng, Michigan, 81-*, *dean, eng. dept, 04-* Chief engineer, U.S.N., 98; mem. jury awards, state educ. and marine engineer committees, Columbian Expos, 93; past asst. engineer, M.S.N.B., 95-; mem. jury awards, Pan-Am. Expos, 01. A.A. (v. pres, 98); Mech. Eng. (v. pres, 02); Naval Eng; Nat. Ass. Std. Eng; Mich. Eng. Soc. (pres, 03); Detroit Eng. Soc. Carbon bisulphid engine; water friction of pumping engines; physical values of railroad, telephone, telegraph, plank roads and river improvement properties in Michigan; tests of steam and hydraulic machinery.
- Cooley, Prof. R(obert) A(llen)**, Montana Agricultural College, Bozeman, Mont. *Entomology*. Deerfield, Mass, June 27, 73. B.S, Mass. Col. and Boston, 95. Asst. entomologist, Mass. Exp. Sta, 95-99; *prof. zool. and entom, Mont. Col, and entomologist, Mont. Exp. Sta, 99-*; *state entomologist, Mont, 03-* A.A; Ass. Econ. Entom. Coccidae; Orthoptera.
- Coolidge, Prof. Algernon**, 613 Beacon St, Boston, Mass. *Laryngology*. Boston, Jan. 24, 60. A.B, Harvard, 81, M.D, 86. *Laryngologist, Mass. Gen. Hosp, 93-*; *instr. laryngol, Harvard Med. Sch, 93-96*, asst. prof, 06-11, *prof, 11-* Laryngol. Ass. (pres, 09); Laryngol. Rhinol. and Otol. Soc; Climat. Ass. Diseases of nose and throat.
- Coolidge, Prof. J(ulian) L(owell)**, 27 Fayerweather St, Cambridge, Mass. **Mathematics*. Brookline, Mass, Sept. 28, 73. A.B, Harvard, 95; B.S, Oxford, 97; Ph.D, Bonn, 04. Teacher *math, Groton Sch, Mass, 97-99*; *instr, Harvard, 99-08*, asst. prof, 08-18, *prof, 18-* Chevalier Légion d'honneur; Officier de l'Instruction Pub. Major, U.S.A., 17-19. Math. Soc. (v. pres, 18); Math. Ass; Am. Acad; Oxford Soc. Modern geometry.
- Coolidge, Dr. W(illiam) D(avid)**, Research Laboratory, General Electric Company, Schenectady, N. Y. **Physical chemistry*. Hudson, Mass, Oct. 23, 73. B.S, Mass. Inst. Tech, 96; Ph.D, Leipzig, 99. Asst. physics, Mass. Inst. Tech, 97; Leipzig, 99; instr. physical chem, Mass. Inst. Tech, 01-03, asst. prof. physico-chem. research, 04-05; research physico-chemist, *Gen. Elec. Co, 05-08*, *asst. director, research lab, 08-* Rumford premium, Am. Acad, 14; medal of honor, Panama-Pacific Expos. Physical Soc; Electrochem. Soc; Chem. Soc; Elec. Eng; Am. Acad; Röntgen Ray Soc; Radiol. Soc; N. Y. Chemists Club; London Röntgen Ray Soc; Soc. de radiol. de Med. de France. Measurement of the dielectric constant of liquids; conductivity of aqueous solutions at high temperatures (up to 306° C); ductile tungsten; X-ray tube with pure electron discharge.
- Coombs, Dr. Helen C(opeland)**, 437 W. 59th St, New York, N. Y. *Physiology*. St. Joseph, Mo, July 25, 91. A.B, Columbia, 11, B.S, 14, A.M, 15, Ph.D, 18. Asst. *physiol, Columbia, 17-18*, *instr, 19-* A.A; Soc. Exp. Biol. Nervous mechanism of respiration in Mammalia; mechanism of intra-abdominal pressure.
- Coon, Prof. J(ohn) S(ayler)**, School of Technology, Atlanta, Ga. *Mechanical engineering*. Burdett, N. Y. M.E, Cornell, 77; Sc.D, Georgia. With Calumet and Hecla Mining Co, 79-86; *prof. mech. eng, Tennessee, 88-89*; *Ga. Tech, 89-* Mech. Eng.
- Coons, Prof. G(eorge) H(erbert)**, Michigan Agricultural College, East Lansing, Mich. *Botany*. Bloomington, Ill, Nov. 2, 85. A.B, Illinois, 08; A.M, Nebraska, 11, Ph.D. Adj. prof. agr. bot, Nebraska, 09-10; research asst. plant path, *Mich. Agr. Col, 10*, *assoc. prof. bot, and plant pathologist. A.A*; Bot. Soc; Phytopath. Soc; Mich. Acad. (v. pres, 16). Ecology of Sand Point and Dickinson Co, Mich; rust; host index of Michigan fungi; potato and apple diseases.
- Coony, Rev. J(ohn) P(atrick)**, S. J, St. Louis University, St. Louis, Mo. *Chemistry, Mathematics*. Edina, Mo, July 22, 62. St. Mary's Col, Kans, 84; St. Louis, 87-93, 99-01, 03-04; Woodstock (Md), 97-99; Ph.D, Hopkins, 03. Asst. math. St. Louis, 93-97; *prof. chem, Marquette, 07*; *sch. med, St. Louis, 07-* Chemist, St. Louis Univ. tropical med. exped, 15. Chem. Soc. Comparison of electrolytically formed semipermeable membranes regarding activity, permanence and reliability for osmotic pressure measurements; variations in blood sugar and blood nitrogen.
- Cooper, Dr. A(rthur) R(euben)**, 508 S. Honore St, Chicago, Ill. *Zoology*. Brinston, Ont, Oct. 30, 88. B.A, Toronto, 10, M.A, 11; fellow, Illinois, 15-17, Ph.D, 17; Can. Lake Biol. Sta, summers, 09-12, fellow, 12-14; Marine Biol. Sta, St. Andrews, N. B, summers, 13-14; Woods Hole, summer, 16. Asst. biol, Toronto, 09-11, demonstrator zool, 11-12, lecture demonstrator, 14-15; instr, med, *Illinois, 17-19*, *assoc. anat, 19-20*, *asst. prof, 20-* Research asst, biol. sta, Michigan, summer, 17. A.A; Micros. Soc. Parasitology; trematodes; cestodes from fishes.
- Cooper, Dr. F(rank) L(awrence)**, Yale University, New Haven, Conn. *Physics*. Owosso, Mich, April 26, 75. B.S, Michigan, 00, A.M, 04; Ph.D, Hopkins, 07. Teacher physics and chem, high sch, Manistee, Mich, 00-01; East Aurora, Ill, 01-03; asst. *physics, Michigan, 03-04*; Hopkins, 06-07; *instr, Yale, 07-* A.A; assoc.

- mem. Physical Soc; Eng. Educ; Cent. Ass. Sci. and Math. Teachers. Light.
- Cooper, Dr. H(ermon) C(harles)**, College of the City of New York, New York, N. Y. *Electrochemistry*. Glen Ellyn, Ill, Nov. 22, 75. Ph.B, Beloit, 96, A.M, 99; Ph.D, Heidelberg, 99. Instr. chem, high sch, Lincoln, Nebr, 00-01; Syracuse, 01-03; research assoc, Mass. Inst. Tech, 03-04; asst. prof, Syracuse, 04-06, assoc. prof, 06-12, prof, 12-18; *asst. prof, Col. City of N. Y.*, 18- Lecturer, Chicago, summer, 10. A.A; Chem. Soc. (sec'y, Syracuse sect, 06-09, pres, 09-10); Physical Soc; Electrochem. Soc; Ass. Prof. History of chemistry; organic chemistry; racemic compounds; electric conductivity of aqueous solutions at high temperatures; lead silicates; silicates and borates; fluorides.
- Cooper, J(ohn) R(alph)**, Fayetteville, Ark. *Horticulture*. Washington, Iowa, April 18, 84. B.S, Kansas State, 12; M.S, Nebraska. Asst. hort, Kansas State, 12; asst. prof, Nebraska, 12-14, assoc, 14-17; *horticulturist, Arkansas*, 17- A.A; Bot. Soc; Soc. Hort. Sci; Pomol. Soc. Horticulture; plant breeding, physiology and nutrition; disease resistance.
- Cooper, Dean Thomas P(oe)**, University of Kentucky, Lexington, Ky. *Agriculture*. Pekin, Ill, March 2, 81. B.S, Minnesota, 08. Statist. agent, Minn. Exp. Sta, and special agent, bur. statist, U. S. Dept. Agr, 02-07; asst. farm management and instr. agr. econ, Minnesota, 08-11; director, N. Dak. Exp. Sta, 14-17; *dean and director, agr. col, Kentucky*, 18- A.A; Soc. Agron; Soc. Prom. Agr. Sci; Farm Econ. Ass. Farm management; agricultural economics.
- Cooper, Dr. William S(kinner)**, University of Minnesota, Minneapolis, Minn. *Plant ecology*. Detroit, Mich, Aug. 25, 84. B.S, Alma, 06; Hopkins, 07-08; fellow, Chicago, 10-11, Ph.D, 11. Lecturer ecol, Stanford; *asst. prof. bot, Minnesota*. Asst. plant ecol, sta. for exp. evolution, Carnegie Institution summer, 07. A.A; Ecol. Soc; fel. Bot. Soc. Ecology of Great Lakes region; ecology of mosses; alpine vegetation of Colorado; chaparral; distribution of redwood; strand vegetation of Pacific Coast; vegetation of southeastern Alaska.
- Coover, Dr. J(ohn) E(dgar)**, Stanford University, Calif. *Psychology*. Remington, Ind, March 16, 72. A.B, Stanford, 04, A.M, 05, Ph.D, 12. Principal schools, Como, Colo, 98-99; Tuolumne Co. High Sch, Sonora, Calif, 05-07; high sch, Dixon, Calif, 07-10; asst. psychol, *Stanford*, 10-12, *fellow psychical research*, 12-, *asst. prof. psychol*, 14- Capt, Sanit. C, 18. A.A; Psychol. Ass. Education; psychical research; subliminal impressions; formal discipline; expert performance in typing; assimilation of sound in speech; sensory thresholds and the unconscious; selection of aviators; statistical procedures.
- Coover, Prof. Winfred F.**, Ames, Iowa. *Chemistry*. Dayton, Ohio, May 29, 75. A.B, Otterbein, 00; A.M, Ohio State, 03. Asst. prof. chem, *Iowa State*, 04-13, *prof. and head of dept*, 13- A.A; Chem. Soc. Analytical chemistry.
- Cope, Prof. Thomas D(arlington)**, University of Pennsylvania, Philadelphia, Pa. *Physics*. West Chester, Pa, Dec. 28, 80. A.B, Pennsylvania, 03, Ph.D, 15; Berlin, 12-13. Instr. *physics, Pennsylvania*, 06-13, *asst. prof*, 13- Capt, Bur. Aircraft Production, 18. A.A; assoc. Physical Soc; Franklin Inst; Wash. Philos. Soc. Industrial physics; apparatus.
- Copeland, Dr. E(dwin) B(ingham)**, Chico, Calif. **Botany*. Monroe, Wis, Sept. 30, 73. Wisconsin, 91-94; A.B, Stanford, 95; Leipzig, 95-96; Ph.D, Halle, 96; Wisconsin, 96-97, 98; Chicago, 00-01. Asst. prof. bot, Indiana, 97-98; State Nor. Sch, Chico, Calif, 99; West Virginia, 99-00, prof, 00-01; instr, Stanford, 01-03; botanist, Philippine Govt, 03-08; supt, Sch. of Agr, P. I., 08-09; dean and prof. plant physiol, col. agr, Univ. Philippines, 09-17. Prof. crypt. bot, Cold Spring Harbor, 01. A.A; Soc. Nat; Bot. Soc; Bot. Cent. States; Wis. Acad; Philippine Nat. Hist. Soc. Agricultural plant physiology; taxonomy of ferns.
- Copeland, Dr. Lennie Phoebe**, Wellesley College, Wellesley, Mass. *Mathematics*. Bangor, Maine, March 30, 81. B.S, Maine, 04; A.M, Wellesley, 11; Ph.D, Pennsylvania, 13. Teacher, high sch, 05-10; *instr. math, Wellesley*, 13-19, *asst. prof*, 19- Math. Soc; Math. Ass. Algebra of invariants.
- Copeland, Prof. Manton**, Brunswick, Maine. *Zoology*. Taunton, Mass, July 24, 81. B.S, Harvard, 04, M.S, 05, Ph.D, 08. Asst. zool, Harvard and Radcliffe, 04-08; instr. *biol, Bowdoin*, 08-09, asst. prof, 09-10, *prof*, 10- A.A; Soc. Zool; assoc. Ornith. Union; Soc. Ichthyol. and Herp; Soc. Mammal; Wash. Biol. Soc; Nuttall Ornith. Club; Boston Soc. Nat. Hist. Physiology; mammalogy; animal reactions; spermatogenesis in Apis and Vespa.
- Copeland, Prof. W(illiam) F(ranklin)**, State Normal College, Athens, Ohio. *Botany*. Tappan, Ohio, Aug. 16, 72. Ph.B, Ohio (Athens), 02, Ph.M, 03, Ph.D, 07. Asst. biol. and geol, *Ohio (Athens)*, 02-05, bot, 07, *prof. elementary science*, 07- A.A; Soc. Nat; Nature Study Soc; Ohio Acad. Periodicity in Spirogyra.
- Copeland, W(illiam) M R(ogers)**, Sewage Commission, City Hall, Milwaukee, Wis. *Biology, Chemistry*. Castleton, Vt, Oct. 23, 68. A.B, Harvard, 92; Mass. Inst. Tech, 93. Asst. bacteriologist and chief, bacter. exp. sta, Mass. State Board of Health, 93-97; bacteriologist, Filtration Commission of Pittsburgh, 97-99; Bur. of Water-supply, Pittsburgh, 99-00; chief bacteriologist, Bur. of Water-supply, Phila, 01-04; bacteriologist, Sewage Testing Sta, Columbus, Ohio, 04-05; Pittsburgh Filtration Commission, 05-07; chemist in charge, Water Purification Works. and consulting chemist, Sewage Purification Works, Columbus, 08-11; chemist, Metropolitan Sewage Commission, N. Y. City, 11-13; *chemist in charge, sewage testing sta, Milwaukee*, 14- Civil Eng. Bacteriology and micro-organisms in drinking waters; purification of water-supplies; water softening; sewage purification; activated sludge.
- Coplin, Dr. W(illiam) M. L(ate)**, Jefferson Medical College, Philadelphia, Pa. *Pathology*. Clarksburg, W. Va, Nov. 1, 64. M.D, Jefferson Med. Col, 86. Intern, Jefferson Med. Col. Hosp, 86-87, asst. demonstrator morbid anat, *Jefferson Med. Col*, 87-89, demonstrator, 89-94, *prof. path.*

- and bacter, 96- Adj. prof. path, Phila. Polyclinic, 89-92; A.A. surgeon, U. S. Marine Hosp. Service, 90-93; lecturer hygiene, Jefferson Med. Col, 92-95; pathologist, Phila. Hosp, 92-95, 96, pres, staff, 20-; bacteriologist, Pa. State Board of Health, and surgeon, St. Mary's Hosp, 93-95; prof. path. and bacter, Vanderbilt, 95-96; director, dept. pub. health and charities, Phila, 05-07; med. director, Jefferson Hosp, 07-12; Phila. (Blockley) Hosp; Friends' Asylum for Insane, Frankford; director, base hospital No. 38, and laboratories, third army, A.E.F, 19. A.A.; Pub. Health Ass; Philos. Soc; Phila. Col. Physicians. Bacteriology.
- Corbett, Dr. James Frank**, University of Minnesota, Minneapolis, Minn. *Experimental surgery*. M.D, 96. Bacteriologist, Board of Health, Minneapolis, 98; pathologist, city hosp, Minneapolis; asst. prof. surg. path, Minnesota, 07-10, assoc. prof. exp. surg. and later assoc. prof. surg, 10- Lieut. col, M.C. Am. Med. Ass; Soc. Pharmacol; Col. Surg; Ass. Path. and Bact; West. Surg. and Gynec. Ass; Minn. Acad; Minn. Acad. Med. Pathology; bacteriology; transfusion; surgery of the kidney; periosteum; thyroid; blood-vessel anastomosis; early diagnosis of carcinoma.
- Corbett, Prof. L(aurence) J(ay)**, 1230 First Ave, San Francisco, Calif. *Electrical engineering*. Saratoga, Calif, May 19, 77. B.S. (E.E), California, 02. With Gen. Elec. Co, 02-03; with various indust. firms, Calif. and Wash, 03-06; consulting engineer, 06-11; assoc. prof. elec. eng, Idaho, 11-12, prof, 12-18; capt, corps engineers, 18-19; with Fed. Board Vocational Educ, 19; ad. interim assoc. prof. meech. eng, California, 20; valuation dept, Pacific Gas and Elec. Co, 20- A.A.; Elec. Eng; Elec. Ry. Ass; Eng. Educ. Electrical apparatus; oscillography.
- Corbett, Prof. L(ee) C(leveland)**, Takoma Park, Washington, D. C. *Horticulture*. Watkins, N. Y, Oct. 21, 67. B.S. Cornell, 90, M.S, 96. Asst. horticulturist, Cornell, 91-93; prof. hort. and forestry, S. Dak. Col, 93-95; West Virginia, 95-01; horticulturist, U. S. Dept. Agr, 01- Silver medal, Paris Expos, 01. A.A.; Pomol. Soc; Soc. Hort. Sci; Soc. Prom. Agr. Sci; Wash. Bot. Soc. Propagation of plants by cuttings; the effect of incandescent gaslight on plants; comparative rate of transpiration of leaves under varying conditions; intensive farming.
- Cordley, Dean A(rthur) B(urton)**, Agricultural College, Corvallis, Oregon. *Entomology*. Pinckney, Mich, Feb. 11, 64. B.S. Mich. Agr. Col, 88, M.S, 00, Sc.D, 17. Asst. entom. Vermont, 90-91; asst. entomologist, U. S. Dept. Agr, 91-93; prof. zool. and entom, Oregon Col, 95-07, dean agr, 07-, director, *Exp. Sta*, 14- A.A.; Soc. Prom. Agr. Sci. Economic entomology; plant pathology.
- Corey, S(amuel) A(rthur)**, 1079 23rd St, Des Moines, Iowa. *Mathematics*. Fairfield, Iowa, Sept. 12, 61. A.A; Math. Soc; Edinburgh Math. Soc; Soc. astron. de France; Circolo Mat. di Palermo. Methods of approximation; linear associative algebra.
- Coriat, Dr. Isador H(enry)**, 416 Marlborough St, Boston, Mass. *Neurology, Psychiatry*. Philadelphia, Pa, Dec. 10, 75. M.D, Tufts, 00; Harvard, 09-10. Asst. physician, Worcester State Hosp, 00-05; first asst. visiting physician, Boston City Hosp, 05-; instr. neur, Tufts, 14-16. Neurologist, Mt. Sinai Hosp, 05-14; consulting neurologist, Frost Hosp, Chelsea, 10-; Forsyth Dental Infirmary, 16-; Beth Israel Hosp, 18-; neurologist, Med. Advisory Board; contract surgeon, U. S. A.; collaborating ed, 'Jour. Abnormal Psychol,' 06- Int. Med. Cong, London, 13. Psychol. Ass; Am. Med. Ass; Medico-Psychol. Ass; Psychopath. Ass; Psychoanal. Ass; Ass. Study Int. Secretions; Boston Med. Library Ass; British Soc. Study Inebriety. Psychopathology; psychoanalysis; nervous and mental diseases; chemistry of the nervous system; sleep; hypnosis; colored hearing; stammering; racial psychopathology; family idiocy; memory; literary criticism; repressed emotions; nerve regeneration.
- Corlett, Prof. William Thomas**, 3618 Euclid Ave, Cleveland, Ohio. *Dermatology*. Orange, Ohio, April 15, 54. Oberlin, 70-73; M.D, Wooster, 77; London Hosp, 79-81, L.R.C.P, London, 81; Hôpital St. Louis, Paris, 81; hon. M.D, Western Reserve, 82. Demonstrator anat, Wooster, 78, registrar and prof. dermat. and genito-urinary diseases, 82-85; acting prof, *Western Reserve*, 85-93, prof. dermat. and syphilol, 93-14, senior prof, 14- Am. Med. Ass. (chairman, dermat. sect, 99); Dermat. Ass. (pres, 04); Cleveland Acad. Med; fel. Royal Soc. Med. Diseases of the skin; dermatoses due to vegetable parasites; leprosy.
- Cornelson, Dr. R(obert) W(ilson)**, 275 W. Summit St, Somerville, N. J. *Chemistry*. Washington, Ill, 69. B.S. Illinois, 90; Morgan fellow, Harvard, 92-93, Sc.D, 93. Research chemist for various companies and consulting chemist, 93-08; chemist, bur. chem, U. S. Dept. Agr, 08-09; supt, The Cott-a-lap Co, 09-15; gen. manager, Calco Chem. Co, 15-16; pres. and gen. manager, Peerless Color Co, 16- Lecturer org. chem, summer sch, Harvard, 92, 93; Brooklyn Inst, 05. A.A.; Chem. Soc; Soc. Chem. Indust. Organic chemistry; production of fast dyes.
- Cornelius, Prof. David W(illiam)**, University of Chattanooga, Chattanooga, Tenn. *Physics*. Linton, Ind, April 28, 85. A.B, DePauw, 06; California, 08-10; fellow, Illinois, 10-12, Ph.D, 12. Asst. physics, DePauw, 05-06; Purdue, 06-08; California, 08-10; prof. physics and eng, Ottawa, 12-13; asst. prof. physics and astron, Kansas, 13-15; instr. physics, Missouri, 15-17; prof, Alma, 17-20, Chattanooga, 20- Physical Soc. Velocity of electrons in the photo-electric effect, as a function of the wave-lengths of the light; high resistance; a liquid high resistance as a substitute for a Bronson resistance.
- Cornell, Prof. Clare Brown**, University of Kentucky, Lexington, Ky. *Psychology*. Michigan, March 16, 83. A.B, Nebraska, 05, A.M, 12, Ph.D, 15. Instr. psychol, Nebraska, 12-18; assoc. prof, Kentucky, 18- Educational measurements; effect of tonsilectomy on mental ability.
- Corner, Prof. George W(ashington)**, 4509 Maine Ave, Forest Park, Baltimore, Md. *Anatomy*. Baltimore, Dec. 12, 89. A.B, Hopkins, 09, M.D, 13. Asst. anat, Hopkins, 13-14; res. house of-

- ficer, Hopkins Hosp, 14-15; asst. prof. anat, California, 15-19; *assoc. prof. Hopkins*, 19- Surg. asst, Labrador Med. Mission, summers, 12, 13. Ass. Anat; Soc. Exp. Biol. Physiological anatomy; histology; history of medicine.
- Cornman, Dr. Oliver P(erry)**, 422 Church Lane, Philadelphia, Pa. *Pedagogy, Psychology*. Philadelphia, Aug. 26, 66. A.B, Cent. High Sch, Phila, 84, A.M, 89; Pennsylvania, 94-99, Ph.D, 99. Supervising principal, Northwest Sch, Phila, 92-06, dist. supt. schools, 06-09, *assoc. supt.*, 09- Lecturer child psychol, Pennsylvania, 98-04. A.A. Spelling in elementary schools.
- Corper, Dr. H(arry) J(ohn)**, 1426 Steel St, Denver, Colo. *Pathology*. Chicago, March 5, 84, B.S, Chicago, 06, Ph.D, 11; M.D, Rush Med. Col, 11. Asst. path, Chicago, 07-09; *physiol*, Illinois, 09-10; path, Chicago, 11-14; lab. director, Chicago Munic. Tuber. Sanitarium, 14-18; chief, lab. service, U.S.A. Gen. Hosp, 16, 18-19; *director research, Nat. Jewish Hosp. for Consumptives*, 19- Lecturer chem. and health, Chicago, 04-07, mem. Sprague Mem. Inst, 11-14, hon. mem, 14- A.A; Am. Med. Ass; Soc. Biol. Chem; Ass. Tuber. (chairman, path. sect, 19); Chem. Soc; Ass. Path. and Bact. Autolysis and necrosis; therapy and diagnosis of tuberculosis.
- Corse, W(illiam) M(alcolm)**, Monel Metal Products Corporation, Bayonne, N. J. *Metallurgy*. Malden, Mass, May 25, 78. B.S, Mass. Inst. Tech, 99. Asst. supt. Detroit Lubricator Co, 02-09; works manager, Lumen Bearing Co, 09-14; *gen. manager*, Titanium Bronze Co, 14-19; *Monel Metal Products Co*, 19- Min. and Metal. Eng. (director, 20); Chem. Soc; Electrochem. Soc; Soc. Test. Mat; Automotive Eng; Chem. Eng; British Inst. Metals. Non-ferrous alloys.
- Corson, Dr. E(ugene) R(ollin)**, 10 James St, W, Savannah, Ga. *Medicine, Natural science*. Washington, D. C, July 20, 55. B.S, Cornell, 75; M.D, Hahnemann Med. Col, Phila, 77, and Southern Med. Col, Atlanta, Ga, 95. *On visiting staff, Savannah Hosp*, 97- Lecturer anat, training sch. for nurses. Am. Med. Ass. X-rays; anatomy; surgery; surgical pathology; the peritoneum and the lymphatics and their relations to carcinoma; oxygen gas in the peritoneal cavity and its influences upon carcinoma and tuberculosis in man and cattle.
- Corson, Dr. H(arry) P(each)**, 11 Ruth St, Lowell, Mass. *Chemistry, Bacteriology*. Concord, N. H, Sept. 30, 87. B.S, N. H. Col, 10; Ph.D, Illinois, 15. Asst. chem, Illinois, 10-14, instr, 15; sanit. chemist, U. S. Pub. Health Service, 15-17; research chemist, Celluloid Co, 17-18; *chief chemist, Avery Chem. Co*, 18- Chemist and bacteriologist, Ill. State Water Surv, 15. Chem. Soc. (sec'y, div. water, sewage and sanit, 14-17); Soc. Bact; Water Works Ass. Sanitation; chemistry and bacteriology of water and sewage; fermentology.
- Corsonwhite, Dr. E(llen) P(awling)**, 1920 Ritterhouse St, Philadelphia, Pa. *Pathology*. Norristown, Pa, 74. A.B, Wellesley, 97; M.D, Woman's Med. Col. of Pa, 02. Assoc. director, lab, Am. Oncol. Hosp, 13-18; *bacteriologist and pathologist, Orthop. Hosp. and Infirmary for Nervous Diseases*, 14- Asst. pathologist, Phila. Zool. Soc. Ass. Path. and Bact. Experimental cancer research; neurology; psychiatry.
- Cort, Dr. W(illiam) W(alter)**, Johns Hopkins University School of Hygiene and Public Health, Baltimore, Md. *Helminthology*. Leon, Iowa, April 28, 87. A.B, Colo. Col, 09; A.M, Illinois, 11, Ph.D, 14. Instr. biol, Colo. Col, 12-13; prof, Macalester, 14-16; asst. prof. zool, California, 16-19; *assoc. prof. helminth. sch. hygiene and pub. health, Hopkins*, 19- Consulting helminthologist, Calif. State Board of Health, 18-19. A.A; Soc. Zool; Micros. Soc; West. Soc. Nat. Larval stages of digenetic trematodes; excretory system of trematodes; frog parasites; hookworm in mines of California; human blood flukes; oriental parasitic diseases in California.
- Cory, Prof. C(larence) L(inus)**, Nevada Bank Building, San Francisco, Calif. *Engineering*. La Fayette, Ind, Sept. 4, 72. B.M.E, Purdue, 89; M.M.E, Cornell, 91. Asst. elec. eng, Purdue, 89-90; prof, Highland Park, 91-92; asst. prof, California, 92-98, *assoc. prof.*, 98-01, *prof. elec. eng. and dean, col. mech.*, 01- Consulting elec. and mech. engineer, San Francisco. Elec. Eng; British Inst. Elec. Eng. Long distance transmission of power with high voltage currents.
- Cory, Prof. E(mnest) N(eal)**, College Park, Md. *Entomology*. Alden, N. Y, Aug. 13, 86. B.S, Md. Col, 09, M.S, 13. Asst. entom, Md. Col, 09-11, instr, 11-12, asst. prof, 12-13, *assoc. prof.*, entom, 13-14, *prof.*, 14-, asst. entomologist, *Exp. Sta.*, 09-14, *entomologist*, 14- Ass. Econ. Entom; Wash. Entom. Soc. Economic entomology.
- Cory, H(arry) T(homas)**, Nevada Bank Building, San Francisco, Calif. *Civil engineering*. La Fayette, Ind, May 27, 70. B.M.E, Purdue, 87, B.C.E, 89; M.C.E, Cornell, 93, M.M.E, 96. Prof. civil eng, Missouri, 93-98, civil and sanit. eng, 98-00; prof. civil eng. and dean, eng. dept, Cincinnati, 00-03; engineer, various railroads and irrigation development projects, 03-09; *consulting engineer*, 09- Director gen, foreign relief, Am. Red Cross, 17-18; engineer, U. S. Reclamation Service, 18-20. Civil Eng; Mech. Eng. Land surveying; the Imperial Valley and the Salton Sea.
- Coryell, Dr. H(orace) N(oble)**, Columbia University, New York, N. Y. *Paleontology*. Brewersville, Ind, Feb. 13, 88. A.B, Indiana, 14, A.M, 16; Ph.D, Chicago, 19. Curator paleont, *Columbia*, 19-20, *instr. geol. and paleont.*, 20- Paleont. Soc; Ind. Acad. Bryozoa of Tennessee and New York; the outcrop at Spades, Ind.
- Coste, Eugène**, 2208 Amherst St, Calgary, Alta, Can. *Mining engineering, Geology*. Amherstburg, Ont, July 8, 59. B.S, Acad. de Paris, 76; diploma, Ecole Nat. Supérieure des Mines de Paris, 83. Petroleum geologist and mining engineer, Can. Geol. Surv, 83-89; *consulting petroleum engineer and geologist*, 89-; *pres. and managing director, The Can. West. Nat. Gas Light, Heat and Power Co, Ltd*, 12- A.A; Geol. Soc; Min. Eng; Inst. Petrol. Tech; Can. Min. Inst. (pres, 03. 04); British Inst. Min. and Metal; N. of England Inst. Min. and Mech. Eng. Natural gas and petroleum.
- Cottingham, Kenneth (Charles)**, 1870 N. Fourth St, Columbus, Ohio. *Geology*. Columbus, April 29, 92. A.B, Ohio State, 13; A.M, 14. Instr.

- geol. Ohio State, 14-17; *petrol. engineer, with Hager-Robitaille, 19-* With Ohio Geol. Surv. A.A.; Mech. Eng; Ohio Acad.
- Cotton, E(dwin) C(harles)**, Ohio Department of Agriculture, Columbus, Ohio. *Entomology*. Amherst, Ohio, Dec. 19, 76. B.S., Ohio State, 05. Asst. inspector, div. nurseries and orchards, Ohio State Dept. Agr., 01-05; asst. entomologist, La. Crop Pest Commission, 06; Tenn. Exp. Sta., 06-14; fruit grower, 14-17; *chief, bur. hort, Ohio Dept. Agr., 17-* A.A.; Ass. Econ. Entom.; Ohio Acad. Life history of the North American fever tick and of the peach tree borer.
- Cotton, Dr. Frederick J(ay)**, 520 Commonwealth Ave, Boston, Mass. *Surgery*. Prescott, Wis, Sept. 24, 69. A.B., Harvard, 90, A.M., M.D., 94. Asst. prof. clin. surg., Tufts, 06-10; *assoc. surg., Harvard Med. Sch.* Visiting surgeon, Boston City Hosp; consultant surg., U. S. Pub. Health Service. Col. Surg; Surg. Ass. Bone and joint surgery.
- Cotton, Dr. Henry Andrews**, New Jersey State Hospital, Trenton, N. J. *Neurology*. Norfolk, Va., May 18, 76. M.D., Maryland, 99; hon. A.M., St. John's (Md); Royal Psychiat. Clinic, Munich, 05-06. Asst. physician, State Hosp, Worcester, Mass., 00-03; State Hosp, Danvers, Mass., 03-07; *med. director, N. J. State Hosp, 07-* A.A.; Medico-Psychol. Ass; Neur. Ass; Psychopath. Ass; Am. Med. Ass; Interstate Psychiat. Soc. (pres, 15-); N. Y. Neur. Soc; N. Y. Psychiat. Soc. Psychiatry; paresis and tabes dorsalis; fatty degeneration of cerebral cortex; cardio-genetic psychoses; mental capacity in dementia praecox and alcoholic insanity; cytology of cerebro-spinal fluid; heredity in mental diseases.
- Cotton, Prof. W(illiam) J(acobs)**, National Aniline and Chemical Co, Buffalo, N. Y. *Chemistry*. Bailundu, W. Cent. Africa, April 21, 90. A.B., Ripon, 10; M.S., Wisconsin, 11. Asst. chem., Wisconsin, 11-13; chemist, Lakeside Press, 13-14; instr. chem., Butler, 14-16; chem. examiner, U. S. Civil Service Commission, 16-18; *chemist, color lab, bur. chem, U. S. Dept. Agr., 19; Nat. Aniline and Chem. Co., 19-* Consulting chemist, North. Water System Co, Madison, Wis, 10-15. A.A.; Chem. Soc; Physical Soc; Ind. Acad. The determination of silica; equilibrium in the system silver-thiocyanate and pyridin; catalytic sulphonation of the aromatic hydrocarbons.
- Cottrell, Prof. F(rederick) G(ardner)**, Bureau of Mines, Washington, D. C. *Chemistry*. Oakland, Calif, Jan. 10, 77. B.S., California, 96, Le Conte fellow, 96-97; Berlin, 00; Ph.D., Leipzig, 02. Teacher chem, high sch., Oakland, Calif, 97-00; instr. physical chem, California, 02-06, asst. prof., 06-11; chief physical chemist, *U. S. Bur. Mines*, 11-14, chief chemist, 14-16, chief metallurgist, 16-19, asst. director, 19-20, *director, 20-* Chairman, div. chem. and chem. tech. Nat. Research Council, 20- A.A.; Min. and Metal. Soc; Chem. Soc; Min. Eng; Electrochem. Soc. Physical chemistry.
- Coulter, Dr. John G(aylord)**, Parmain, France. *Biology*. Hanover, Ind, July 20, 76. Wabash, 89-90; Indiana, 91-92; A.B., Lake Forest, 95; fellow, Chicago, 97-99, Ph.D., 99. Instr. bot. and geol., Syracuse, 99-00; prof. biol., Emory, 01; botanist, Educ. Dept., P. I., 02-05; ed., 'The Philippine Teacher' and 'The Daily Manila Times,' 04-06; prof. biol., Ill. State Nor., 07-11; ed. and publisher, 'School Science Series,' 12-16. Chief officer, garden service, A. E. F., 17-19; commandant nat. science, agr. detachment, A. E. F., 19. A.A.; Cent. Ass. Sci. and Math. Teachers. Secondary education.
- Coulter, Prof. John M(erle)**, University of Chicago, Chicago, Ill. *Botany*. Ningpo, China, Nov. 20, 51. A.B., Hanover, 70, A.M., 73; Ph.D., Indiana, 82, LL.D., 20. Botanist, Hayden Surv., 72-74; prof. nat. science, Hanover, 74-79; biol., Wabash, 79-91; pres. and prof. bot., Indiana, 91-93; pres., Lake Forest, 93-96; *prof. bot., Chicago, 96-* Ed., 'Bot. Gazette,' 75- Nat. Acad; A.A. (sec'y, F, 90, v. pres, 91, gen. sec'y, 01, pres, 19); Soc. Nat; Bot. Soc. (pres, 97-15); Philos. Soc; Ass. Prof. (pres, 18); Am. Acad; Bot. Cent. States; Wash. Acad; Ind. Acad. (pres, 86); Ill. Acad. (pres, 10); Chicago Acad. (pres, 16-); for. mem. Linnean Soc; cor. fel. Edinburgh Bot. Soc. Taxonomic work with seed plants; special morphology of gymnosperms and angiosperms.
- Coulter, Dr. Merle Crowe**, University of Chicago, Chicago, Ill. *Botany*. Lake Forest, Ill, June 13, 94. B.S., Chicago, 14, Ph.D., 19. Asst. biol., Williams, 14-15; *bot., Chicago, 17, assoc., 17-18, instr., 18-* Plant genetics; inheritance in corn and in thallophytes; sex determination.
- Coulter, Prof. Stanley**, Purdue University, La Fayette, Ind. *Biology, Botany*. Ningpo, China, June 2, 55. A.M., Hanover, 77, Ph.D., 89, LL.D., 08. *Prof. biol. and director, biol. lab., Purdue, 87-*, dean of men. Ind. State Board Forestry; state Conservation Commission, Ind. A.A.; Soc. Nat; Bot. Soc; Nature Study Soc; Bot. Cent. States; Ind. Acad. Flora of Indiana; forest trees of Indiana; nature study.
- Coulter, Dr. Victor A(ldine)**, University, Miss. *Chemistry*. Newton, N. C., July 15, 92. B.S., North Carolina, 13, M.S., 14, Ph.D., 16. Instr. chem., North Carolina, 16-17; lieut. and capt., C.W.S., 17-19; *asst. prof. chem., Mississippi, 20-* Research chemist, Armstrong Cork Co, summer, 17. Chem. Soc. Organic chemistry; insulating materials.
- Councilman, Dr. W(illiam) T(homas)**, 78 Bay State Road, Boston, Mass. *Pathology*. Baltimore Co, Md, Jan. 1, 54. St. John's (Md), 68-71; M.D., Maryland, 78, LL.D., 07; Vienna, Leipzig and Hopkins, 80-86; hon. A.M., Harvard, 98; Hopkins, 02. Assoc. and assoc. prof. *path.*, Hopkins, 86-91; *prof., Harvard, 91-* Nat. Acad; A.A.; Ass. Path. and Bact; emer. mem. Am. Physicians; Soc. Exp. Biol; Am. Acad. Anatomy; pathology; diphtheria; dysentery; cerebrospinal meningitis; small-pox; the changes of old age; pathological anatomy.
- Courtis, S(tuart) A(ppleton)**, 246 Eliot St., Detroit, Mich. *Education*. Wyandotte, Mich, May 15, 74. Mass. Inst. Tech., 97, 99; Chicago, summer, 08; Teachers Col., Columbia, summer, 10, B.S., 19. Head, dept. science and math, Liggett Sch., 98-14; supervisor educ. research, pub. schools, Detroit, 14-19; *director instruction, teacher training and research and dean, Detroit*

- Teachers Col.*, 20-; *assoc. prof. educ. measurements*, Michigan, 19-; *Hanus committee of sch. inquiry*, N. Y. City, 12; *consulting director*, dept. measurement, efficiency and standardization, Oklahoma, 13-; *measurement sch. products*, Gary Sch. Surv., Gen. Educ. Board, 16. A.A. (see'y, L, 12-17, pres, 17). *Standard tests; standards for school products.*
- Courtis, W(illiam) M(unroe)**, 7 Illinois St., Detroit, Mich. *Metallurgy, Botany*. Boston, Mass., Jan. 7, 42. A.B., Harvard, 64, A.M., 67; diploma, Royal Mining Acad., Freiberg, 68. Asst. geologist, chemist, assayer, cashier and asst. supt., 68-72; gen. manager, silver, lead, gold and copper smelting works and mines, 72-89; *consulting metallurgist*, 89- Asst., Geol. Surv., Santo Domingo, 69; *lecturer metal*, Harvard, 75; *director*, several companies; *treas.*, U. S. Potash Co. A.A.; Mich. Acad.; Boston Nat. Hist. Soc.; Detroit Archeol. Chem. and Eng. Societies. *Metallurgy; amarillium; ferns; Asclepias courtisi; Amareuxia and Lillium; graphite; sulphur; gold ores in Georgia.*
- Coutant, Mrs. Mary Wotherspoon**, Barnard College, Columbia University, New York, N. Y. *Botany*. A.B., Columbia, 13, A.M., 15. Asst. bot. Barnard, Columbia, 13-16, *lecturer*, 16-18; *technician*, Philippine Health Service, 18-19; *lecturer bot.*, Barnard, Columbia, 19-20, *instr.*, 20- A.A.; Bot. Soc.; Torrey Bot. Club. *Physiological botany and bacteriology; effect of stimulants on bacterial growth.*
- Coville, Frederick V(ernon)**, 1836 California St., Washington, D. C. **Botany*. Preston, N. Y., March 23, 67. A.B., Cornell, 87. *Instr. bot.*, Cornell, 87-88; *asst. botanist*, U. S. Dept. Agr., 88-93, *botanist*, 93- *Curator bot.*, U. S. Nat. Museum, 93-; *bot. asst.*, Ark. Geol. Surv., 87; *botanist*, Death Valley exped., 90-91; *adviser bot.*, Carnegie Institution, 02-05. A.A. (v. pres, 03); Bot. Soc. (pres, 03-04); *Ass. Geog; Ecol. Soc; Wash. Acad.* (pres, 12); *Wash. Biol. Soc.* (pres, 99-00). *Economic, systematic and geographic botany; plants of the aborigines; control of grazing on the public lands; effect of soil acidity on plant growth and distribution; domestication and improvement of the blueberry; influence of cold in stimulating growth of plants.*
- Coville, Dr. Luzerne**, 514 E. Buffalo St., Ithaca, N. Y. *Medicine*. Preston, N. Y., Aug. 16, 65. B.S., Cornell, 86; M.D., Columbia, 89. *Lecturer anat.*, Cornell, 98-00, *surg.*, 00-03. *Rochester Acad. Med; Ithaca Tuber. Ass.* (pres). *Typhoid epidemics in Ithaca, 1898-1903.*
- Cowan, Mrs. Edwina A(bbott)**, Wichita, Kans. *Psychology*. Chicago, Ill., Jan. 6, 87. A.B., Illinois, 08, A.M., 09; Ph.D., Chicago, 13. Asst. psychol., Vassar, 09-12; *instr.*, Tulane, 13. A.A.; *Psychol. Ass; S. Soc. Philos. and Psychol. Learning process.*
- Cowan, P(hilip) Russell**, Central Experimental Farm, Ottawa, Can. *Plant pathology*. Gloucester, England, April 26, 92. B.S.A., McGill. Asst. investigator cereal diseases, Can., 15-17; *cerealist*, Dominion Exp. Farms, 17- *Phytopath. Soc.* Cereal diseases; cereal breeding.
- Cowdry, Prof. E(dmund) V(incent)**, Union Medical College, Peking, China. *Anatomy*. Mac-
- Leod, Alta, July 18, 88. B.A., Toronto, 09; fellow, Chicago, 10-11, Ph.D., 12. Asst. anat., Chicago, 09-12, *assoc.*, 12-13; *Hopkins*, 13-16; *prof.*, Peking Union Med. Col., 17- *Ass. Anat. Cytology; endocrinology.*
- Cowgill, H(orace) B(ranson)**, Fort Smith, Ark. *Agronomy*. Sterling, Kans., Oct. 14, 80. A.B., Washburn, 05; M.S.A., Cornell, 10. *Plant breeder*, Cuban-Am. Sugar Co., 10-11; *plant breeder and agronomist*, P. R. Sugar Planters Exp. Sta. and P. R. Insular Exp. Sta., 11-18; *office sugar plant investigations, bur. plant indust.*, U. S. Dept. Agr., 18- A.A.; *Soc. Agron; Phytopath. Soc.* Sugar cane.
- Cowie, Dr. D(avid) Murray**, University of Michigan, Ann Arbor, Mich. *Medicine*. Moncton, N. B., Nov. 19, 72. Battle Creek, 89-92; M.D., Michigan, 96; Heidelberg, 08. *First asst. internal med.*, Michigan, 96-06, *instr. pediat.*, 06-07, *clin. prof.*, 07-09, *pediat. and internal med.*, 09-19, *prof.*, 19-20, *pediat. and infectious diseases*, 20- *Assoc. ed.*, 'Am. Jour. Diseases of Children,' 12- *Ass. Path. and Bact; Am. Med. Ass; Soc. Clin. Invest; Pediat. Soc.* The acid-resisting group of bacteria; hyper-chlorhydria; effect of oil in gastric functions; occult blood tests; gastric juice in the insane; structure of opsonins; chylous ascities in the newborn; hirudin immunity; method of obtaining human blood plasma without chemical action; metabolism; infectious diseases.
- Cowles, Prof. Henry C(handler)**, University of Chicago, Chicago, Ill. **Botany*. Kensington, Conn., Feb. 27, 69. A.B., Oberlin, 93; fellow, Chicago, 95-97, Ph.D., 98. *Instr. nat. science*, Gates, 94-95; *asst. bot.*, Chicago, 97-01, *assoc.*, 01-02, *instr.*, 02-07, *asst. prof.*, 07-11, *assoc. prof. bot. and later prof. plant ecol.*, 11- *Field asst.*, U. S. Geol. Surv., 95; *assoc. ed.*, 'Bot. Gazette,' 98-; 'Jour. of Geog,' 02- A.A. (see'y, G, 08-); *Soc. Nat; Bot. Soc; Ecol. Soc; Ass. Geog; Bot. Cent. States* (see'y, 07-); *Chicago Acad.* (v. pres, 12, 13); *Int. Ass. Bot.* *Ecological relations of dune vegetation; physiographic ecology; comparative ecology of dune vegetation.*
- Cowles, Dr. E(heinar) P(arker)**, Johns Hopkins University, Baltimore, Md. *Zoology*. Washington, Iowa, April 8, 72. A.B., Stanford, 99; Bruce fellow, Hopkins, 02-04, Ph.D., 04. Asst. biol., Hopkins, 04-07, *instr.*, 07-10, *assoc.*, 10-11; *assoc. prof. zool.*, Univ. Philippines, 11-15; *prof.*, 15-19; *assoc. prof.*, Hopkins, 19- *Biologist in charge*, Gulf Biol. Sta., La., summer, 04; *exp. bacteriologist*, Griffith and Turner Co; *investigator in charge biol. and hydrographic surv.*, Chesapeake Bay, 20- A.A.; *Soc. Nat; Soc. Zool.* Life history of *Phoronis architecta*; *Ocyropoda arenaria*; rearing of *Polygordius*; light and contact with solid walls as factors in the behavior of ophiuroids; reactions of starfish to light; habits of tropical Crustacea; locomotion of the starfish; *Palaemons* of the Philippine Islands; hermit crabs; parthenogenetic ostracods.
- Cowley, Dr. E(lizabeth) B(uchanan)**, Vassar College, Poughkeepsie, N. Y. *Mathematics, Astronomy*. Allegheny, Pa., May 22, 74. A.B., Vassar, 01, A.M., 02; Ph.D., Columbia, 08. *Teacher, pub. schools*, 93-97; *instr. math.*, Vassar, 02-13, *asst.*

- prof, 13-16, *assoc. prof*, 16- Assoc. ed, 'Rev. Semest. Pub. Math.' A.A; Math. Soc; Math. Ass. (mem. exec. council). Algebraic curves; definite orbit of comet.
- Cox, Dr. Alvin J(oseph)**, 118 Emerson St, Palo Alto, Calif. *Chemistry*. Lawrence, Kans, June 14, 75. A.B, Stanford, 01, A.M, 02; Leipzig, summer, 02; Breslau, 02-04, Ph.D, 04. Lab. asst, Stanford, 99-01, instr. anal. chem, 01-02, chem, 04-06; chief chemist, sect. weights, measures and mineral analysis, Bur. Science, P. I, 06-10, div. chemistry, 10-12, asst. director, 12, director, 12-19, *consulting chem. engineer*, 19- Chem. Soc. Acid, neutral and basic chromates of the difficultly soluble metals; the coals, clays and raw cement materials of the Philippines; effect of litsea chinensis on the hardening of lime mortar; industrial alcohol.
- Cox, Dr. G(uy) H(enry)**, Rolla, Mo. *Geology*. Lehigh, Iowa, May 4, 81. B.S, Northwestern, 05; A.M, Wisconsin, 08, Ph.D, 11; E.M, Mo. Sch. Mines, 14. Instr. geol. California, 08; asst. prof. miner. and petrog, Mo. Sch. Mines, 09-11, *prof. geol. and miner*, 11-; *consulting engineer*, Cox and Radcliffe, 16- Geol. Soc; Min. and Metal. Eng; Ass. Petrol. Geol; Eng. Educ. Lead and zinc ores; cherts; sphalerite; influence of an element upon its compounds; ignition of oil and gas wells by lightning.
- Cox, Dr. Henry J(oseph)**, U. S. Weather Bureau, Chicago, Ill. *Meteorology*. Newton, Mass, April 5, 63. A.B, Harvard, 84; hon. A.M, Norwich, 87, Sc.D, 14. *With U. S. Weather Bur*, 84-, *in charge, north-cent. forecast. dist. and the corn and wheat region service*. District ed, 'Monthly Weather Rev,' 09-12. A.A; Ass. Geog; Ill. Acad; Chicago Acad; Chicago Geog. Soc. (pres, 05-07). Agricultural meteorology; temperature and frost conditions in cranberry marshes and orchard regions.
- Cox, Dr. J(ohn) W(esley)**, U. S. Public Health Service, Washington, D. C. *Pathology*. Horseheads, N. Y, Sept. 17, 82. M.D, Syracuse, 12. Asst. physiol, Syracuse, 10-11, path, 11-12, instr, 12-13; asst. prof. path. and in charge of dept, North Dakota, 14-18; *with U. S. Pub. Health Service*, 18- Res. pathologist and bacteriologist, Crouse Irving Hosp, Syracuse, 13; pathologist, N. Dak. Pub. Health Lab, 14-18. Pub. Health Ass; Chem. Soc. Bacteriology; blastomycetes; hyphomycetes.
- Cox, W(illiam) T(homas)**, State Forester, Minneapolis, Minn. *Forestry*. Glenwood, Minn, Jan. 25, 78. B.S.F, Minnesota, 06. Various positions, U. S. Forest Service; *state forester*, Minn, 11- Lecturer, Minnesota. A.A; Forestry Ass; Soc. Foresters; Minn. Forestry Ass; Wash. Biol. Soc; Can. Forestry Ass. Relation of animal life to the forest; reforestation on national forests.
- Coye, John S(tarr)**, General Chemical Co, Laurel Hill, L. I, N. Y. *Chemistry*. Carson, Iowa, Aug. 80. B.S, Iowa State, 02; B.S, Mass. Inst. Tech, 08. Anal. and consulting chemist, 08-13; chief chemist, Iowa Eng. Exp. Sta, 13-18; *asst. chemist, Gen. Chem. Co*, 18- Chem. Soc; N. Y. Chemists Club. Inorganic and physical chemistry; hydrogen-ion concentration.
- Crabtree, James**, Georgetown, Demerara, S. Am. *Chemistry*. Lancashire, England, April 3, 89. B.Sc, Manchester, 10, M.S, 13. Research chemist and bacteriologist sewage disposal, Manchester (England) Corp, 11-15; res. chemist, Woburn Exp. Farm, Royal Agr. Soc, 15-20; *supt, British Guiana Sugar Planters' Exp. Stations*, 20- Inst. Chem. Gt. Britain and Ireland. Agriculture; bacteriology; sugar-cane breeding and culture.
- Crabtree, J(ohn) I(ckeringill)**, Eastman Kodak Co, Rochester, N. Y. *Chemistry*. England, March 27, 91. B.Sc, M.Sc, Manchester. *Research chemist, Eastman Kodak Co*, 12- Chem. Soc; Inst. Chem. Gt. Britain and Ireland. Photographic chemistry; motion picture photography.
- Cragin, Prof. F(rancis) W(hittmore)**, 912 E. San Miguel St, Colorado Springs, Colo. *Geology, Zoology, Botany*. Greenfield, N. H, Sept. 4, 58. Brooklyn Polytech, 75-79; B.S, Harvard, 82; Ph.D, Hopkins, 99. Prof. nat. hist, Washburn, 82-91; geol, Colo. Col, 91-03. Originator and in charge, Kans. Biol. Surv, 83-91; geologist, Tex. Geol. Surv, 92-93; lecturer geol, summer sch, Colorado Springs, 94; co-editor, 'Am. Geologist,' 90-96. A.A; Kans. Acad. Systematic zoology and botany; lesser known parts of fauna and flora of Kansas; paleontology and stratigraphic geology; marine invertebrate paleontology of Texas Jurassic; history and archeology of the far west.
- Craig, Dr. Alex(ander) B(ighter)**, 535 N. Dearborn St, Chicago, Ill. *Medicine*. Columbia, Pa, July 31, 68. A.B, Franklin and Marshall, 90, A.M, 93, Sc.D, 20; M.D, Pennsylvania, 93. Intern, Polyclinic Hosp, Phila, 93-94; *practising physician*, 94- A.A; Am. Med. Ass. (sec'y, 11-); Am. Acad. Med. (asst. sec'y, 01, 04, 07-11, sec'y, 03, pres, 12); Acad. Ophthalm. and Oto-Laryngol; Phila. Col. Physicians.
- Craig, Dr. Cha(rles) F(ranklin)**, U.S.A, Care Surgeon General's Office, Washington, D. C. **Bacteriology*. Danbury, Conn, July 4, 72. M.D, Yale, 94, hon. A.M, 14. Col, M. C, and pathologist and bacteriologist, various army hospitals, 98-06; asst. curator, Army Med. Museum, 09-13; asst. prof. bacter. and clin. diagnosis, Army Med. Sch, 09-13; assoc. prof. bacter, George Washington, 10-11; commanding officer, dept. lab, cent. dept, U.S.A, Ft. Leavenworth, Kans, 11-16; dept. lab, No. 2, El Paso, Tex, 16-17, army lab, Yale, 17-18; curator, Army Med. Museum, 18-20; *prof. bacter, parasitol. and prev. med. and director, laboratories, Army Med. Sch*, 20- Mem. U.S.A. board for study of tropical diseases, Manila, 06-07. Am. Med. Ass; Soc. Trop. Med. (pres, 13); Ass. Mil. Surg; London Soc. Trop. Med. and Hygiene (local sec'y). Protozoology; serology; serology of syphilis; etiology of tropical diseases.
- Craig, Dr. C(lyde) F(irman)**, 311 Elmwood Ave, Ithaca, N. Y. *Mathematics*. Des Moines, Iowa, Sept. 4, 81. A.B, Michigan, 04; Ph.D, Cornell, 08. Instr. and later *asst. prof. math*, Cornell, 07- Math. Soc.
- Craig, Dr. Joseph D(avis)**, 12 Ten Broeck St, Albany, N. Y. *Anatomy*. Albany, Oct. 5, 56. A.B, Union, 80, A.M, 83; M.D, Albany Med.

- Col. 84. Demonstrator anat, *Albany Med. Col.*, 86-02, asst, 87-90, lecturer, 90-92, adj. prof, 92-02, *prof.*, 02- Curator, museum, Albany Med. Col, 88-; visiting physician, St. Vincent's Orphan Asylum, 90-; Albany Hosp, 94-; health officer, Albany, 00- Ass. Anat.
- Craig, Prof. Robert Alexander**, West Lafayette, Ind. *Veterinary science*. Philadelphia, Pa, 72. D.V.M. Iowa State, 97. Instr. vet, Iowa State, 98; *prof. vet. science*, *Purdue*, 99-; asst. state veterinarian, Ind, 01-04, *veterinarian*, 05- Vet. Med. Ass; U. S. Live Stock Sanit. Ass; Ass. Prof. Animal diseases; swine diseases.
- Craig, Prof. Wallace**, Orono, Maine. *Psychology*. Toronto, Can, July 20, 76. B.S., Illinois, 98, M.S., 01; Ph.D., Chicago, 08. Asst, Ill. Biol. Sta, 98-99; asst. zool, Chicago, 02-04; *prof. philos*, Maine, 08- A.A.; Psychol. Ass; Sociol. Soc; assoc. Ornith. Union. Behavior, emotions, instincts and songs of birds; animal societies.
- Cram, Prof. Marshall P(erley)**, Brunswick, Maine. *Chemistry*. Brunswick, Jan. 1, 82. A.B., Bowdoin, 04, A.M., 05; Ph.D., Hopkins, 08. Instr. chem, *Bowdoin*, 08-09, asst. prof, 09-11, *prof*, 11- Mem. Maine State Board of Health, 10-17. A.A.; Chem. Soc; Electrochem. Soc; London Chem. Soc. Petroleum; utilization of waste liquors from sulphite paper mills.
- Cramblet, Dr. W(ilbur) H(averfield)**, Bethany College, Bethany, W. Va. *Mathematics*. Tippicanoe, Ohio, July 10, 92. A.B., A.M., Bethany (W. Va.), 10; A.M., Yale, 11, Ph.D., 13. Instr. math, Rochester, 13-15; Phillips, 15-17; *Bethany (W. Va.)*. Prof. math, Bethany (W. Va.), summers, 10-14. Math. Soc; Ass. Teachers Math. Middle States and Md. Discontinuous functions over the general field; intermediate functions and their integral sets.
- Crampton, Dr. C(harles) Ward (Grinnell)**, 500 Park Ave, New York, N. Y. *Physiology, Education*. New York, May 26, 77. A.B., Col. City of N. Y., 96; M.D., Columbia, 00. Asst, Woods Hole, 98; path. dept, Columbia, 00-03; chairman, dept. physical training, High Sch. of Commerce, N. Y., 00-05; asst. director physical training, pub. schools, N. Y. City, 05-08, director, 08-19; dean, sch. physical educ, and director, educ. activities and research on blood pressure, Battle Creek Sanitarium, 19-20; *consultant physical educ*, 20- Chairman, committee on physical standards for child labor, children's bur, U. S. Dept. Labor; hon. mem. nat. council, Boy Scouts Am. A.A.; Physical Educ. Ass. (v. pres); Soc. Exp. Biol; Nat. Pub. Sch. Physical Training Soc. (pres); Sch. Hygiene Ass; N. Y. Physical Educ. Soc. (pres, 05). Splanchnic vasomotor control; pubescence; physiological, psychological and anatomical age with special reference to weight; height, strength and scholarship; school hygiene; physical training, athletics and folk dancing; the gravity resisting functions of the circulation.
- Crampton, Prof. G(uy) C(hester)**, Massachusetts Agricultural College, Amherst, Mass. *Entomology*. Mobile, Ala, Sept. 21, 81. A.B., Princeton, 04; A.M., Cornell, 05; Freiburg and Munich; Ph.D., Berlin, 08; M.S., Harvard, 20. Asst. biol, Princeton, 08-10; *prof. zool*, Clemson, 10-11; assoc. *prof. entom*, *Mass. Col*, 11-15, *prof*, 15- A.A.; Soc. Nat; Soc. Zool; Ass. Econ. Entom; Entom. Soc; Wash. Entom. Soc; London Entom. Soc. Insect morphology; insect behavior; phylogeny of arthropods; evolution of various structures in insects.
- Crampton, Prof. Henry E(dward)**, Barnard College, Columbia University, also, American Museum of Natural History, New York, N. Y. **Zoology, Experimental biology*. New York, Jan. 5, 75. Col. City of N. Y., 88-92; A.B., Columbia, 93, fellow, 96-97, Ph.D., 99. Asst. biol, Columbia, 93-95; instr. *zool*, Mass. Inst. Tech, 95-96; lecturer, *Columbia*, 97-99, tutor, 99-00, instr, *Barnard*, 00-01, adj. prof, 01-03, *prof*, 04-; *curator invert. zool*, *Am. Museum Nat. Hist*, 09- Instr. embryol, Woods Hole, 95-03; in charge embryol, biol. lab, Cold Spring Harbor, 04-06; research assoc, Carnegie Institution, 04-; expeditions to Polynesia, 06-09, 19; West Indies, 13, 14; interior of S. Am, 11. Int. Zool. Cong, Graz, 10. A.A.; Soc. Nat; Soc. Zool; Soc. Exp. Biol; fel. Ethnol. Soc; Ecol. Soc; Anthropol. Soc; fel. N. Y. Acad. (rec. sec'y, 06, v. pres, 06, cor. sec'y, 08). Developmental mechanics; fertilization of the egg; embryology of gastropods; variation, selection and inheritance in Lepidoptera (Saturniidae); general experimental evolution; variation, evolution and geographical distribution of Polynesian Mollusca.
- Crandall, Dr. Irving B(ardshar)**, 463 West St, New York, N. Y. *Physics*. Chattanooga, Tenn, May 27, 90. A.B., Wisconsin, 09; A.M., Princeton, 10, fellow, 12-13, Ph.D., 16. Prof. physics and chem, Chekiang Provincial Col, 11-12; *research physicist*, *West. Elec. Co.* 13- Physical Soc. Infra-red optical properties; telephonic transmission; acoustical apparatus; speech.
- Crandall, Lee S(aunders)**, Zoological Park, New York, N. Y. *Ornithology*. Sherburne, N. Y., Jan. 26, 87. Cornell, 07-08; Columbia, 08-09. Asst, *dept. birds*, N. Y. *Zool. Park*, 08-11, asst. curator, 11-19, *curator*, 19- Mem. collecting exped. to British Guiana, 09; Costa Rica, 14. Assoc. mem. Ornith. Union; Soc. Ichthyol. and Herp; N. Y. Zool. Soc. Ornithology of Costa Rica; birds in captivity; protection and propagation of birds.
- Crandall, Prof. W(esley) C(larence)**, La Jolla, Calif, *Biology*. Sigourney, Iowa, Aug. 5, 78. A.B., Stanford, 99. Teacher science, high sch, Ogden, Utah, 99-04; Kern Co. High Sch. Bakersfield, Calif, 04-05; physiol. and nature study, State Nor. Sch, San Diego, 05-13; *prof. biol*, *Scripps Inst, California*, 13- Business agent, Scripps Inst, California. Kelp.
- Crane, E(van) J**, Ohio State University, Columbus, Ohio. *Chemistry*. Columbus, Feb. 14, 89. A.B., Ohio State. Assoc. ed, '*Chem. Abstracts*,' 11-14, ed, 14- A.A.; Chem. Soc. Indexing of chemical compounds and subjects.
- Crane, Prof. H(arley) L(ucius)**, 757 N. Front St, Morgantown, W. Va. *Horticulture*. Terra Alta, W. Va, March 31, 91. B.S.A., West Virginia, 14, M.S.A., 18. Instr. hort, *West Virginia*, 14-17, asst. horticulturist, *Exp. Sta*, 17-20, *horticulturist*, 20-, asst. prof. hort, 19-20, *assoc. prof*, 20- A.A.; Soc. Hort. Sci; W. Va. Sci. Soc; W. Va. Hort. Soc. (see'y, 19-). Spray nozzles; culture of apples and peaches.

- Crane, Prof. Harry W(olven)**, Ohio State University, Columbus, Ohio. *Psychology, Sociology*. Big Rapids, Mich, Dec. 21, 85. A.B, Michigan, 09, A.M, 10, Ph.D, 13. Asst. sociol, Michigan, 09-13, psychol, 10, instr, 13; chief investigator, Mich. legislative commission on mental defectiveness, 13-15; instr. and later asst. prof. psychol, Ohio State, 15- A.A; Psychol. Ass. Association and reaction times; feeble-mindedness in Michigan; dependency and juvenile delinquency.
- Crane, Jasper E(lliott)**, E. I. duPont de Nemours and Co, Wilmington, Del. *Chemistry*. Newark, N. J, May 17, 81. A.B, Princeton, 01, M.S, 04; Mass. Inst. Tech, 04. Chemist, supt, manager and later director, Arlington Co, 04-17; manager, cellulose division, E. I. duPont de Nemours and Co, 17-20, *European manager*, 20- See'y, plastics sect, Int. Cong. Applied Chem, 12. Chem. Soc. (councilor, 12, v. chairman, Del. sect, 19); Soc. Chem. Indust; Chem. Eng; Soc. Automotive Eng. Chemical technology; nitration of cellulose; pyroxylin plastics and solutions; camphor.
- Crane, Dr. W(alter) R(ichard)**, U. S. Bureau of Mines, Washington, D. C. *Mining engineering*. Grafton, Mass, Feb. 5, 70. A.B, Kansas, 95, A.M, 96; Ph.D, Columbia, 01. Asst. prof. mining Kansas, 98-05; asst. prof. sch. mines, Columbia, 05-08; prof. and dean, sch. of mines and metal, Pa. State, 08-18; mining engineer, U. S. Bur. Mines, 18-20, chief engineer, War Minerals Relief Commission, 20- Min. Eng. Ore concentrations; mining methods.
- Crane, W(ill) E(dwinn)**, 208 13th St, N. E, Washington, D. C. *Engineering, Geology*. Fond du Lac, Wis, May 14, 57. C.E, Iowa, 82, A.M, 85. Asst. and later assoc. prof. civil eng, Iowa, 82-86; civil engineer, 86-13; collector geol, paleont. and conchol. specimens, 81- Chief inspector materials, Pa. and N. Y. tunnels; Panama Canal; Hell Gate Bridge. Civil Eng; Paleont. Soc. Paleontology; conchology.
- Crary, Dr. Geo(rge) W(aldo)**, 770 Park Ave, New York, N. Y. *Dermatology*. Brooklyn, N. Y, Jan. 3, 64. M.D, Columbia, 85. House surgeon, Bellevue Hosp, 87; asst. attending surgeon, out-patient dept, Roosevelt Hosp, 88-01, asst. to attending surgeon, 96-01; asst. consulting dermatologist, N. Y. Lying-in Hosp, 03-05; consulting dermatologist, Gen. Mem. Hosp, 08-; Lincoln Hosp, 06-; N. Y. Infant Asylum, 08-; Manhattan Eye, Ear and Throat Hosp, 09-; Nursery and Child's Hosp, 10- Instr. physiol. chem, Post-Grad. Med. Sch. and Hosp, 88-89; asst. attending surgeon, N. Y. Cancer Hosp, 95-00; asst. demonstrator anat, Columbia, 97-01; attending surgeon and clin. asst, med. col, Cornell, 01-06. Myxedema and thyroid extract; thyroid extract in psoriasis.
- Crathorne, Prof. Arthur R(oberth)**, 1113 S. Fourth St, Champaign, Ill. *Mathematics*. Scarborough, England, Oct. 26, 75. B.S, Illinois, 98; Chicago, summer, 02; Ph.D, Göttingen, 07. Tutor math, Maine, 98-00; instr, Wisconsin, 00-04; assoc, Illinois, 07-15, asst. prof, 14- A.A; Math. Soc; Math. Ass; Statist. Ass; Ill. Acad; Royal Statist. Soc. Limitations of applications of mathematics to statistics; correlation methods in educational statistics.
- Cratty, R(oberth) I(rvin)**, Ames, Iowa. *Botany*. Butler Co, Pa, Feb. 5, 53. Pub. schools. Teacher, pub. schools, 73-94; curator bot, Iowa State, 18. A.A; Bot. Soc; fel. Iowa Acad. The Iowa sedges; aquatic phenogams of Iowa; Iowa flora.
- Cravath, James R(aley)**, Monadnock Block, Chicago, Ill. *Electrical engineering*. Grinnell, Iowa, July 11, 72. B.S, Grinnell, 92. West. ed, 'Elec. World,' 00-10; consulting engineer, Fowle and Cravath, 10- Lecturer illum, Purdue; Iowa State; Armour. Elec. Eng; Illum. Eng. Soc; West. Soc. Eng; Chicago Elec. Club. Illumination.
- Crawford, Dr. Albert C(ornelius)**, Stanford University Medical School, San Francisco, Calif. *Pharmacology*. Baltimore, Md, June 10, 69. M.D, Col. Physicians and Surg, Baltimore, 93; Hopkins, 88-90, 91-94, 02. Asst. pharmacol, Hopkins, 94-00; research pharmacologist, Detroit, 03; bur. plant indust. and bur. animal indust, U. S. Dept. Agr, 04-10; prof. pharmacol, Stanford, 10- Soc. Pharmacol; Soc. Biol. Chem; Soc. Exp. Biol. Physiological standardization and apparatus; poisonous plants; cotton-seed-meal poisoning; active principles in mistletoe; chemistry of endocrine organs.
- Crawford, D(avid) F(rancis)**, 5243 Ellsworth Ave, Pittsburgh, Pa. *Mechanical engineering*. Pittsburgh, Dec. 4, 64. Pa. Mil. Acad, 82; D.Eng, Kentucky. Apprentice, Pa. Lines, 85-89, test dept, 89-92, asst. master mechanic, Fort Wayne shop, 92-95, asst. to supt. motive power, 95-99, supt, 99-03, gen. supt, 03-16, gen. manager, lines west of Pittsburgh, 17-18; v. pres. and gen. manager, Locomotive Stoker Co, and pres, Westinghouse Union Battery Co, 20- A.A; Mech. Eng; Elec. Eng; Ry. Master Mech. Ass. (v. pres, pres); Master Car Builders (pres); Soc. Test. Mat; Illum. Eng. Soc; R. R. Eng; West. Pa. Eng. Soc. Locomotive and car construction; railway operation; electrification of steam railroads; electric locomotive.
- Crawford, Prof. D(avid) L(ivingston)**, University of Hawaii, Honolulu, Hawaii. *Entomology*. Hermosillo, Mexico, 89. A.B, Pomona, 11, A.M, Stanford, 12. Asst. entom, Cornell, 12-13; hort. expert, Mex. Gulf Coast Citrus Ass, 13-15; asst. prof. bot, Pomona, 14-17; prof. entom, Univ. of Hawaii, 17- In charge, biol. expeditions to Mexico, 09, 10. A.A; Entom. Soc; Ass. Econ. Entom. Taxonomic and economic entomology; phytopathology; pomology; jumping plant lice.
- Crawford, H(enry) G(ordon MacGregor)**, Department of Agriculture, Ottawa, Can. *Entomology*. Mahone Bay, N. S. B.S.A, Toronto; M.S, Illinois, fellow, 17-18. Asst. to Provincial entomologist, 15; lecturer entom. and zool, Ont. Agr. Col, 18-20; entomologist, entom. branch, Can. Dept. Agr, 20- Field entomologist in charge, Dominion Entom. Lab, summers, 16, 17. A.A; Entom. Soc; Ass. Econ. Entom; Ecol. Soc; Phytopath. Soc; Ont. Entom. Soc; Ottawa Field Nat. Soc. Economic entomology; ecology; insect morphology; immature insects; orchard and field crop pests.
- Crawford, J(ames) C(hamberlain)**, 2063 Park Road, Washington, D. C. *Entomology*. West-point, Nebr, Aug. 24, 80. Nebraska. Special

- field agent, bur. entom, U. S. Dept. Agr, 04-08, *asst. curator, div. insects, U. S. N. Museum, 08- A.A.*; Entom. Soc; Ass. Econ. Entom; Wash. Entom. and Biol. Societies. Hymenoptera, especially parasitic forms.
- Crawford, Prof. J(ohn) Forsyth**, Beloit College, Beloit, Wis. *Psychology*. Damascus, Syria, Nov. 16, 71. Union, 91-93; A.B., Princeton, 95, A.M., 97; Berlin, 96; McCormick Theol. Sem, Chicago, 97-00, D.B. 10. Demonstrator exp. psychol, Princeton, 97; pastor, Beaver Dam, Wis, 00-04; *prof. psychol. and pedag*, Grand Island, 04-07; Tabor, 07-12; *philos. and psychol*, Beloit, 12- A.A.; Soc. Nat; Psychol. Ass. The temperature sense; theories of knowledge.
- Crawford, Prof. Morris B(arker)**, Middletown, Conn. **Physics*. Ossining, N. Y., Sept. 26, 52. A.B., Wesleyan, 74, A.M., 77. Tutor math, *Wesleyan*, 74-77, *instr. physics*, 80-81, *assoc. prof.*, 81-84, *prof.*, 84- A.A.; Physical Soc.
- Crawford, Prof. R(alph) D(ixon)**, 1050 Tenth St, Boulder, Colo. *Geology*. Peotone, Ill, March 7, 73. A.B., Colorado, 05, A.M., 07; Ph.D., Yale, 13. *Asst. geol. Colorado*, 04-07, *instr.*, 07-08, *asst. prof.*, 08-14, *prof. miner. and petrol.*, 14- Field *asst.*, U. S. Geol. Surv, 06; *asst. Colo. State Geol. Surv*, 07-09, *geologist*, 09-17. A.A.; Min. Eng; Chem. Soc; Geol. Soc. Areal and economic geology; petrology; mineralogy.
- Crawford, Prof. R(ussell) T(racy)**, 2740 Hillegrass Ave, Berkeley, Calif. *Astronomy*. Davisville, Calif, March 26, 76. B.S., California, 97, fellow, Lick Observatory, 98-01, Ph.D., 01. *Asst. astron*, California, 97-98; *computer*, Watson Trustees, 01-02; *examiner*, U. S. Civil Service Commission, 02-03; *instr. practical astron, California*, 03-06, *asst. prof.*, 06-10, *assoc. prof.*, 10-19, *prof.*, 19- Major, Air Service, 18-19. A.A.; Astron. Soc; Pacific Astron. Soc. (sec'y, 07-09); hon. mem. Soc. Astron. de Mex; Astron. Gesell. Constant of refraction; orbits of new satellites; comet orbits; perturbations of minor planets; celestial mechanics.
- Crawley, Prof. Edwin S(chofield)**, University of Pennsylvania, Philadelphia, Pa. *Mathematics*. Philadelphia, July 31, 62. B.S., Pennsylvania, 82, Ph.D., 92. *Instr. civil eng, Pennsylvania*, 82-84, *math*, 84-89, *asst. prof.*, 89-99, *Thomas A. Scott prof.*, 99- A.A.; (sec'y, A., 02); Math. Soc; Math. Ass; Ass. Teachers Math. Middle States and Md. (pres).
- Crawley, Howard**, Pennsylvania Bureau of Animal Industry, Philadelphia, Pa. *Zoology*. Philadelphia, June 4, 69. B.S., Pennsylvania, 97; M.S., Harvard, 01. *Asst. zool.*, Harvard, 00-01; *expert protozool.*, bur. animal indust, U. S. Dept. Agr, 08-19; *Pa. Bur. Animal Indust*, 19- A.A.; Phila. Acad; Wash. Biol. Soc. The Sporozoa; classification and physiology of Gregarina; the trypanosomes; parasitic worms.
- Crehore, Dr. Albert C(ushing)**, Nela Research Laboratory, Nela Park, Cleveland, Ohio. **Engineering*. Cleveland, Ohio, June 8, 68. A.B., Yale, 90; Hopkins, 91; Ph.D., Cornell, 93. *Instr. physics*, Cornell, 93-94; *asst. prof.*, Dartmouth, 94-98; *research physicist*, Nela Research Lab. A.A.; Physical Soc; Elec. Eng. Application of the sine wave to telegraphs as applied to submarine cables and land lines; the invention of a printing telegraph; alternating currents; the polarizing photo-chronograph; multiple telegraphs; the atom; matter and energy.
- Creighton, Prof. Elmer E. F(armer)**, Union University, Schenectady, N. Y. *Electrical engineering*. B.S., Stanford, 95, E.E., 97; Paris, 98-00. *Asst. engineer*, Pacific Postal Telegraph Co, 95; *instr. elec. eng.*, Stanford, 95-98, 00-01; *engineer*, exp. dept, Stanley Elec. Mfg. Co, 01-04; *in charge lightning arrester development*, Gen. Elec. Co, 04-; *active asst. prof. elec. eng, Union*, 04-06, *consulting prof.*, 06- A.A. Oscillographs; wireless telegraphy; annealing of sheet iron for magnetic uses; development of lightning arresters for electrical circuits; aluminum cells; fixation of nitrogen; nature and prevention of electrical surges in electrical circuits.
- Creighton, Prof. H(enry) Jermain (Maude)**, Swarthmore, Pa. *Chemistry*. Dartmouth, N. S., March 2, 86. B.A., Dalhousie, 06, M.A., 07; 1851 Exhibition scholar, Birmingham, 08-10, M.S., 09; Sc.D., Polytech, Zürich, 11; Heidelberg, 09-10. Demonstrator chem, Dalhousie, 07-08, lecturer physical chem, 11-12; *instr. chem, Swarthmore*, 12-13, *asst. prof.*, 13- Longstreth medal, 18. A.A.; Chem. Soc; Electrochem. Soc; Franklin Inst. (chairman, committee of science and arts, 18); N. S. Inst. (councilor and ed, 'Trans,' 11); Can. Inst. Chem; Maritime Chemists Ass. (v. pres, 20); London Chem. Soc. Physical and electrochemistry.
- Creighton, Prof. J(ames) E(dwin)**, Cornell University, Ithaca, N. Y. **Philosophy*. Pictou, N. S., April 8, 61. A.B., Dalhousie, 87; Berlin, 91; Ph.D., Cornell, 92; LL.D., Queen's (Can), 03. *Instr. philos, Cornell*, 89-91, *assoc. prof. modern philos*, 92-95, *prof. logic and metaphysics*, 95- Ed, 'Philos. Rev,' 93-; Am. ed, 'Kant-Studien,' 96- A.A.; Philos. Ass. (pres, 02). The nature of judgment and the knowing processes of mind; metaphysics.
- Creighton, Prof. W(illiam) H(enry) P(aul)**, U. S. N. (retired), 1445 Henry Clay Ave, New Orleans, La. *Mechanical engineering*. Cincinnati, Ohio, June 29, 59. Cincinnati, 76-77; U. S. Naval Acad, 78-82. *Asst. engineer*, U. S. N., 84-92, retired, 92; *prof. mech. eng*, Purdue, 87-91; *chief engineer*, U. S. Coast Surv, 'Steamer Blake,' 91-92; *prof. mech. and sugar eng, Tulane*, 95- Inspector vessels and govt. material, Spanish-Am. War; German-Am. War. Naval Eng; Eng. Educ; Franklin Inst. Steam engine and other heat motors; evaporation of sugar juices.
- Crenshaw, Prof. J(ames) L(ewellyn)**, Bryn Mawr College, Bryn Mawr, Pa. *Physical Chemistry*. Dermott, Ark, July 10, 87. A.B., Center, 07, A.M., 08; Ph.D., Princeton, 11. *Asst. chemist*, geophys. lab, Carnegie Institution, 10-15; *assoc. physical chem, Bryn Mawr*, 15-18, *assoc. prof.*, 18- Capt, C.W.S., A.E.F., 18. Chem. Soc. Electrochemistry; mineral chemistry.
- Cresse, Prof. G(eorge) H(offman)**, U. S. Naval Academy, Annapolis, Md. *Mathematics*. Swainston, N. J., Dec. 21, 71. A.B., Princeton, 06, A.M., 07; A.M., Harvard, 11; Ph.D., Chicago, 18. *Instr. math*, Amherst, 10-11; *asst. prof. in charge of dept*, Middlebury, 11-15; Michigan, 17-19; U. S. Naval Acad, 19- Math. Soc; Math. Gesell. Acceleration of a particle.

- Cresson, E(zra) T(ownsend)**, Swarthmore, Pa. *Entomology*. Philadelphia, Pa, June 18, 38. Common schools. Entom. Soc; Phila. Acad. Hymenoptera.
- Cresson, E(zra) T(ownsend), Jr**, Swarthmore, Pa. *Entomology*. Philadelphia, Pa, Dec. 18, 76. Common schools. *Assoc. ed.*, 'Entom. News,' 10-; *asst. curator*, Phila. Acad. Entom. Soc; Phila. Acad. Acalyptrate Diptera.
- Crew, Prof. Henry**, Northwestern University, Evanston, Ill. **Physics*. Richmond, Ohio, June 4, 59. A.B, Princeton, 82, fellow, 82-84; fellow, Hopkins, 84-87, Ph.D, 87; Sc.D, Michigan, 14. Asst. physics, Hopkins, 87-88; instr, Haverford, 88-91; astronomer, Lick Observatory, 91-92; *prof. physics, Northwestern*, 92- Assoc. ed, 'Astrophys Jour'. Delegate of Am. Physical Soc, Cong. of Physicists, Paris, 00. Nat. Acad; A.A; Physical Soc. (v. pres, 06, pres, 09); Optical Soc; Astron. Soc; Am. Acad; Ill. Acad. (v. pres, 08, pres, 13); Chicago Acad. (v. pres, 16); Padua Acad. Spectroscopy; arc and spark spectra of metals.
- Cribbs, Prof. J(ames) E(lias)**, 1241 Summit Ave, Springfield, Mo. *Botany*. Mercer, Pa, March 25, 91. A.B, Grove City, 14; M.S, Chicago, 16, fellow, 17-18, Ph.D, 18. Instr. in charge, dept. biol, Grove City, 14-18; *prof. bot*, Emporia, 19-20; *Drury*, 20- Bot. Soc. Plant associations; transpiration; Marchantia polymorpha; stelar anatomy of the seedling of *Todea barbara*.
- Criddle, Norman**, Treebank, Man. Can. *Ornithology*, *Entomology*, *Botany*. Addlestone, Surrey, England, May 14, 75. A.A; Ass. Econ. Entom; Soc. Mammal; mem. Ornith. Union; Entom. Soc; Ont. Entom. Soc; Ottawa Field Nat. Club. Insects injurious to growing grain.
- Crider, Prof. Joseph O(tterbein)**, University, Miss. *Physiology*. Harrisonburg, Va, Aug. 29, 81. M.D, Virginia, 12. Instr. physiol. and pharmacol, Virginia, 12-13; *prof. physiol. Mississippi*, 13- Am. Med. Ass. Physiology of the nervous system.
- Crile, Dr. George**, 2620 Derbyshire Road, Cleveland, Ohio. **Medicine, Surgery*. Chile, Ohio, Nov. 11, 64. A.B, Ohio North. Univ, 84; M.D, Wooster, 87, A.M, 88, LL.D, 16; Vienna, 93; London, 95; Paris, 97; hon. Ph.D, Hiram, 01. Lecturer and demonstrator histol, med. dept, Wooster, 89-90, *prof. physiol*, 90-93, principles of surg, 93-00; clin. surg, *Western Reserve*, 00-11, *surg*, 11- Surgeon, St. Alexis Hosp; visiting surgeon, Lakeside Hosp; lieut, M. R. C. Porto Rico, 98; major and director, Lakeside Base Hosp, B.E.F, 18, senior consultant surg, research, 18-19, lieut. col. and col, 18. Cartwright prize, Columbia, 97, 03; Senn prize, Am. Med. Ass, 98; Alvarenga prize, Col. of Physicians, Phila, 01. A.A; Ass. Path. and Bact; Surg. Ass; Col. Surg. (pres, 16); Soc. Biol. Chem; Gynec. Soc (pres, 20); Physiol. Soc; Exp. Biol; Am. Med. Ass. (v. pres, 07); Soc. Clin. Surg; Int. Soc. Surg; Soc. Int. Chirurgie; hon. fel. Royal Soc. Surg; hon. mem. Peruvian Med. Soc; for. cor. Acad. Royale de Méd. de Belgique. Surgical shock; surgery of the respiration system; blood pressure in surgery; hemorrhage and transfusion; anoci-association; origin and nature of the emotions; physical interpretation of shock; exhaustion and restoration; man an adaptive mechanism; mechanistic view of war and peace; the kinetic drive.
- Crittenden, E(ugene) C(asson)**, Bureau of Standards, Washington, D. C. *Photometry*. Oswayo, Pa, Dec. 19, 80. A.B, Cornell, 05. Instr. physics, Cornell, 05-09; asst. physicist, assoc. physicist and later physicist, *Bur. Standards*, 09- Physical Soc; Optical Soc; assoc. Elec. Eng; Illum. Eng. Soc. (director, 19-); Wash. Acad; Wash. Philos. Soc. (cor. sec'y, 17-19). Illumination; photometric standards and methods.
- Crocker, Prof. Francis B(acon)**, Crocker-Wheeler Co, Ampere, N. J. **Electrical engineering*. New York, July 4, 61. E.M, Columbia, 82, Ph.D, 95. Instr. elec. eng. Columbia, 89-92, ad. prof, 92-93, prof, 93-14. Int. Elec. Cong, Chicago, 93 (perm. sec'y); Int. Electrotech. Commission (sec'y, Am. sect, 08). A.A; Physical Soc; Elec. Eng. (pres, 97); Electrochem. Soc; N. Y. Elec. Soc. (pres, 91-94); British Inst. Elec. Eng. High potential direct current dynamos; unipolar dynamos; regulation of electric motors; primary and secondary batteries.
- Crocker, Dr. W(illiam)**, University of Chicago, Chicago, Ill. **Botany*. Medina, Ohio, Jan. 27, 76. A.B, Illinois, 02, fellow, 02-03, A.M, 03; fellow, Chicago, 04-06, Ph.D, 06. Instr. biol, Northern Ill. State Nor. Sch, 03-04; assoc. *plant physiol*, *Chicago*, 07-09, instr, 09-11, asst. prof. and later *assoc. prof*, 11- A.A; Soc. Nat; Bot. Soc; Wash. Bot. Soc. Delayed germination; effects of noxious gases on plants; gravity as a form stimulus; inspection methods for detecting injury in greenhouses from illuminating gas.
- Crockett, Prof. Cha(rlie)s W(inthrop)**, Rensselaer Polytechnic Institute, Troy, N. Y. *Mathematics*, *Astronomy*. Macon, Ga, Oct. 6, 62. A.B, Mercer, 79, hon. A.M, 86, LL.D, 13; C.E, Rensselaer, 84. Asst. prof. *math. and astron*, *Rensselaer*, 84-93, *prof*, 93- A.A; Astron. Soc; Eng. Educ. Slide rule; earthwork; engineering instruments; automobile engineering.
- Croft, Terrell**, 6600 Delmar Ave, University City, St. Louis, Mo. *Electrical engineering*. Denver, Colo, Nov. 14, 80. Grad. Pratt Inst, 03. *Directing engineer and owner*, *Terrell Croft Eng. Co*. Elec. Eng; Illum. Eng. Soc. Electricity; mechanics.
- Cromwell, Dr. Richard O(liver)**, 208 S. La Salle St, Chicago, Ill. *Plant pathology*. Weeping Water, Nebr, 90. B.S, Nebraska, Ph.D, 18; M.S, N. C. Col, 16. Research worker, Forest Exp. Sta, Ephraim, Utah, 13; asst. plant pathologist, N. C. Exp. Sta, 13-18; exten. plant pathologist, Iowa State, 18-20, *director, bur. crop reporting and statistics*, *E. W. Wagner Co*, 20- Mem. bot. and forestry exped. to Ozark and Rocky Mts. A.A; Bot. Soc; Phytopath. Soc; Nebr. Acad. Forest bacteriology; control of cotton anthracnose; inheritance and disease.
- Crook, Prof. A(lja) B(obinson)**, State Museum of Natural History, Springfield, Ill. *Mineralogy*, *Geology*. Circleville, Ohio, June 17, 64. A.B, Ohio Wesleyan, 87; Ph.D, Munich, 92. Supt. pub. schools, Mt. Carmel, Ohio, 87-89; prof. nat. hist, Wheaton, 92-93; miner. and econ. geol, Northwestern, 93-06; curator, Ill. State

- Museum Nat. Hist, 06-17; *chief, state museum div, Dept. Registration and Educ, Ill, 17-* A.A.; Geol. Soc; Ass. Mus; Ill. Acad. (sec'y, 07-10, 15, pres, 14); Geol. Gesell. Cretaceous fossil fish; mineralogical and economic geology; origin of Monk's Mound; mineral collection; museum administration.
- Crook, Louis H(enry)**, 1353 Newton St, N. W, Washington, D. C. *Physics*. Havre de Grace, Md, 87. B.S, Catholic Univ, 09. Machinist, U. S. Navy Yard, 06-09; *instr. theoret. and applied mech, Catholic Univ, 09-* Asst. to Dr. Zahm, aeronaut. lab, U.S.N, 16- Physical Soc; Wash. Philos. Soc. Aeronautics; aerofoils.
- Crook, Welton Joseph**, P. O. Box 985, Stanford University, Calif. *Metallurgy*. Melbourne, Australia, Feb. 1, 86. A.B, Stanford, 11, E.M, 19. Chemist and assayer, Dept. Mines, Govt. of Victoria, 08; asst. instr. metal, Stanford, 10; chief chemist, Pacific Coast Steel Co, 11-13; prof. metal, S. Dak. Sch. Mines, 13-17; *metal. engineer, Pacific Coast Steel Co, 17-* Research chemist, Panama-Pacific Expos, 15. Min. and Metal. Soc; Min. Eng. Metallurgical analytical methods; electrolysis; silver cupellation; metallic magnesium; hot dip galvanizing process; properties of basic steel.
- Crooker, Dr. Sylvan J(ay)**, Bureau of Standards, Washington, D. C. *Physics*. Fairmont, Minn, July 3, 93. B.S, Carleton, 14; M.S, Illinois, 15, fellow, 15-17; Ph.D, 17. Asst. physicist, *Bur. Standards, 17-18, radio engineer, Sig. C. Research Lab, 19-* Lieut, Sig. C, 18-19; cable investigator, Alaska, 19. Physical Soc; Wash. Philos. Soc. Telephone, radio and cable communication; high potential phenomena; corona.
- Crosby, Prof. Cyrus R(ichard)**, Cornell University, Ithaca, N. Y. *Entomology*. Penn Yan, N. Y, Jan. 9, 79. A.B, Cornell, 05. Asst. entomologist, Missouri, 04-06; exp. entomologist, *Cornell Exp. Sta, 06-09, asst. prof. entom. investigations, 09-13, exten. prof, 13-* Entom. Soc. (sec'y-treas, 10); Micros. Soc. Economic and systematic entomology; Erigonea; Araneae; Ophiliones.
- Crosby, W(alter) W(ilson)**, 307 E. 30th St, Baltimore, Md. *Highway engineering*. Brooklyn, N. Y, Sept. 2, 72. B.C.E, Maine, 93, C.E, 96; Sc.D, Md. Col, 12. Asst. engineer, Portland and Rumford Falls Ry, 93-97; res. engineer, Mass. Highway Commission, 97-01; roads engineer, Baltimore Co, Md, 01-04; gen. supt. to park commissioner, Baltimore, 04-05; *chief engineer, Md. Roads Commission, 05-12; Md. Geol. and Econ. Surv, 05-* Non-res. lecturer highway eng, Columbia, 11-15; instr. in charge extramural course, N. Y. Univ, 14-15. A.A; Civil Eng. (chairman, committee on road materials); Soc. Test. Mat; Eng. Educ; Road Ass. (treas); Soc. Munic. Improv; Int. Ass. Road Congresses; Int. Soc. Test. Mat.
- Crosby, Prof. W(illiam) O(tis)**, Massachusetts Institute of Technology, Cambridge, Mass. **Geology*. Decatur, Ohio, Jan. 14, 50. B.S, Mass. Inst. Tech, 76. Instr. *geol, Mass. Inst. Tech, 78-83, asst. prof, 83-02, assoc. prof, 02-06, prof, 06-07, emer. prof, 07-* Asst. geol. and miner, Boston Soc. Nat. Hist, 76-02; consulting geologist to various state and city commissions, 95- Walker prize, Boston Soc. Nat. Hist, twice; bronze medal, Paris Expos, 00. A.A; Geol. Soc; Min. Eng; Min. and Metal. Soc; Am. Acad; Boston Soc. Nat. Hist; Appalachian Mt. Club. Chemical, structural, glacial and economic geology; ore deposits; geology of the Boston Basin, of Alaska, of the Rocky Mountains and of southern New York.
- Crosland, Prof. Harold Randolph**, University of Oregon, Eugene, Oregon. *Psychology*. Blackville, S. C, Feb. 19, 93. A.B, South Carolina, 13; fellow, Clark, 13-16, A.M, 14, Ph.D, 16. Instr. *psychol, Minnesota, 16-17; asst. prof, Arkansas, 17-18; Pittsburgh, 18-20; Oregon, 20-* Psychol. Ass. Experimental psychology; forgetting.
- Cross, Prof. Charles R(obert)**, Massachusetts Institute of Technology, Cambridge, Mass. **Experimental physics*. Troy, N. Y, March 29, 48. B.S, Mass. Inst. Tech, 70. Prof. *physics, Mass. Inst. Tech, 75-78, Thayer prof, 78-17, director, Rogers Lab, 85-17, emer. prof, 17-* Chairman, sect. B, Elec. Cong, Columbian Expos, 93; pres, Elizabeth Thompson Science Fund, 19. A.A; Physical Soc; Astron. Soc; Elec. Eng; Am. Acad. (chairman, Rumford Committee, 97-); Appalachian Mt. Club (pres, 80); British Ass. Telephony; electric arc; musical pitch; phenomena of audition.
- Cross, Dr. (Charles) Whitman**, 2138 Bancroft Place, Washington, D. C. **Geology*. Amherst, Mass, Sept. 1, 54. B.S, Amherst, 75, 76; Göttingen, 77; Ph.D, Leipzig, 80. Asst. geologist, *U. S. Geol. Surv, 80-88, geologist, 88-*, chief, sect. petrol, 03-07. Mem. Nat. Research Council, 18-, treas, 18-19, v. chairman, div. geol. and geog, 18, chairman, 19. Nat. Acad; Philos. Soc; Geol. Soc. (pres, 18); Wash. Acad; Wash. Geol. Soc. (pres, 99); hon. mem. Colo. Sci. Soc; for. assoc. London Geol. Soc. Petrology; mineralogy; systematic petrography; geology of various districts in Colorado.
- Crossley, Prof. M(oses) L(everock)**, Calco Chemical Co, Bound Brook, N. J. *Chemistry*. Saba Isl, D. W. I, July 3, 84. Ph.B, Brown, 09, M.S, 10, Ph.D, 11. Instr. chem, Brown, 09-11; assoc. prof, William Jewell, 11-13; lecturer org. chem, Wesleyan, 13-14, assoc. prof. chem. and acting head of dept, 14-18; *chief chemist, Calco Chem. Co, 18-* Consulting chemist, Middlesex Hosp, 15- A.A; Chem. Soc. (pres, Conn. Valley sect, 15-). Amidoanthraquinones and anthraquinone sulphonic acids; dye industry; nitro-cyclic compounds; phosphorus as index of nerve metabolism; chemical physiology of human hair; valency.
- Crowe, Dr. Samuel J(ames)**, Johns Hopkins Hospital, Baltimore, Md. *Surgery*. Washington Co, Va, April 16, 83. A.B, Georgia, 04; M.D, Hopkins, 08; Freiberg; Berlin; Vienna. Asst. surg. in charge, Hunterian Lab, 08-09; asst. res. surgeon, *Hopkins Hosp, 09-10, laryngologist and otologist, 11-, clin. prof. laryngol, rhinol. and otol, Hopkins. A.A; Ass. Path. and Bact. Physiology of the ductless glands; pituitary gland; adrenal; the relation of focal infection to general disorders.*
- Crowell, Dr. Bowman C(orning)**, Instituto Oswaldo Cruz, Caixa Postal 926, Rio de Janeiro,

- Brazil. *Pathology*. Yarmouth, N. S., Jan. 10, 79. B.A. McGill, 00, M.D., C.M., 04. Res. pathologist, City Hosp., N. Y. City, 04-07; instr. path., Univ. and Bellevue Hosp. Med. Col., 07-11; pathologist, Bellevue Hosp., 08-11; Bur. Science, P. I., 11-15; prof. path. and bacter., Univ. Philippines, 12-18, director, grad. sch. trop. med. and pub. health, 17-18; *chief in path., Oswaldo Cruz Inst.*, 18- Am. Med. Ass.; P. I. Med. Soc. (pres, 17); Manila Med. Soc. (pres, 14, 16). Tropical diseases; beriberi; cholera; plagues; trypanosomiasis.
- Crowley, Dr. Charles F(elix)**, Creighton University, Omaha, Nebr. *Chemistry*. Detroit, Mich., May 17, 69. A.B., Detroit, 87, A.M., 87; Ph.C., Michigan, 89; M.D., Creighton, 03. *Prof. chem.*, Detroit, 90-93; *Creighton*, 94- Gas commissioner, Omaha, 09-12, city chemist, 03-09, 12- A.A.; Chem. Soc.; Chem. Eng. Cattle foods and dips; gas.
- Crozier, Gen. William**, U. S. A. (retired), War Department, Washington, D. C. *Engineering*. Carrollton, Ohio, Feb. 19, 55. Grad., U. S. Mil. Acad., 76. Served in fourth artil., U.S.A., 76-81, appointed to O. D., 81, brig. gen. and chief, 01-18, major gen., 18, retired, 18. Instr. math., U. S. Mil. Acad., 79-84; on special duty in Europe, 88-89; inspector fortifications, 98; Int. Peace Conference, The Hague, 99; served in Philippine campaign, 00; relief exped. to Peking, 00. A.A.; Soc. Nat.; Am. Geog. Soc.; Civil Eng.; Wash. Acad. Application of wire to construction of guns; strains of gun carriages; strains due to rifling of guns; industrial management.
- Crozier, Prof. W(illiam) J(ohn)**, Rutgers College, New Brunswick, N. J. *Zoology, Physiology*. New York, N. Y., Aug. 28, 92. B.S., Col. City of N. Y., 12; Austin fellow, Harvard, 14-15, A.M., 14, Ph.D., 15. Res. naturalist, Bermuda Biol. Sta., 15-18; asst. prof. physiol. med. dept., Illinois, 18-19; *zool.*, Chicago, 19-20; *prof. and head of dept.*, Rutgers, 20- Sheldon traveling fellow, Harvard, 15-18. A.A.; Soc. Nat.; Soc. Zool.; Physiol. Soc.; Chem. Soc. Marine zoology; adaptation; animal behavior; irritability.
- Crum, Dr. W(illiam) L(eonard)**, 766 Yale Station, New Haven, Conn. *Mathematics*. Hoosick Falls, N. Y., April 8, 94. A.B., Williams, 14; A.M., Yale, 16, Ph.D., 17. Instr. math., Yale, 17- Math. Soc.; Math. Ass. Planetary theory; statistics.
- Crump, Dr. Clifford C(harles)**, Ohio Wesleyan University, Delaware, Ohio. *Astronomy*. Kewanee, Ind., Oct. 11, 91. B.S., Earlham, 12; A.M., Michigan, 13, Ph.D., 16. Asst. astronomer, Observatorio Nacional, La Plata, Argentina, 13-14; instr. math. and astron., Carleton, 16; *prof. astron. and director, Perkins Observatory, Ohio Wesleyan*. A.A.; Astron. Soc. Astrophysics.
- Crump, Col. Malcolm H(art)**, Bowling Green, Ky. *Engineering, Geology*. Culpeper Co., Va., Oct. 24, 49. Grad., Va. Mil. Inst., 73; summer sch. of geol., Harvard, 75-77. Asst. and acting director, Ky. Geol. Surv., 75-90; prof. nat. science, Ogden, 77-89. Director, Ky. dept. mining and forestry, Columbian Expos, 93; Ky. commissioner, La. Purchase Expos, 04, Jamestown Expos, 07; medals, Columbian, La. Purchase and Jamestown Expositions. A.A.; Geol. Soc.; Ky. Acad.; Royal Soc. Arts. Rock asphalt, oil and gas of western Kentucky.
- Cubberley, Prof. Ellwood P.**, Stanford University, Calif. *Education*. Andrews, Ind., June 6, 68. A.B., Indiana, 91; A.M., Columbia, 02, Ph.D., 05. Instr. sciences, Vincennes, 91-93, pres, 93-96; supt. city schools, San Diego, Calif., 96-98; *prof. educ. and head of dept., Stanford*, 98-, *dean, sch. educ.*, 17- Lecturer, California; Columbia; Chicago; Harvard; ed., 'Riverside Text Books in Educ.' A.A.; Nat. Soc. Study Educ.; Soc. Col. Teachers Educ. Educational administration and finance.
- Culin, (Robert) Stewart**, Brooklyn Institute Museum, Brooklyn, N. Y. **Anthropology*. Philadelphia, Pa., July 13, 58. Nazareth Hall, Pa. Director, dept. archeol., Pennsylvania, 92-99, *curator*, sect. Am. and gen. ethnol., Free Museum Science and Arts, 99-03; *ethnol., Brooklyn Inst.*, 03- Sec'y, U. S. commission, Columbian Hist. Expos, Madrid, 92-93. A.A. (see'y, H, 75, v. pres, 02); Anthropol. Soc. (mem. council, 19); Philos. Soc.; Folk-lore Soc. (pres, 97); Numis. Soc. (rec. sec'y, 83-01); fel. Ethnol. Soc.; Brooklyn Inst.; hon. mem. Soc. Cient. Ant. Alz.; cor. mem., Madrid Royal Acad. Hist.; cor. mem. Soc. Ital. d'Antrop., Etnol. e Psicol. comp.; Swedish Soc. Anthropol. and Geog. Comparative study of games; games of North American Indians.
- Cullen, Dr. Glenn Ernest**, 66th St. and Avenue A, New York, N. Y. *Chemistry*. Isle St. George, Ohio, April 1, 90. A.B., Michigan, 12, B.Ch. E., 13; Ph.D., Columbia, 17. *Assoc. Rockefeller Inst.*, 13- Capt., Sanit. C. Chem. Soc.; Soc. Biol. Chem. Physiological chemistry; antiseptics; bacteriological chemistry.
- Cullen, Joseph F(rancis)**, Midvale, Utah. *Chemistry*. Worcester, Mass., June 24, 85. B.S., Worcester, 07. Asst. chemist, Cambria Steel Co., 07-08; chemist, Lackawanna Steel Co., 08-09; in metal. research, U. S. Bur. Mines, 10-14; director, laboratories, dept. metal. research, Utah, 15-16; *research chemist and metallurgist, U. S. Smelting Co.*, 16- A.A.; Min. and Metal. Eng.; Chem. Soc. Iron ore smelting; coke manufacture; non-ferrous metallurgy.
- Cullen, Dr. Thomas Stephen**, 20 E. Eager St., Baltimore, Md. *Abdominal surgery*. Bridge-water, Ont., Nov. 20, 68. M.B., Toronto, 90. House surgeon, Toronto Gen. Hosp., 90-91; demonstrator anat., Toronto, 91; asst. res. gynecologist, *Hopkins Hosp.*, 92-96, res. gynecologist, 96-97, assoc. and later head, dept. gynec., 97-; assoc. prof. and later *prof. clin. gynec., Hopkins*, 00- A.A.; fel. Gynec. Soc.; Ass. Anat.; Ass. Path. and Bact.; fel. British Gynec. Soc.; London Obstet. Soc.; hon. mem. Edinburgh Obstet. Soc.; cor. mem. Leipzig Gesell. für Geburtshilfe; Munich Gynec. Gesell.; hon. mem. Soc. Ital. di Ostet. e Ginec. Cancer, adenomyoma and myomata of the uterus; gynecological pathology; the umbilicus.
- Culler, Prof. J(oseph) A(ibertus)**, Oxford, Ohio. *Physics*. Wooster, Ohio, March 5, 58. A.B., Wooster, 84, Ph.D., 00. Principal, high sch., Cambridge, Ohio, 84-85; Kenton, Ohio, 85-00, supt. schools, 00-01; Bowling Green, Ohio, 01-

- 03; *prof. physics, Miami, 03*— Ohio Acad. (pres, 07); Oxford Sci. Club. Mechanics and heat; electricity; electromagnetic waves; sound.
- Culver, Prof. G(arry) E(ugene)**, 310 Center Ave, Stevens Point, Wis. *Geology*. Hebron, Wis, May 20, 49. Harvard, 86; Wisconsin, 88–91; hon. A.M. Denison, 88. *Prof. nat. science, Dakota, 83–86, physical science, 86–87, geol. and miner, 88–91; physical science, State Nor. Sch, Stevens Point, Wis, 94–07, geol. and chem, 07*— Instr. geol. Beloit, 92; lecturer, exten. dept, Wisconsin, 92–93. A.A.; Geol. Soc; Chem. Soc; Wis. Acad. Artesian well problems in the Dakotas; glacial topography; graphite deposits of central Wisconsin.
- Culver, Dr. Harry**, 508 S. Honore St, Chicago, Ill. *Medicine*. Cobb, Wis, Aug. 13, 85. B.S., Wisconsin, 10; M.D., Rush Med. Col, 13; M.S., Illinois, 18. Fellow, Sprague Mem. Inst, 15; instr. exp. med, med. dept, Illinois, 15–18; *fellow, Christian Fenger Mem. Inst, 20*— Chicago Inst. Med. Infections of the genito-urinary tract.
- Cummings, Dr. Edgar R(oscoe)**, Indiana University, Bloomington, Ind. *Geology, Paleontology*. Madison, Ohio, Feb. 20, 74. A.B. Union, 97; Cornell, 97–98; fellow, Yale, 01–03, Ph.D, 03. Instr. paleont, *Indiana, 98–03, asst. prof. geol, 03–06, assoc. prof, 06–09, prof, 09*—; *acting dean, grad. sch, 14*— A.A. (mem. gen. committee, 16); Geol. Soc; Paleont. Soc; Am. Geog. Soc; Ass. Prof. (councilor, 17–19); Ind. Acad. Stratigraphic geology; Brachiopoda; Paleozoic Bryozoa; Ordovician and Mississippian faunas and stratigraphy; development and morphology of the Monticulporoids.
- Cummings, Prof. Byron**, University of Arizona, Tucson, Ariz. *Archaeology*. Westville, N. Y, Sept. 20, 61. A.B. Rutgers, 89, A.M. 02; Chicago, summer, 96; Berlin, 10–11. Teacher, high sch, Syracuse, N. Y, 87–88; Rutgers Prep. Sch, 89–93; instr. Latin and English, Utah, 93–94, asst. prof, Latin and Greek, 94–95, prof, 95–15, dean, sch. arts and sciences, 05–15; *director, museum, Arizona, 15*—, dean, arts, letters and science, 17—, dean of men, 18— Director, archeol. expeditions to southern Utah and northern Ariz. A.A.; Anthropol. Ass. (mem. council, 19); Mus. Ass; Inst. Social Sci. Prehistoric man in Utah and Arizona; cliff dwellers; natural bridges in Utah.
- Cummings, Miss Edith E**, Lick Observatory, Mt. Hamilton, Calif. *Astronomy*. Beatrice, Nebr, Sept. 10, 94. A.B. Missouri, 15, A.M. 17. Asst, Laws Observatory, 15–17; Allegheny Observatory, 17–18; *fellow, Lick Observatory, 18*— Astron. Soc; assoc. Physical Soc; Pacific Astron. Soc. Stellar photometry.
- Cummings, Prof. Louise D(uffield)**, Vassar College, Poughkeepsie, N. Y. *Mathematics*. Hamilton, Can, 72. B.A. Toronto, 95, M.A. 02; fellow, Pennsylvania, 96–97; Chicago, 97–98; Bryn Mawr, 99–00, Ph.D, 14. Instr. math, St. Margaret's Col, Toronto, 01–02; Vassar, 02–15, asst. prof, 15–19, *assoc. prof, 19*— Math. Soc. Triad systems on fifteen elements.
- Cummings, Prof. Marshall Baxter**, Vermont Agricultural Experiment Station, Burlington, Vt. *Horticulture*. North Thetford, Vt, Dec. 2, 76. B.S., Vermont, 01; M.S., Maine, 04; Ph.D, Cornell, 09. Instr. bot, Maine, 03–06; *prof. hort, Vermont, 09*— A.A.; Soc. Hort. Sci; Pomol. Soc; New England. Bot. Club. Plant breeding; fruit growing; diseases of the peach; forcing plants with CO₂; size of seed as a factor in plant production; perpetuation of high productivity in apple trees.
- Cummins, Dr. G(eorge) Wyckoff**, Belvidere, N. J. *Physiological chemistry*. Vienna, N. J, March 2, 65. Ph.B. Yale, 84, Ph.D, 87; M.D., Columbia, 90. Asst, lab. physiol. chem, Yale, 84–87; instr. math, Sheffield Sci. Sch, Yale, 87–88; *practising physician, 90*— A.A.; Am. Med. Ass. Physiological chemistry, chiefly in relation to digestion; annealing of copper; history of Warren County, N. J.
- Cummins, Dr. W(illiam) Taylor**, Southern Pacific General Hospital, San Francisco, Calif. *Pathology*. Media, Pa, May 17, 79. M.D., Pennsylvania, 02. Asst. demonstrator path, Pennsylvania, 03–10; physician, Henry Phipps Inst, Phila, 06–10; bacteriologist, Dept. of Health, N. Y. City, 11; *pathologist, and director, Harri-man Research Lab, South. Pacific Gen. Hosp. Acting pathologist, Meth. Epis. Hosp, Phila, 09–10. A.A.; Ass. Path. and Bact; Am. Med. Ass; Pacific Ass. Ry. Surg; Phila. Col. Physicians. Tuberculosis in children; diazo reaction; arteriosclerosis; Döhle inclusion bodies; guinea pig blood tests; coccidioidal granuloma and blastomycosis; intraspinal treatment of syphilis.*
- Cunningham, Dr. R(ichard) H(oope)**, 60 W. Tenth St, New York, N. Y. **Physiology, Neurology*. Richmond, Va, July 1, 65. Virginia, 83–85; M.D., Med. Col. of Va, 86; M.D., Columbia, 88; Heidelberg, 90–91; Univ. Col, London, 91–93. Lecturer nervous and mental diseases, Med. Col. of Va, 93–94; demonstrator physiol, Columbia, 95–98, clin. asst. neur, Vanderbilt Clinic, 95–02, *instr. electrophysiol, Columbia, 02–06, neur. and chief of clinic, dept. neur, Vanderbilt Clinic, 06*— Physiol. Soc; Neur. Ass; Soc. Exp. Biol; Elec. Eng; fel. N. Y. Acad. Physiology; neurology; electricity; stimulation of sciatic nerve with strong electric currents.
- Cunningham, Dr. R(obert) S(ydney)**, Johns Hopkins Medical School, Baltimore, Md. *Anatomy*. Anderson, S. C, Nov. 14, 91. B.S., A.M., Davidson, 11; M.D., Hopkins, 15. Asst. and instr. *anat, Hopkins, 15–17, assoc, 19*— Lieut. M. C, 17–19. Ass. Anat. Embryology on the lymphatic system; absorption.
- Cunningham, Prof. S(usan) J**, 107 N. 34th St, Philadelphia, Pa. *Mathematics, Astronomy*. Wilna, Md, March 23, 42. Vassar, 66–67; Harvard, summers, 74, 76; Princeton, summer, 81; Cambridge, England, summers, 77, 78, 79, 82, 87, 91; Williams, summers, 83, 84; hon. Sc.D, Swarthmore, 88. Instr. math, Swarthmore, 69–72, asst. prof, 72–74, *prof. math. and astron, 74–06, emer. prof, 06*— A.A.
- Curme, Dr. George O(liver)**, Jr, Charleston, W. Va. *Chemistry*. Mt. Vernon, Iowa, Dec. 24, 88. B.S., Northwestern, 09; Ph.D, Chicago, 13; Berlin, 13–14. Fellow, Mellon Inst, 14–20; *chief chemist, Carbide and Carbon Chem. Corp, 20*—

- A.A.; Chem. Soc. Organic chemical reactions; hydrocarbon gases.
- Curme, Dr. Henry R(usell)**, Mellon Institute, Pittsburgh, Pa. *Chemistry*. Mt. Vernon, Iowa, Oct. 4, 94. B.S., Northwestern, 15; Ph.D., Pittsburgh, 19. *Fellow, Mellon Inst.*, 17- Chem. Soc. Organic and physico-organic chemistry.
- Currie, Rolla P(ateson)**, 632 Keefer Place, N. W., Washington, D. C. *Entomology*. Preemption, Ill., March 25, 75. A.B., North Dakota, 93. Aid, div. insects, U. S. Nat. Museum, 97-04; *asst. entomologist, bur. entom.*, U. S. Dept. Agr., 04- Collected specimens for U. S. Nat. Museum, Wyo. and N. Dak., 96, Liberia, 97, B. C., 04. A.A.; assoc. mem. Ornith. Union; Wash. Entom. Soc. (rec. sec'y, 01-06, chairman, pub. committee, 01-08); Wash. Biol. Field Club. Myrmecoleonidae and Odonata in systematic entomology.
- Currier, C(linton) H(arvey)**, Brown University, Providence, R. I. *Mathematics*. Manchester, N. H., Jan. 1, 76. Ph.B., Brown, 98, A.M., 99; Göttingen, 10-11. *Instr. math.*, Brown, 99-16; *astron.*, 14-16, *asst. prof.*, 16- *Instr. math.*, R. I. Sch. of Design, 03-09. A.A.; Math. Soc.; Astron. Soc.; New Eng. Ass. Math. Teachers.
- Curtis, Dr. B(enjamin) Farquhar**, Hastings-on-Hudson, N. Y. *Surgery*. Philadelphia, Pa., Aug. 5, 57. A.B., Columbia, 78, M.D., 81. *Prof. clin. surg.*, Women's Med. Col., N. Y., 92-98; *surg.*, N. Y. Postgrad. Med. Sch., 94-98; *Univ. and Bellevue Hosp. Med. Col.*, 98-08. *Instr. and chief of clinic*, Columbia, 90-94; *attending surgeon*, St. Luke's Hosp., 88-; *Bellevue Hosp.*, 98-08; *Mem. Hosp.*, 90-00. *Surg. Ass.*; N. Y. Acad. Med.
- Curtis, Prof. Carlton C(larence)**, Columbia University, New York, N. Y. **Botany*. Syracuse, N. Y., Aug. 24, 64. A.B., Syracuse, 89, Ph.D., 95; A.M., Columbia, 94; Cambridge, England, 96; Leipzig, 97. *Principal*, Fayetteville Union Sch., 84-86; *instr. nat. science*, Brooklyn Polytech., 90-92; *tutor bot.*, Columbia, 98-08, *adj. prof. and later assoc. prof.*, 08- A.A.; Soc. Nat.; Bot. Soc.; Torrey Bot. Club (treas., 07). *Turgor*; transmission and tension of fluids in plants; transpiration; action of pure and colored light upon transpiration.
- Curtis, George Carroll**, 64 Crawford St., Boston, Mass. *Geography, Geology*. Abington, Mass., July 15, 72. B.S., Harvard, 96; Zürich, 01. *Asst. geol.*, Harvard, 96-98; *asst. geologist*, U. S. Geol. Surv., 98-99. In charge of construction, State Model of Metrop. Boston, 00; U. S. Senate Models of Washington, 01-02; *geologist on Dixie exped.*, 02. Gold medal, Paris, 00; *La. Purchase Expos.*, 04. A.A.; fel. Am. Geog. Soc.; Boston Sci. Soc. Geographic sculpture; coral islands of Tahitian Group.
- Curtis, George M(orris)**, Vanderbilt University Medical School, Nashville, Tenn. *Anatomy*. Big Rapids, Mich., April 2, 90. A.B., A.M., Michigan, 10, Ph.D., 14; M.D., Rush Med. Col., 20. *Asst. zool.*, Michigan, 08-12, *histol.*, 11-13; *asst. prof. anat.*, Vanderbilt, 13-14, *acting prof.*, 14-15, *prof. and head of dept.*, 15- A.A.; Ass. Anat. Morphology of seminiferous tubules; spermatogenic wave.
- Curtis, Dr. Harold B(artlett)**, 620 University Place, Evanston, Ill. *Mathematics*. Brooklyn, N. Y., May 22, 84. A.B., Cornell, 07, Ph.D., 10. *Instr. math.*, Columbia, 10-17; *Northwestern*, 19- *Second lieut.*, U.S.A., 17-19. Math. Soc. Popular astronomy.
- Curtis, Dr. Harry A(lfred)**, International Coal Products Corp., Newark, N. J. *Chemistry*. Sedalia, Colo., Feb. 16, 84. B.S., Colorado, 08, A.M., 10; fellow, Wisconsin, 13-14, Ph.D., 14. *Instr. chem.*, Colorado, 08-12, *asst. prof.*, 12-13, 14-15, *prof.*, 15-17; with ordnance dept., U.S.A., 17-19; *prof. chem.*, Northwestern, 19-20; *chief chemist*, *Int. Coal Products Corp.*, 20- A.A.; Chem. Soc. Electroanalysis; photochemistry; industrial chemistry.
- Curtis, Dr. Harvey L(incoln)**, Bureau of Standards, Washington, D. C. **Physics*. Mason, Mich., Dec. 14, 75. Ph.B., Michigan, 00, A.M., 03, Ph.D., 10. *Asst. physics*, Michigan, 02-03; *instr.*, Mich. Agr. Col., 03-07, *asst. prof.*, 07; *asst. physicist*, *Bur. Standards*, 07-13, *assoc. physicist*, 13-18, *physicist*, 18- *Lecturer theoret. elec.*, George Washington, 10-14. *Physical Soc.*; Wash. Acad.; Wash. Philos. Soc. Mica condensers; measurement of inductances and insulating properties of solid dielectrics; design of alternating current resistances; quadrant electrometer; skin-effect.
- Curtis, Dr. H(eber) D(oust)**, Allegheny Observatory, Pittsburgh, Pa. **Astronomy*. Muskegon, Mich., June 27, 72. A.B., Michigan, 92, A.M., 93; fellow, Leander McCormick Observatory, 00-02, Ph.D., Virginia, 02. *Instr. math.*, high sch., Detroit, 93; *prof. Greek and Latin*, Napa, 94-96; *math. and astron.*, Pacific (Calif.), 97-00; *asst.*, Lick Observatory, California, 02-04, *asst. astronomer*, 04-06, *acting astronomer in charge*, D. O. Mills' exped. to south. hemisphere, 06-09, *astronomer*, 09-20; *director*, *Allegheny Observatory*, 20- *Voluntary aid*, Lick Observatory Eclipse Sta., Thomaston, Ga., 00; *mem.* U. S. Naval Observatory eclipse exped. to Sumatra, 01; in charge Lick Observatory Eclipse Sta., Cartwright, Labrador, 05; *Russian eclipse*, 14; *Goldendale*, Wash., 18. Pan-Am. Sci. Cong., Santiago, 08. Nat. Acad.; A.A.; Astron. Soc.; Optical Soc.; Philos. Soc.; Pacific Astron. Soc. (v. pres., 16); Soc. Sci. du Chile. Spectrography; spectroscopic binaries; astronomical photography.
- Curtis, Dr. Mary F(lorencia)**, Wellesley College, Wellesley, Mass. *Mathematics*. Westminster, Mass., April 12, 84. A.B., Wellesley, 06; Leipzig, 10-11; A.M., Radcliffe, 15, Ph.D., 17. *Instr. math.*, Wellesley, 11-14, *Western Reserve*, 17-18; *Wellesley*, 18-20, *asst. prof.*, 20- Math. Soc. Functions of elliptic cylinders; point transformations.
- Curtis, Dr. Maynie R(ose)**, Columbia University, New York, N. Y. *Biology*. Ingham Co., Mich., July 27, 80. A.B., Michigan, 05, A.M., 08, Ph.D., 13. *Asst. biologist*, Maine Exp. Sta., 08-17; *assoc. cancer research*, *Crocker Research Fund*, Columbia, 17- A.A.; Soc. Nat.; Soc. Zool.; Ecol. Soc. Physiology of reproduction; cancer.
- Curtis, Prof. Otis F(reeman)**, Cornell University, Ithaca, N. Y. *Plant physiology*. Sendai, Japan, Feb. 12, 88. A.B., Oberlin, 11; Ph.D., Cornell,

16. Tutor biol. Oberlin Acad., 11-12; asst. nat. hist., *Cornell*, 12, instr. *plant physiol.*, 13-17, asst. prof., 17- Bot. Soc. Stimulation of root growth in cuttings; upward translocation of foods and salts in plants; rise of water in trees.
- Curtis, Dr. R(obert) W(illiam)**, College of the City of New York, New York, N. Y. *Chemistry*. Bridgeport, Conn., July 4, 69. B.S., Trinity (Conn.), 96; Ph.D., Yale, 04. Asst. instr. chem., Yale, 03-04; asst. prof., Kansas, 04-07; instr., *Col. City of N. Y.*, 07-16, asst. prof., 16- Action of reducing agents upon vanadium pentoxid; determination of metals by rotating cathode.
- Curtis, Dr. W(interton) C(onway)**, University of Missouri, Columbia, Mo. *Zoology*. Richmond, Maine, Nov. 4, 75. A.B., Williams, 97, A.M., 98; fellow, Hopkins, 00-01, Ph.D., 01. Instr. zool., *Missouri*, 01-04, asst. prof., 04-08, prof., 08- Instr. zool., Woods Hole, 99-03, in charge invert. zool., 08-11; scientific asst. various seasons, U. S. Fisheries Bur., 04-11. A.A.; Soc. Nat.; Soc. Zool. Planaria; Cestoda; embryology of Unionidae; parasitic Protozoa; history of science.
- Curtiss, Dean Charles F(ranklin)**, Ames, Iowa. *Agriculture*. Nora, Ill., Dec. 12, 63. B.S.A., Iowa State, 87, M.S.A., 93; hon. Sc.D., Mich. Agr. Col., 07. Statistician, U. S. Dept. Agr., 88-93; prof. animal husbandry, *Iowa State*, and asst. director, *Exp. Sta.*, 91-96, dean agr. and director, 97- Pres., Iowa Live Stock Breeders' Ass.; judge of live stock, Trans-Miss., Pan-Am., La. Purchase, Lewis and Clark and Panama-Pacific expositions; pres., Int. Live Stock Expos; director, Iowa State Board Agr., 06-09. A.A.; Soc. Animal Nutrition (pres., 09); Ass. Agr. Col. (mem. exec. committee, 02-09).
- Curtiss, Prof. D(avid) R(aymond)**, 2023 Sherman Ave., Evanston, Ill. *Mathematics*. Derby, Conn., Jan. 12, 78. A.B., California, 99, A.M., 01; Ph.D., Harvard, 03, traveling fellow, at Ecole Nor. Supérieure, Paris, 03-04. Instr. math., Sheffield Sci. Sch., Yale, 04-05; asst. prof., *Northwestern*, 05-07, assoc. prof., 07-09, prof., 09- A.A. (chairman, A); Math. Soc. (ed. board, 'Trans,' mem. council and v. pres); Soc. math. de France; Circolo Mat. di Palermo. Differential equations; theory of functions; the real branches of implicit functions in the neighborhood of multiple points.
- Curtiss, Prof. Ralph H(amilton)**, Detroit Observatory, Ann Arbor, Mich. *Astronomy, Astrophysics*. Derby, Conn., Feb. 8, 80. B.S., California, 01, Ph.D., 04. Student asst. astron., California, 00-01, fellow, Lick Observatory, 01-05; Carnegie asst., Lick Observatory, 05; asst. astronomer, Allegheny Observatory, 05-07; asst. prof. astrophysics, *Michigan*, 07-11, assoc. prof. astron., 11-18, prof., 18-, asst. director, *Detroit Observatory*, 11- Mem. Lick Observatory eclipse exped. to Sumatra, 01; mem. Int. Astron. Union. A.A.; Astron. Soc. Spectroscopy of heavenly bodies; photography of comet forms; spectrographic construction; spectrography of variable stars, and of stars with peculiar spectra in class B.
- Curtiss, Dr. Richard S(ydney)**, Covina, Calif. *Chemistry*. Stratford, Conn., Nov. 8, 64. Ph.D., Yale, 88; Munich, 90-91; Ph.D., Würzburg, 92; Paris, 92-93. Chemist, Conn. Exp. Sta., New Haven, 88-90; docent and instr. org. chem., Chicago, 93-97; prof. chem., Hobart, 97-01; Union, 01-04; org. chem., Illinois, 04-12; Throop, 12-16; director, research lab, Mex. Petrol. Co., Los Angeles, 16-18; acting prof. org. chem., Stanford, 18-19; owner and manager, *Citriodora Ranch*, 19- Research chemist, Conn. Exp. Sta., 93. A.A. (sec'y, C, 05); Chem. Soc. (chairman, div. org. chem., 09); Am. Health League (v. chairman); Ill. Acad.; Chem. Gesell. Organic chemistry; acetylacetone and acetoacetic ester derivatives of certain amino malonic esters; intermediate addition products in organic chemical reactions; condensation in the mesoxalic ester series; chemistry applied to sub-tropical horticulture.
- Curtman, Dr. Louis J**, College of the City of New York, New York, N. Y. *Chemistry*. London, England, Oct. 31, 78. B.S., Col. City of N. Y., 99; M.S., N. Y. Univ., 02; Ph.D., Columbia, 07. Instr. chem., E. Side Evening High Sch., N. Y. City, 04-09; *Col. City of N. Y.*, 07-15, asst. prof., 15- A.A.; Chem. Soc. Analytical chemistry; double phosphates; double arsenates; new methods on metal and organic compounds.
- Cushing, Prof. Harvey**, 305 Walnut St., Brookline, Mass. *Surgery*. Cleveland, Ohio, April 8, 69. A.B., Yale, 97, hon. A.M., 13, Sc.D., 19; A.M., Harvard, 95, M.D., 95; Sc.D., Washington (St. Louis), 14; LL.D., Western Reserve, 19; Cambridge, England, 20. Res. surgeon, Hopkins Hosp., 97-01, asst. surg., Hopkins, 97-99, assoc., 99-03, assoc. prof., 03-12; *Moseley prof., Harvard*, 12- Surgeon-in-chief, Peter Bent Brigham Hosp. Address on surg., Int. Med. Cong., 13. Nat. Acad.; A.A.; Ass. Path. and Bact.; Physiol. Soc.; Soc. Exp. Path.; Neur. Ass.; hon. fel. Surg. Ass.; Am. Acad. (v. pres., 19); hon. fel. Royal Col. Surg. Neurological and experimental surgery; experimental medicine and neurology.
- Cushing, Prof. H(enry) P(latt)**, Western Reserve University, Cleveland, Ohio. *Geology*. Cleveland, Oct. 10, 60. Ph.B., Cornell, 82, M.S., 84, Ph.D., 09; Columbia, 84-85; Munich, 91-92. Teacher science, Nor. Sch., Mankato, Minn., 85-91; instr. geol. and chem., *Western Reserve*, 92-93, assoc. prof. geol., 93-95, prof., 96- A.A.; Geol. Soc. (librarian, 98-13, v. pres., 15); Philos. Soc.; Ohio Acad.; N. Y. Acad. Geology of northern New York, especially pre-Cambrian; geology of northeastern Ohio.
- Cushman, Dr. Allerton S(eward)**, 1314 16th St., Washington, D. C. *Chemistry*. Rome, Italy, June 2, 67. B.S., Worcester, 88; Freiburg and Heidelberg, 89-90; A.M., Harvard, 97, John Harvard fellow, 97-98, Ph.D., 98. Instr. chem., Washington (St. Louis), 92-96; asst., Harvard, 98; asst. prof., Bryn Mawr, 99-00; asst. director and chemist in charge, div. of tests, office of pub. records, U. S. Dept. Agr., 01-10; founder and director, *Inst. Indust. Research*, 10- Lieut. col. ordnance dept., 17-18. Longstreth medal, Franklin Inst., 11. A.A.; Chem. Soc.; Electrochem. Soc.; Soc. Test. Mat.; British Iron and Steel Inst. Revision of atomic weight of nickel; road materials; cementing power of rocks; plasticity of clays; relation of 'water of combina-

tion' to physical properties of rock dust, clays, etc; colloid theory of plasticity; corrosion and preservation of iron and steel; chemistry and civilization.

Cushman, Dr. J (oseph) A (ugustine), 234 Berkeley St, Boston, Mass. *Biology, Paleontology*. Bridgewater, Mass, Jan. 31, 81. B.S, Harvard, 03, Ph.D, 09. *Museum director, Boston Soc. Nat. Hist, 03-; geologist, U. S. Geol. Surv, 13- Paleont. Soc; Geol. Soc; Am. Geog. Soc; Am. Acad; New England Bot. Club; Boston Soc. Nat. Hist; Wash. Acad. Fossil and recent Foraminifera; desmids; Ostracoda.*

Custis, Dr. Horace H (atch), 1839 Irving St, N. W, Washington, D. C. *Chemistry*. Washington, March 16, 84. A.B, Hopkins, 06; A.M, George Washington, 08, Ph.D, 16. *Chemist, Wash. Gas Light Co, 06-08; asst. chem, George Washington, 07-08; asst. to chemist, health dept, D. C. and collaborating chemist, bur. chem, U. S. Dept. Agr, 08-09; junior chemist, U. S. Geol. Surv, 09, chemist, 09- Chem. Soc. Actino-chemistry.*

Cutler, Dr. Elbridge G (erry), 214 Beacon St, Boston, Mass. *Surgery*. Farmington, Maine, Sept. 7, 46. A.B, Harvard, 68, M.D, 72. *Asst. path. anat, Harvard, 78-82, clin. instr, auscultation, 84-88, instr. theory and practise of med, 88-09; consulting physician, Mass. Gen. Hosp, 08- Visiting physician, Mass. Gen. Hosp. Emer. mem. Am. Physicians; Am. Med. Ass. The urine; contagious and infectious diseases; gastric ulcer in children.*

Cutler, Dr. Elliott C (arr), 61 Health St, Brookline, Mass. *Surgery*. Bangor, Maine, July 30, 88. A.B, Harvard, 09, M.D, 13, fellow, 13-14. *House officer, Peter Bent Brigham Hosp, Boston, 13-15; res. surgeon, Am. Ambulance Hosp, Paris, 15; asst. surg, Harvard Med. Sch, 15-16; res. surgeon, Mass. Gen. Hosp, 15-16; vol. asst, Rockefeller Inst, 16-17; major, M.C, A.E.F, 17-19; res. surgeon, Peter Bent Brigham Hosp, 19-20; instr. surg, Harvard Med. Sch, 19- A.A. Experimental liver pathology; tortula disease; strychnin poisoning; Paget's disease.*

Cutler, Dr. Ira E (ugene), 2122 S. Clayton St, Denver, Colo. *Biology*. Putnam, Conn, 63. B.S, Albion, 93; A.B, Denver, 07, Ph.D, LL.D, 19. *Manager, flouring mill, 93-94; teacher science, high sch, Menominee, Mich, 94-97; supt. schools, Crystal Falls, 97-98; head, dept. biol, Denver, 98- Bot. Soc; Denver Teknik Club. Genetics.*

Cutter, Dr. Irving S (amuel), 42nd St. and Dewey Ave, Omaha, Nebr. *Biochemistry*. Keene, N. H, Dec. 5, 75. B.S, Nebraska, 98, M.D, 10. *Instr. physical chem, Nebraska, 10-13, adj. prof. biochem, 13-14, prof, 14-, director, laboratories and dean, med. col, 15- A.A.; Am. Med. Ass; Chem. Soc. Creatin and creatinin in metabolism of children.*

Cutter, Prof. William D (ick), Education Building, Albany, N. Y. *Physiology*. Brooklyn, N. Y, Sept. 14, 78. A.B, Yale, 99; M.D, Hopkins, 05. *Asst. physiol. chem, Columbia, 99-01; prof. physiol. and pharmacol, Georgia, 11-19. A.A; Am. Med. Ass. Tendon mucoid; salivary and renal secretion.*

D

Dabney, Dr. Charles W (illiam), 3421 Middleton Ave, Cincinnati, Ohio. **Education, Economics, Chemistry*. Hampden-Sidney, Va, June 19, 55. A.B, Hampden-Sidney, 73; Virginia, 77; Ph.D, Göttingen, 80; LL.D, Yale, 01; Hopkins, 02. *Prof. chem, Emory and Henry, 77-78; state chemist and director, N. C. Exp. Sta, 80-87; prof. agr. and director, Exp. Sta, Tennessee, 87-90, pres, Tennessee, 87-04; Cincinnati, 04-20, retired, 20. Asst. Sec'y of Agr, 94-97; special agent, scientific investigation, U. S. Dept. Agr, 97; pres, Summer Sch. of the South, 02-04; mem. S. Educ. Board, 02-10; chief, dept. govt. and state exhibit, New Orleans Expos, 84; chairman, board of govt. exhibit, Atlanta Expos, 95; Tenn. Centennial Expos, 97; mem. jury awards, Paris Expos, 00; Officier de l'Instruction Pub; Chevalier, Légion d'honneur. A.A; Chem. Soc; Econ. Ass; Social Sci. Ass; Wash. Acad; Cincinnati Soc. Nat. Hist. Isomerism among benzol compounds; isopieraminic acid; phosphates; agricultural resources of North Carolina; history of agricultural and technical education in the United States; the culture of cotton in America; scientific work of the government; national university; education and production; educational conditions of the south; industrial work for rural schools; cooperation in education; the university and the city.*

Dachnowski, Prof. A (lfred) P (aul), U. S. Department of Agriculture, Washington, D. C. *Botany*. Königshütte, Germany, Jan. 23, 75. Berlin, 00-01; Vienna, 02; Ph.D, Michigan, 06. *Asst. plant physiol, Michigan, 03-06; asst. prof. bot, Ohio State, 08-14; plant physiologist, bur. soils, U. S. Dept. Agr, 15, bur. plant industry, 15- Collaborator, bur. plant indust, U. S. Dept. Agr, 09-; botanist, Ohio Geol. Surv, 09-12. Bot. Soc; Ecol. Soc. Stratigraphy of peat deposits; types of peat material; correlation.*

Dadourian, Prof. H (arountune) M (ugurditch), Trinity College, Hartford, Conn. **Physics*. Evrek, Asia Minor, Dec. 5, 73. Ph.B, Yale, 03, Loomis fellow, 03-05, A.M, 05, Ph.D, 06. *Asst. physics, Sheffield Sci. Sch, Yale, 05-06, instr, 06-17; asst. prof, Trinity, 19- Aeronaut. engineer, U. S. Govt, 17-19. A.A; Physical Soc; Math. Soc. Radioactivity; analytical mechanics; graphic statics; soft X-rays; characteristic X-rays; electrons; sound ranging.*

Daft, Leo, 568 W. 149th St, New York, N. Y. *Electrical engineering*. Birmingham, England, Nov. 13, 43. Collegiate Inst, Liverpool, England, 54-57; University Col, London, 60-63. *Asst. to Dr. Wm. Pole, University Col, 61-63; elec. engineer, Daft Elec. Co, 80-90; consulting elec. engineer, 90- A.A; Elec. Eng; Electrochem. Soc. Electric railway apparatus; high frequency phenomena; lightning protection; radiography; conduction of electricity through gases; synthetic rubber; submarine signaling.*

Daggett, Prof. P (arker) H (ayward), Chapel Hill, N. C. *Electrical engineering*. Neponset, Mass, April 5, 85. B.S, Harvard, 07. *Asst. elec. eng, Harvard, 08-09; engineer, Am. Telephone and Telegraph Co, 09; assoc. prof. elec. eng, North Carolina, 10-13, prof, 13-, acting dean, sch. applied science, 15-16. Acting dist. educ. direc-*

- tor, fourth dist. S. A. T. C., 18; director, div. home comforts, N. C. Highway Commission, 19—Assoc. Elec. Eng.; Eng. Educ. Illumination; economics of small power plants.
- Dahlgren, Prof. Ulric**, Princeton University, Princeton, N. J. **Histology*. Brooklyn, N. Y., Dec. 27, 70. A.B., Princeton, 94, M.S., 96. Instr. *biol.*, Princeton, 95–99, asst. prof., 99–11, *prof.*, 11—Instr. *invert. zool.*, Woods Hole, 96–98, asst. director, 99—; trustee, Harpswell Lab, 14—Potts gold medal, Franklin Inst., 17. A.A.; Soc. Nat.; Soc. Zool.; Ass. Anat. Principles of animal histology; production of light by organisms; giant ganglion cell apparatus of fishes; breathing valves of fishes; dorsal nervous apparatus of fishes; electric and luminous organs of fishes; evolution of electric organs from muscle; static and auditory organs of mollusks.
- Dains, Dr. F(rank) B(urnett)**, 1224 Louisiana St., Lawrence, Kans. *Chemistry*. Gouverneur, N. Y., Jan. 15, 69. Ph.B., Wesleyan, 90, M.S., 91; fellow, Chicago, 94–95, Ph.D., 98; Berlin and Freiburg, 01–02. Asst. *chem.*, Wesleyan, 91–93; asst. prof., Kansas, 93–94; Northwestern, 95–02; prof., Washburn, 02–11; assoc. prof., Kansas, 11–14, *prof.*, 14—A.A.; Chem. Soc.; Kans. Acad. (pres., 09); Chem. Gesell. Aldehydes; urea ethers; substituted ureas; thiazoles; pyrazoles; halogen compounds; the interaction of formamides with bodies containing methylene hydrogen.
- Dake, Prof. C(harles) L(aurence)**, Missouri School of Mines, Rolla, Mo. *Geology*. Chasburg, Wis., April 2, 83. A.B., Wisconsin, 11, fellow, 11–12, A.M., 12; fellow, Columbia, 20–21. Asst. *geol.*, Williams, 12–13; asst. *prof.*, Mo. Sch. Mines, 13–18, *assoc. prof.*, 18—Wis. Geol. and Nat. Hist. Surv., summer, 10; asst. geologist, A. C. and H. B. R. R., summer, 11; Longyear Prospecting Co., summer, 12; Mo. Bur. Geol. and Mines, summers, 13, 14, 15, 19; Wyo. Geol. Surv., summer, 16. Min. and Metal. Eng.; Eng. Educ. Origin of iron ores; sand and gravel resources of Missouri; petroleum geology.
- Dakin, Dr. H(enry) D(rysdale)**, Edgehill, Scarborough-on-Hudson, N. Y. **Chemistry*. London, England, March 12, 80. B.S., Manchester, 01; 1851 Exhibition scholar at London and Heidelberg; Sc.D., Leeds, 07; Yale, 18. Demonstrator chem., Leeds, 01–02; *research worker*, Lister Inst. Prev. Med., London, Heidelberg and Herter's Lab., N. Y. Chevalier, Légion d'honneur. A.A.; Biochem. Soc.; Soc. Biol. Chem.; Physiol. Soc.; Soc. Exp. Biol.; Harvey Soc.; fel. Royal Soc.; Inst. Chem. Gt. Britain and Ireland; London Chem. Soc.; Chem. Gesell. Organic chemistry and its biological applications; chemistry of enzyme action; chemistry of animal oxidative processes; antiseptics.
- Dalaker, Prof. H(ans) H.**, 523 Walnut St., S. E., Minneapolis, Minn. *Mathematics*. Rennesö, Norway, Dec. 6, 71. A.B., Minnesota, 02; Cornell, 06–07, fellow, 07–08, Ph.D., 17. Instr., Decorah Inst., Iowa, 93–97; *math.*, Minnesota, 02–07, *asst. prof., eng. col.*, 08—Math. Soc. Functions of the complex variable; automorphic functions.
- Dale, Dr. J(ulian) K(alfus)**, 119 S. Maplewood Ave., Peoria, Ill. *Chemistry*. Lexington, Ky., April 13, 89. A.B., Princeton, 11, A.M., 13, fellow, 13–14, Ph.D., 14. Asst., Princeton, 11–13; asst. chemist, bur. chem., U. S. Dept. Agr., 14–19; *research chemist*, U. S. Food Products Corp., 19—Chem. Soc. Carbohydrate chemistry; rare sugars.
- Dale, Prof. Nelson C.**, Hamilton College, Clinton, N. Y. *Geology*. Newport, R. I., July 9, 80. B.S., Middlebury, 03; A.M., Brown, 10; fellow, Princeton, 13–14, Ph.D., 14. Asst. *geol.*, Brown, 08–10, instr., 10–12; asst., Princeton, 12–13; asst. prof., Hamilton, 14–16, *prof.*, 16—Aid and field asst. to T. N. Dale, U. S. Geol. Surv., summers, 99–03; asst. geologist, R. I. Nat. Resources Surv., 09–12; mem. Princeton exped. to Newfoundland, 13; Vt. Geol. Surv., 14, 15; N. Y. Geol. Surv., 16; consulting geologist, S. Mangnese Corp., summer, 18; N. S. Steel and Coal Co., summer, 20. Chemical geology; ore deposits; petrology.
- Dale, T(homas) Nelson**, 42 Cornell St., Springfield, Mass. *Geology*, *Botany*. New York, N. Y., Nov. 25, 45. Private schools and instruction; hon. A. M., Williams, 96. Prof. *geol. zool.* and *bot.*, Drury, 77; *geol.*, Vassar, 78; instr., Williams, 93–97, *geol.* and *bot.*, 97–01; field asst., U. S. Geol. Surv., 85–89, asst. geologist, 90–91, geologist, 92–20; *consulting geologist*, 20—Cor. Vienna Geol. Reichsanstalt; Soc. géol. de France. Structural and areal geology of the Taconic region; secondary structures in stratified rock; causes of the Taconic landscape; slate; New England granites; Vermont marbles; Tennessee, Georgia and Alabama marbles; lime-producing belt of western Massachusetts and eastern New York.
- Dales, Dr. Benton**, B. F. Goodrich Co., Department 19 B, Akron, Ohio. *Chemistry*. Lincoln, Nebr., Dec. 11, 77. B.S., Nebraska, 97, A.M., 99; fellow, Cornell, 00–01, Ph.D., 01. Asst. *chem.*, Nebraska, 97–99; Cornell, 01–03; asst. prof., Nebraska, 03–06, *assoc. prof.*, 06–08, *prof.* and head of dept., 08–18; *research chemist*, B. F. Goodrich Co., 18—A.A.; Chem. Soc. Rare earths; iron; rubber.
- Dall, Prof. William H(ealey)**, U. S. National Museum, Washington, D. C. **Mollusks*. Boston, Mass., Aug. 21, 45. Under Agassiz, museum comp. *zool.*, Harvard, 62–63; hon. A.M., Wesleyan, 88; Sc.D., Pennsylvania, 04; LL.D., George Washington. Chief, scientific corps, West. Union Tel. exped. to Alaska, 65–68; *hon. curator, div. mollusks*, U. S. Nat. Museum, 69—; asst., U. S. Coast Surv., 70–85; *paleontologist*, U. S. Geol. Surv., 85—Prof. *invert. paleont.*, Wagner Inst., Phila., 93—; *hon. curator*, Bishop Museum, Honolulu, 99. Wagner gold medal, 99. Nat. Acad.; A.A. (sec'y, B., 77–79, v. pres., 82, 85); Soc. Nat.; Paleont. Soc. (pres., 11); Philos. Soc.; Am. Acad.; and other American and foreign societies. Geography of northwestern America and Alaska; recent and fossil mollusks and brachiopods; North American Tertiary and recent mollusk fauna, especially Pelecypoda.
- Dallenbach, Dr. Karl M.**, Cornell University, Ithaca, N. Y. *Psychology*. Champaign, Ill., Oct. 20, 87. A.B., Illinois, 10; fellow, Pittsburgh, 10–11, A.M., 11; fellow, Cornell, 11–12, Ph.D., 13. Asst. *psychol.*, Illinois, 09–10; *instr.*, Oregon, 13–15; Ohio State, 15–16; Cornell, 16–

- Capt, Sanit. C, 18-19. A.A.; Psychol. Ass. Experimental psychology.
- Dalrymple, Prof. W(illiam) H(addock)**, Louisiana State University, Baton Rouge, La. *Veterinary medicine*. Stranraer, Wigtownshire, Scotland, April 23, 56. Glasgow Vet. Col, 86; M.R.C.V.S., England, 86. Mem. vet. staff, Irish Privy Council, Dublin, 88; prof. vet. science, Louisiana, and veterinarian, Exp. Sta, 89-20, *dean, col. agr. and director Exp. Sta*, 20- Lecturer, La. farmers' institutes; hygiene, med. dept, Tulane, 09; special delegate from La, Am. Indust. Exhib, London, 09; mem. advisory board, U. S. Agr. and Indust. Expos. Int. Cong. on Tuberculosis, Wash, 08; delegate, Int. Cong. Hygiene and Demog, Wash, 12. A.A.; Pub. Health Ass; Vet. Med. Ass. (past pres); Ass. S. Commissioners Agr; U. S. Live Stock Sanit. Ass. (past pres); La. Vet. Med. Ass. (pres, ed, 'Jour'); La. Nat. Soc; La. State Live Stock Sanit. Board; Royal Inst. Pub. Health London. Anthrax; bovine tick fever; bovine intestinal parasites; black leg; animal dietetics; veterinary obstetrics.
- Daly, Prof. Reginald Aldworth**, 23 Hawthorn St, Cambridge, Mass. **Geology*. Napanee, Ont, May 19, 71. A.B, Victoria (Ont), 91; A.M, Harvard, 93, Ph.D, 96; Heidelberg and Paris, 96-98. Instr. geol, Harvard, 95-96, physiog, 98-01; geologist, Can. Int. Boundary Commission, 01-07; prof. physical geol, Mass. Inst. Tech, 07-12; *Sturgis-Hooper prof. geol, Harvard*, 12- Geol. Soc; Seismol. Soc; Philos. Soc; Am. Acad; Geol. Soc. Glasgow; Miner. Soc. Petrograd. Field geology; petrology; physical geography, geology along the 49th parallel; geology of igneous rocks.
- Damon, Samuel Chester**, Kingston, R. I. *Agronomy*. Ashby, Mass, Nov. 2, 57. B.S, Mass. Col. and Boston, 82. *Asst. field experiments, R. I. Exp. Sta*, 07- Soc. Agron. Soil treatment; crop culture.
- Dana, Dr. Charles L(oomis)**, 53 W. 53d St, New York, N. Y. **Nervous and mental diseases, Medicine*. Woodstock, Vt, March 25, 52. A.B, Dartmouth, 72, A.M, 75, LL.D, 05; M.D, Columbia, 77. *Prof. physiol, Woman's Med. Col, N. Y. Infirm*, 80-88; nervous diseases, Dartmouth, 84; nervous and mental diseases, Post-Grad. Med. Sch, 86-98; *nervous diseases, med. col, Cornell*, 99- Visiting physician, Bellevue Hosp; formerly asst. ed, 'Med. Record.' A.A.; Am. Physicians; Psychol. Ass; Neur. Ass; Am. Acad. Med. (pres); Social Sci. Ass; N. Y. Acad. Med. (pres); N. Y. Psychiat. Soc. (pres, 13). Public health; neurology; psychiatry; physiology; psychology; archeology; the applications of modern doctrines of pathology to neuropathology; pathology of paralysis agitans of the combined sclerosis of douloureux; cerebral localization of cutaneous sensations; alcoholism; alcoholic meningitis; degenerative diseases of the brain and cord.
- Dana, Prof. E(dward) S(alisbury)**, 24 Hillhouse Ave, New Haven, Conn. **Mineralogy*. New Haven, Nov. 16, 49. A.B, Yale, 70, A.M, 74, Ph.D, 76; Heidelberg and Vienna, 72-74. Tutor physics, Yale, 74-79, asst. prof, 79-90, *prof. physics and curator miner*, 90-18, *emer. prof*, 18- Ed, 'Am. Jour. of Science,' 75- Nat. Acad; A.A.; Geol. Soc; Physical Soc; Philos. Soc; Am. Acad; London and Edinburgh Geol. Societies; Cambridge Philos. Soc. Crystallography.
- Dana, Samuel T(rask)**, R. F. D. 1, Bethesda, Md. *Forestry*. Portland, Maine, April 21, 83. A.B, Bowdoin, 04; M.F, Yale, 07. Asst, U. S. *Forest Service*, 07-09; *asst. chief, forest investigations*, 10-18, *branch of research*, 20- Soc. Foresters (treas, 10-13, 16, mem. exec. council, in charge admissions, 19-); Ecol. Soc. Forest ecology; measurements and valuations.
- Dancey, Prof. Lloyd S(lote)**, Waukesha, Wis. *Physics*. Fairbury, Ill, Feb. 5, 79. A.B, Illinois, 07, A.M, 08; Chicago. *Prof. physics, Carroll*, 08- Physical Soc. Temperatures in the mercury are.
- Danchakoff, Prof. Vera**, 437 W. 59th St, New York, N. Y. *Anatomy*. Petrograd, Russia, March 21, 79. Grad, Gymnasium, Petrograd, 94; M.D, Lausanne, 02; Kharkov, 03; Petrograd Acad. Med, 07. Privat docent, Moscow, 08; prof. histol. and embryol, Moscow Med. Sch, 10-11; instr. *anat, Columbia*, 16, *asst. prof*, 17- Ass. Anat; N. Y. Acad; French Soc. Anat; Anat. Gesell. Embryology; cytology; immunity; histogenesis of blood; digestive capacity of the mesenchyme in relation to immunity.
- Dandeno, Prof. J(ames) B(rown)**, Department of Education, Toronto, Can. *Botany*. Guelph, Ont, Feb. 2, 62. B.A, Queen's (Can), 95; A.M, Harvard, 99, Ph.D, 04. Science master, high sch, Newburgh, 88-96; principal, Williamstown, 96-98; teacher bot, St. Louis Nor. Sch, 01-02; asst. prof, Mich. Agr. Col, 02-10; principal, Bowmanville High Sch, 10-15; *inspector, agr. classes, Dept. Educ, Toronto, Can*, 15- Asst. bot, summer sch, Harvard, and asst. bot. museum, 99-01. Absorption of water by leaves; effects of solutions upon leaves; normal solutions; seed dispersion; the relation of mass action and physical affinity to toxicity; colors as vital stimuli; interaction of plant roots; Puccinea malvacearum; osmotic theories and van't Hoff's law; Sclerotinia fructigena; Didymaria perforans; stimulus to the production of cellulose and starch; toxic action of Bordeaux mixture; plant roots as modifiers of soil; elementary agriculture and horticulture.
- Dandy, Dr. Walter E(dward)**, Johns Hopkins University, Baltimore, Md. *Surgery*. Sedalia, Mo, April 6, 86. A.B, Missouri, 07; A.M, Hopkins, 11, M.D, 10. *Assoc. surg, Hopkins*. Surgery of the brain.
- Danforth, Prof. C(harles) H(askell)**, Washington University School of Medicine, St. Louis, Mo. *Anatomy*. Oxford, Maine, Nov. 20, 83. A.B, Tufts, 08, fellow, 08-09, A.M, 10; Ph.D, Washington (St. Louis), 12. Instr. biol, Tufts, 10-11; teaching fellow *anat*, Harvard Med. Sch, 10-11; instr, *Washington (St. Louis)*, 08-14, *assoc*, 14-16, *assoc. prof*, 16- A.A.; Ass. Anat; Eugenics Research Ass; Anthropol. Ass; St. Louis Acad. (rec. sec'y, 14-18). Physical anthropology; human variation and heredity.
- Danforth, Prof. Ralph E(merson)**, 115 N. Sixth Ave, New Brunswick, N. J. *Ecology*. Philadelphia, Pa, Oct. 1, 77. A.B, Michigan, 08, M.S, 19; foreign study. Director, Jaffrey Nature

- Class, Jaffrey, N. H., 14-17; instr. *zool.*, Rutgers, 17-19, *asst. prof.*, 19- Human and animal ecology; racial progress.
- Danforth, Prof. R(aymond) H(ewes)**, Case School of Applied Science, Cleveland, Ohio. *Mechanical engineering*. Salem, Mass., Nov. 8, 77. B.S., Mass. Inst. Tech., 98. Mem. staff, U. S. Naval Eng. Exp. Sta., Annapolis, 08-11; *asst.* to head of post-grad. dept., U. S. Naval Acad., 11-14; *prof. and head, dept. mech. and hydraul.*, Case, 14- *Mech. Eng.* (chairman, fuel oil research committee); Eng. Educ.; West. Pa. Eng. Soc.; Cleveland Eng. Soc. Heat transmission in boilers; economizers and condensers; utilization of fuels; flow of fluids.
- Daniel, Prof. John**, Vanderbilt University, Nashville, Tenn. *Physics*. Perry Co., Ala., July 6, 63. A.B., Alabama, 84, A.M., 86; Hopkins, 86-88; Berlin, 92. *Asst. prof. physics*, Alabama, 84-86; *asst.*, Vanderbilt, 88-89, instr., 89-90, *adj. prof.*, 90-94, *prof.*, 94- Mem. jury awards, Tenn. Centennial Expos, 97. A.A. Voltmeter polarization; X-rays, including the depilatory and burning effect; photometry.
- Daniel, Prof. J(ohn) Frank(lin)**, University of California, Berkeley, Calif. *Zoology*. O'Fallon, Mo., July 31, 73. B.S., Chicago, 06; fellow, Hopkins, 07-08, Adam T. Bruce fellow at Pasteur Inst., Lille, France, 08-09, Ph.D., 09. With Educ. Dept., P. I., 01-05; instr. *zool.*, Michigan, 09-10; comp. anat., California, 10-11, *asst. prof. zool.*, 11-17, *assoc. prof.*, 17-19, *prof.*, 19- A.A.; Soc. Zool.; West. Soc. Nat. Adaptation and immunity; tolerance produced by alcohol; anatomy of elasmobranch fishes.
- Daniel, Zaccheus**, Allegheny Observatory, Pittsburgh, Pa. *Astronomy*. Hawthorn, Pa., Nov. 14, 74. B.S., Princeton, 08, Thaw fellow, 08-10, A.M., 09. *Asst.*, Princeton Observatory, 03-08; *Allegheny Observatory*, 10- Three Donohoe comet medals, Pacific Astron. Soc. Astron. Soc.; hon. mem. Soc. Astron. de Mex.; Soc. astron. de France. Variable stars; orbits of spectroscopic binaries; stellar parallax.
- Daniell, Prof. P(ercy) J(ohn)**, 5108 LaBranch St., Houston, Tex. *Mathematics*. Valparaiso, Chile, Jan. 9, 89. B.A., Cambridge, 10, M.A., 14; traveling fellow, Rice Inst., 12-13. *Asst. lecturer math.*, Liverpool, 11-12; *asst. prof. applied math.*, Rice Inst., 13-20, *prof.*, 20- Senior wrangler math., Cambridge, 09, first class physics tripos, 10, Rayleigh prize, 12. Math. Soc.; Math. Ass. End correction for resistance columns; general integrals.
- Daniels, Prof. Amy L(ouise)**, University of Iowa, Iowa City, Iowa. *Biochemistry*. Boston, Mass. B.S., Columbia, 06; Ph.D., Yale, 12. *Asst. prof. home econ.*, Missouri, 11-14; *assoc. prof.*, Wisconsin, 14-17, *prof. nutrition*, 17-18; *child welfare research sta.*, Iowa, 18- Biochem. Soc. Nutrition.
- Daniels, Dr. Farrington**, 1162 Emerald St., Madison, Wis. *Physical chemistry*. Minneapolis, Minn., March 8, 89. B.S., Minnesota, 10, M.S., 11; Ph.D., Harvard, 14. Instr. and *asst. prof. chem.*, Worcester, 14-18; electrochemist, U. S. Fixed Nitrogen Lab., 19-20; *asst. prof.*, Wisconsin, 20- Lieut., C. W. S., 18- A.A.; Chem. Soc. Thermochemistry; exact calorimetry; nitrogen fixation; reaction velocity.
- Daniels, Prof. Francis (Potter)**, Tucson, Ariz. *Botany*. Ionia, Mich., Aug. 1, 69. A.B., Michigan, 95; A.M., Missouri, 97, Ph.D., 05; Hopkins scholar, Harvard, 97-98. Acting director for. lang., Manual Training High Sch., Kansas City, Mo., 06; *prof. romance lang.*, Cornell (Iowa), 06-09; Wabash, 09-16; *asst. prof. modern lang.*, Mo. Sch. of Mines, 16-20; *romance lang.*, Arizona, 20- Fellow, Kahn Foundation Foreign Travel for Am. Teachers, 11-12; *prof. romance lang.*, Columbia, summer, 16. A.A.; Modern Lang. Ass.; Ass. Phonétique Int. Ecology of the flora of Sturgis and Manistee, Mich., and of Columbia, Mo.; flora of Missouri and of Boulder, Colo.
- Daniels, Fred C(linton) T(ilton)**, Wheeling Mold and Foundry Co., Wheeling, W. Va. *Metallurgy*. Starkesboro, Vt., Jan. 22, 82. A.B., Worcester, 04. Chemist, Mackintosh, Hemphill and Co., 04-12; *asst. supt. and metallurgist*, Pittsburgh Iron and Steel Foundries, 12-14; *metallurgist*, Wheeling Mold and Foundry Co., 14- Sand research, Am. Foundrymen's Ass. A.A.; Chem. Soc. Lead, antimony, nickel and tin alloys; sand; iron and steel metallurgy.
- Daniels, Prof. Joseph**, University of Washington, Seattle, Wash. *Mining engineering*. New York, N. Y., Aug. 8, 84. B.S., Mass. Inst. Tech., 05; M.S., Lehigh, 08. Engineer, Dominion Coal Co., 05-06, geologist, summer, 07; instr. mining eng., Lehigh, 07-08, *asst. prof.*, 08-10, *assoc. prof.* and acting head of dept., 10-11; *assoc. prof. mining eng. and metal.*, Washington (Seattle), 11- Geologist, Wash. Geol. Surv., 11-17. A.A.; Min. Eng.; Eng. Educ. Metallurgy; coal mining; fuels; mineral resources.
- Dannerth, Dr. Frederic**, 539 76th St., Brooklyn, N. Y. *Chemistry*. Philadelphia, Pa., June 18, 81. Royal Tech. Col., Berlin; Würzburg; Ph.D., Freiburg, 06. Prof. indust. chem., Phila. Textile Sch., 06-07; consulting indust. chem., 06-20; *gen. manager*, Rubber Trade Lab, Newark, N. J., 12- Lecturer textiles, Univ. Extension, N. Y. City, 08-09; exec. sec'y, Int. Rubber Cong., N. Y. City, 12. Chem. Soc.; Chem. Eng.; German Tech. Soc. Phila. Chemistry of rubber and related gums, textile fibers and dyes.
- Dantzig, Dr. Tobias**, 4331 Katonah Ave., New York, N. Y. *Geometry*. Shavli, Russia, Feb. 19, 84. Paris, 09; Ph.D., Indiana, 17. Instr. math., Indiana, 15-18; *Columbia*, 19- Mathematician, ordnance dept., U. S. A., 19. Math. Soc. Geometry of plane transformations; Morley's theorem; the last theorem of Poincaré; the Poincaré transformation.
- Darbaker, Prof. Leasure Kline**, 7025 Hamilton Ave., Pittsburgh, Pa. *Bacteriology*. Pittsburgh, Jan. 13, 79. Ph.G., Ohio Northern, 00; Pittsburgh, 06, Phar.D., 09; Berlin, 08. Assoc. bacter. and pharmacog., col. pharmacy, Pittsburgh, 07-09, *asst. bot. and mat. med.*, 07-14, *prof. bacter. and pharmacog.*, 09- A.A.; Pharmacoeut. Ass.; Micros. Soc.; Am. Med. Ass.; Pittsburgh Bot. Soc. Pharmacognosy; plant pathology.
- Darling, Prof. C(hester) A(rthur)**, Allegheny College, Meadville, Pa. *Botany*. Leon, N. Y.,

- Oct. 4, 80. A.B, Albion, 04, A.M, 06; Ph.D, Columbia, 09. Prof. biol, Defiance, 04-06; asst. bot, Columbia, 06-08, instr, 08-13; *prof. biol, Allegheny, 18-* A.A.; Bot. Soc; Soc. Baet. Cytology; bacteriology.
- Darling, Dr. E(ugene) A(braham)**, 33 Concord Ave, Cambridge, Mass. *Medicine*. Troy, N. Y., April 17, 68. A.B, Harvard, 90, A.M, M.D, 94; Edinburgh. Asst. bacter, Harvard Med. Sch, 94-98, instr. hygiene, Harvard, 99-08, asst. prof. physiol, 08-13. Bacteriologist, Board of Health, Cambridge, Mass; visiting surgeon, Cambridge Hosp. Ass. Path. and Baet; Am. Med. Ass. Effects of training; hygiene; bacteriology; physiology.
- Darling, Dr. J(ohn) H(enry)**, 532 W. Third St, Duluth, Minn. *Civil engineering, Astronomy*. C.E, Michigan, 73, D.Eng, 15. Asst. engineer, U. S. Lake Surv, 73-82; U. S. River and Harbor Improvements, 83-13; builder, *Duluth Astron. Observatory, 15-16, director, 17-* Mem. solar eclipse exped. to Frazer, Colo, 18. A.A; Civil Eng; Am. Geog. Soc. Magnetic declinations; river and harbor improvements; convergent point in auroras.
- Darling, Philip G(renville)**, 5 Watson St, Boston, Mass. *Mechanical engineering*. Somerville, Mass, May 25, 78. A.B, Harvard, 01; B.S, Mass. Inst. Tech, 05. *Engineer, Manning, Maxwell and Moore, 05-10; E. I. duPont de Nemours and Co, 10-19; Manning, Maxwell and Moore, 19-* Mem. Am. Mission of Munitions of War, 17. Mech. Eng. (chairman, research committee, div. safety valves, 12). Safety valves.
- Darling, Dr. Samuel T(aylor)**, Rockefeller Foundation, 61 Broadway, New York, N. Y. *Tropical medicine*. Harrison, N. J., April 6, 72. M.D, Col. Physicians and Surgeons, Baltimore, 03. Res. pathologist, City Hosp, Baltimore, 03-05; intern and physician, Ancon Hosp, C. Z, 05-06; chief of lab, Isthmian Canal Commission, 06-15; chairman, Malaya Board, Rockefeller Foundation, 15-17; *prof. hygiene, Faculdade de Med, São Paulo, Brazil, 17-* With W. C. Gorgas on sanit. exped. to Africa, 13-14; chairman of board, Rockefeller Foundation exped. to Malay Peninsula, Java, Sumatra and Fiji, 15-17. Am. Med. Ass; Soc. Trop. Med; cor. mem. Wash. Helminth. Soc; C. Z. Med. Ass. (pres, 08); hon. fel. London Soc. Trop. Med. and Hygiene; cor. mem. Soc. de Path. exot; cor. mem. Soc. de Med. e Cirurgia Brazil. Parasitology; malaria; tropical dysentery; pathogenic horse trypanosome of Panama; hookworms.
- Darlington, Prof. H(enry) T(ownsend)**, Michigan Agricultural College, East Lansing, Mich. *Botany*. West Chester, Pa, June 23, 75. B.S, Idaho, 03; Colo. Col, 05; M.S, Harvard, 11. Chief engineer, Idaho-Iowa Lateral and Reservoir Co, Boise, Idaho, 04; mem. eng. staff, Great West. Sugar Co, Denver, Colo, 05-09; instr. and asst. prof. bot, Wash. State, 11-14; *asst. prof. and curator, herbarium, and director, bot. garden, Mich. Agr. Col, 14-* Temporary asst, Gray Herbarium; bot. exped. to Newfoundland, 11. A.A; Bot. Soc; Mich. Acad. Systematic botany; ecology; forage; distribution; flora of Michigan.
- Darlington, Dr. Thomas**, 61 Broadway, New York, N. Y. *Medicine*. Brooklyn, N. Y., Sept. 24, 58. C.E, N. Y. Univ; M.D, Columbia, 80. *Practising physician, 80-* Commissioner and pres, N. Y. Board of Health, 04-10; prof. anat, surg, path. and hygiene, N. Y. Col. Dentistry; mem. N. Y. State Workmen's Compensation Commission, 14-15; consulting physician, various hospitals. Major, M. R. C, 17. Climat. Ass. (pres, 07); Ass. Tuber; Am. Med. Ass; Soc. Med. Juris; Medico-Legal Soc; Min. Eng; Iron and Steel Inst. (sec'y); Inst. Social Sci. Climatology; sanitation.
- Darnall, Dr. William Edgar**, 1704 Pacific Ave, Atlantic City, N. J. *Surgery*. Pearisburg, Va, April 9, 69. A.M, Washington and Lee, 92; M.D, Virginia, 95. *Gynecologist, Atlantic City Hosp, 98-* Physician, Mercer House for Invalid Women, 99-09; consulting surgeon, N. A. Sanitarium for the Treatment of Surg. Tuber, 12-; pres, Atlantic Co. Mosquito Extermination Commission. A.A; Am. Med. Ass. (v. pres, 14); Col. Surg; Am. Acad. Med. (v. pres, 12); Ass. Obstet. and Gynec; Climat. Ass; Hosp. Clin. Ass. (pres); N. Y. Acad. Med; N. J. Mosquito Exterm. Ass. (past pres). Gynecology.
- Darrach, Prof. William**, Columbia University, New York, N. Y. *Surgery*. Germantown, Pa, March 12, 76. A.B, Yale, 97, hon. A.M, 20; A.M, M.D, Columbia, 01. Demonstrator anat, Columbia, 03-06, assoc, 06-09, instr. clin. surg, 06-16, prof, 16-19, *assoc. prof. surg. and dean, med. faculty, 19-* Second asst, first asst. and later junior visiting surgeon, Roosevelt Hosp, 06-03; assoc. attending surg, Presb. Hosp, 13-16; director, surg. div, Bellevue Hosp, 16- With B. E. F. from capt. to col, M. C, A. E. F. Ass. Anat; fel. Surg. Ass; Soc. Clin. Surg; Am. Med. Ass; N. Y. Acad. Med; Soc. int. de Chirurg. Surgery; fractures.
- Darrow, Geo(rge) M(cMillan)**, U. S. Department of Agriculture, Washington, D. C. *Horticulture*. Springfield, Vt, Feb. 2, 89. A.B, Middlebury, 10; A.M, Cornell, 11. *Asst. pomologist, bur. plant indust, U. S. Dept. Agr, 11-* A.A; Soc. Hort. Sci; Wash. Bot. Soc. Culture, breeding and taxonomy of small fruits.
- Darrow, Dr. Karl K(elchner)**, 610 W. 111th St, New York, N. Y. *Physics*. Chicago, Ill, Nov. 26, 91. Ph.D, Chicago, 17; Paris and Berlin, 11-12. *Physicist, West. Elec. Co, 17-* A.A; Physical Soc. Velocity of sound in gases; electricity.
- Darton, N(elson) H(oratio)**, U. S. Geological Survey, Washington, D. C. **Geology*. New York, N. Y., Dec. 17, 65. Pub. schools. *Geologist*, U. S. Geol. Surv, 86-10; U. S. Bur. Mines, 10-13; *U. S. Geol. Surv, 13-* A.A; Geol. Soc; Ass. Geog; Min. Eng; Min. and Metal Soc; Wash. Acad; Wash. Geol. Soc; Soc. géol. de France; Geol. Gesell. Bibliography of North American geology; Appalachian geology; Newark rocks of New Jersey; artesian waters of South Dakota and Nebraska; geology of the Great Plains, Big Horn Mountains, Black Hills and Laramie Basin, Wyo; underground waters of western United States; underground temperatures of the United States; the northern anthracite coal field; red beds and structures of New Mexico; the Grand Canyon of the Colorado.

- Dash, J(ohn) S(ydney)**, Pointe-à-Pitre, Guadeloupe, West Indies. *Agriculture*. Barbados, W. I. April 9, 87. B.S.A. McGill, 13. Plant pathologist, B.C. 13-14; asst. director agr, Barbados, 14-18; *director, Station Agron, Guadeloupe*, 19- Collaborator, 'Bot. Abstracts,' 19. Phytopath. Soc. Entomology; mycology; sugar cane.
- Dashiell, Prof. J(ohn) F(rederick)**, Chapel Hill, N. C. *Psychology*. Southport, Ind. April 30, 88. B.S. Moore's Hill, 08, B.L. 09; A.M. Columbia, 10, Ph.D. 13. Asst. philos. Columbia, 10-13; prof. edue. Waynesburg, 13-14; instr. philos. Princeton, 14-15; Minnesota, 15-16, *psychol.* 16-17; asst. prof. Oberlin, 17-19; assoc. prof. *North Carolina*, 19-20, *prof.* 20- A.A.; Psychol. Ass; Philos. Ass; Soc. Col. Teachers Educ. Esthetic perceptions; maze construction; maze learning by rats and children; learning in motor and mental functions.
- Daugherty, Prof. Robert L(ong)**, 373 S. Euclid Ave, Pasadena, Calif. *Mechanical engineering*. Irvington, Ind. 85. A.B. Stanford, 09; M.E. 14. Instr. mech. eng. Stanford, 09-10; asst. prof. Cornell, 10-16; *prof.* Rensselaer, 16-19; *mech. and hydraulic eng. Calif. Inst. Tech.*, 19- Mech. Eng; Eng. Educ. Hydraulic engineering; turbines; centrifugal pumps.
- Davenport, Dr. Bennett F(ranklin)**, 34 School St. Boston, Mass. *Medicine, Chemistry*. Cambridge, Mass. May 28, 45. A.B. Harvard, 67, A.M. 70, M.D. 71; M.D. Columbia, 71. Coroner, Boston, 75, milk inspector, 82-85; prof. chem. Mass. Col. Pharm. 79-86; analyst, Mass. State Board of Health, 82-92; Mass. State Dairy Bur. 92-20; *consulting medico-legal expert*, 20- Chairman, Board of Health, Park and Water Boards, Watertown, Mass. A.A.; Chem. Soc; Am. Med. Ass; Mass. Medico-Legal Soc; Boston Soc. Med. Improv; London Chem. Soc; Soc. chim. de Paris; Chem. Gesell. Identification of questioned writings.
- Davenport, Prof. Cha(rle)s B(enedict)**, Station for Experimental Evolution, Cold Spring Harbor, N. Y. *Zoology*. Stamford, Conn. June 1, 66. B.S. Brooklyn Polytech, 87; A.B. Harvard, 89, A.M. 90, Ph.D. 92. Asst. zool. Harvard, 88-91, instr. 91-99; asst. prof. Chicago, 99-01, assoc. prof. 01-04; *director, sta. for exp. evolution, Carnegie Institution*, 04-, *eugenics record office*, 10- Director, biol. lab. Cold Spring Harbor, 98-; ed., 'Cold Spring Harbor Monographs'; co-editor, 'Jour. Exp. Zool.', 'Genetics.' Major in charge anthrop. S. G. O. Nat. Acad; A.A. (v. pres, 03); Soc. Nat. (v. pres, 06); Soc. Zool. (pres, 07); Soc. Exp. Biol; Ecol. Soc; Anthrop. Soc; Bison Soc. (board of managers); Entom. Soc; Harvey Soc; Ass. Study Feeble-minded; Philos. Soc; Am. Acad; Galton Soc. (pres, 18-20); Inst. Social Sci; N. Y. Acad. (v. pres, 10); N. Y. Zool. Soc; Wash. Acad; Boston Soc. Nat. Hist; assoc. Belgian Acad. Experimental evolution; eugenics; budding in Bryozoa; morphogenesis; variation; experimental breeding; reactions of animals; heredity of eye, hair and skin color, temperament and stature in man; heredity in animals and man.
- Davenport, Mrs. C. B. (Gertrude Crotty)**, Cold Spring Harbor, N. Y. *Zoology*. Asequa, Colo. Feb. 28, 66. B.S. Kansas, 89; Radcliffe, 92-94. Instr. zool. Kansas, 89-92; micros. methods, biol. lab, Cold Spring Harbor, 98-03. Soc. Zool. Embryology of the turtle; variation in *Sagartia*; variation in starfish at Cold Spring Harbor; variation in organisms; heredity in man.
- Davenport, Prof. E(ugene)** 805 S. Wright St, Champaign, Ill. *Agriculture*. Woodland, Mich. June 20, 56. B.S. Mich. Agr. Col. 78, M. Agr. 95, LL.D. 07. Prof. agr. Mich. Agr. Col. 89-91; pres. Ezeola Agron, Piracicaba, Brazil, 91-92; *dean, col. agr. and director, Exp. Sta, Illinois*, 95-, v. *pres, Illinois*, 20- A.A. (v. pres, 16); Soc. Prom. Agr. Sci. Breeding; education; statistical evolution.
- Davey, Dr. Wheeler P(edlar)**, General Electric Co, Schenectady, N. Y. *Physics*. Cleveland, Ohio, March 19, 86. A.B. Western Reserve, 06; M.S. Pa. State, 11; Ph.D. Cornell, 14. Instr. physics, Pa. State, 10-11; Cornell, 12-14; *physicist, research lab, Gen. Elec. Co.*, 14- Physical Soc. Effect of X-rays on living tissue; emulsions; radiography of metals.
- Davidson, Dr. A(nstruther)**, 419 S. Alvarado St, Los Angeles, Calif. *Botany, Entomology*. Caithness, Scotland, Feb. 19, 60. M.B. C.M. Glasgow, 81, M.D. 87. *Practising physician*, 87-; *assoc. prof. dermatol, Southern California*, 09- A.A.; fel. S. Calif. Acad. (pres, 93, ed, 02); cor. mem. Phila. Entom. Soc. Field botany of southern California and Arizona; habits and parasites of bees and wasps.
- Davidson, Prof. J(ames) G(rant)**, University of British Columbia, Vancouver, B. C. *Physics*. Union, Ont. Aug. 15, 74. A.B. Toronto, 00; Ph.D. California, 07. Prof. science, Columbian (B. C.), 00-05; asst. *physics, California*, 06-07; *prof, McGill Univ. Col. of B. C.*, 07- A.A.; Physical Soc; B. C. Acad. (v. pres, 09). Ionization; precipitation of suspended particles from gases on a technical scale.
- Davidson, Prof. J(ay) Brownlee**, Iowa State College, Ames, Iowa. *Agricultural engineering*. Douglas, Nebr. Feb. 15, 80. B.S. (M.E.) Nebraska, 04, A.E. 14. Experimentalist, Deere and Co, 04; adj. prof. farm mechanics, Nebraska, 05; *prof. agr. eng, Iowa State*, 05-15; California, 15-19; *Iowa State*, 19- A.A.; Agr. Eng. (past pres, sec'y-treas); Eng. Educ. Farm machinery, buildings and power.
- Davidson, Dr. Jehiel**, U. S. Department of Agriculture, Washington, D. C. *Chemistry*. Russia. B.S. Cornell, 11, Ph.D. 14. Asst. instr. chem. Cornell, 12-13; *soil chemist, bur. chem, U. S. Dept. Agr.*, 13- Chem. Soc; Agr. Chem. Chemistry of plants; nitrogen in plants; soil toxicity.
- Davidson, John**, University of British Columbia, Vancouver, B. C. *Botany*. Aberdeen, Scotland, Aug. 6, 78. Gordon's Col; Aberdeen. Asst. bot. Aberdeen, 93-11; provincial botanist, B. C. 11-16; *in charge, herbarium and bot. gardens, British Columbia*, 16-, *instr. bot.* 17- Director, Vancouver Museum, 16-18. Ecol. Soc; Torrey Bot. Club; Forestry Ass; B. C. Acad. (hon. sec'y, 16-19); B. C. Entom. Soc. (mem. advisory board); Vancouver Nat. Hist. Soc. (pres, 17-); Vancouver Inst. (hon. sec'y, 17-20); fel. Edinburgh Bot. Soc; fel. London Lin-

nean Soc. Economic botany, trees and botanical survey of British Columbia.

Davidson, Dr. J(oseph) G(eorge), Mellon Institute, Pittsburgh, Pa. *Chemistry*. New York, N. Y., Feb. 7, 92. A.B., Southern California, 11, A.M., 12; fellow, Columbia, 17-18, Ph.D., 18. Instr. chem, Los Angeles Junior Col, 14-16; physical chem, Columbia, 18; fellow, Mellon Inst, 19- Chem. Soc. Petroleum; natural gas condensate; aromatic hydrocarbons.

Davies, Dr. A(rthur) E(rnest), 1512 N. Tejon St, Colorado Springs, Colo. *Philosophy, Psychology*. London, England, March 18, 67. Owens Col, Manchester, and Univ. Col, London, 84-88; B.D., Yale, 91, Ph.D., 98. Instr. philos, Ohio State, 00-06, asst. prof, 06-08, prof, 08-19; philos. and psychol, Colo. Col, 19- A.A.; Psychol. Ass; Ass. Prof. The concept of change; psychology of esthetic reaction to rectangular forms; elementary psychic process; imagination and thought in human knowledge; genetic ethics; the personal and the individual; genesis of ideals; the good and the bad; education and philosophy; the moral life.

Davis, Albert Gould, General Electric Co, Schenectady, N. Y. *Law, Electrical engineering*. Brooklyn, N. Y., Oct. 19, 71. B.S., Mass. Inst. Tech, 93; M.L., Nat. Univ, 97. Engineer, Davis Colby Ore Roaster Co, Middlesboro, Ky, 93; asst. examiner, U. S. Patent Office, 94-96; practising attorney, Washington, D. C, 96-97; manager, patent dept, *Gen. Elec. Co*, 97-19, v. pres, 19- Elec. Eng; Bar Ass.

Davis, A(lex) Brooking, 2929 Observatory Road, Cincinnati, Ohio. *Chemistry*. Prairie City, Ill, Sept. 16, 82. Ala. Polytech, 04-05. Plant operator, The Smet Solvay Co, 00-07; chemist, Ind. Gas Ass, 07-12; research chemist, dept. exp. med, Eli Lilly and Co, 12-17; *chem. director, The Ault and Wiborg Co*, 17- Chem. Soc. (chairman various sections). Quinolin carboxylic acids; halogen ketones; amino alcohols; local anesthetics.

Davis, Dr. A(lva) R(aymond), University of California, Berkeley, Calif. *Plant physiology*. Cascade, Iowa, Feb. 15, 87. A.B., Pomona, 12; Lackland fellow, Mo. Bot. Garden, 12-15, Ph.D., Washington (St. Louis), 15. Asst. Mo. Bot. Garden, 15-16; asst. prof. plant path. and physiol, Nebraska, 16-19; *instr. soil. chem. and bacter, California*, 19- Instr. Woods Hole, summers, 13, 14; in charge bot, Pomona, summer, 15. Capt, C. A., 17-19. A.A.; Bot. Soc. Plant enzyme action; physiology of the fungi; plant nutrition; energy relations of bacteria.

Davis, Arthur P(owell), U. S. Reclamation Service, Washington, D. C. *Civil engineering*. Decatur, Ill, Feb. 9, 61. B.S., George Washington, 88, Sc.D., 17. Topographer, U. S. Geol. Surv, 85-94, hydrographer, 94-98; chief hydrographer, Isthmian Canal Commission, 98-01; asst. chief engineer, U. S. Reclamation Service, 02-06, chief engineer, 06-20, director, 14- Consulting engineer, Panama Canal, 09; mem. Reclamation Commission, 13- A.A.; Civil Eng. (pres, 20); Forestry Ass; Wash. Acad. Irrigation engineering; irrigation and water supply in arid regions of the United States, especially in Arizona; hydrography of Nicaragua and of the American

Isthmus; irrigation projects of the United States government.

Davis, Dr. Benj(amin) F(ranklin), 25 Tenth Ave. E, Duluth, Minn. *Surgery*. Chicago, Oct. 13, 84. A.B., Wisconsin, 07; Ph.D., Chicago, 10, M.D., Rush Med. Col, 12, Senn fellow, 13-14. Asst. attending surgeon, Presb. Hosp, 13-20; instr. surg, Rush Med. Col, 13-20; *surgeon, Acad. Clin. Med, Duluth, Minn*, 20- Assoc. attending physician, Children's Mem. Hosp, 17-20; ed, 'Surg. Clinics of Chicago,' 17-20. Am. Med. Ass; Chicago Inst. Med. Pathology; blastomycosis; Rocky Mountain spotted fever; anesthesia; paraffin cancer; pathological physiology of pleural cavity.

Davis, Prof. B(enjamin) M(arshall), Miami University, Oxford, Ohio. *Zoology, Education*. North Salem, Ind, June 15, 67. B.S., Butler, 90, M.S., 92; Stanford, 95; Chicago, 96-97; California, summers, 00, 02, 03, 04, Ph.D., 06. Acting prof. chem, Butler, 91-92; prof. chem. and physiol, Garfield, 92-93; biol, Whittier, 93-95; Butler, 95-97; State Nor. Sch, Los Angeles, 97-04; res. naturalist, Marine Biol. Sta, San Diego, 04-05; *prof. biol, State Nor. Sch, Chico*, 05-07; *Miami*, 07- A.A.; Nature Study Soc; Ohio Acad. Pineal structures in Amia; ecology and development of enteropneusts; school gardens; agricultural education in the public schools; science teaching.

Davis, Prof. Bergen, Columbia University, New York, N. Y. **Physics*. White House, N. J., March 31, 69. B.S., Rutgers, 96; fellow, Columbia, 99-00, A.M., 00, Ph.D., 01, John Tyndall fellow, 01-03, at Göttingen, 01-02, Cambridge, 02-03, Adams research fellow, 07-09. Teacher, N. Y. City, 96-99; asst. physics, Columbia, 00-01, tutor, 03-07, instr, 07-09, adj. prof, 09-13, assoc. prof, 13-19, prof, 19- A.A.; Physical Soc. Sound waves; motion of ions in varying magnetic field; electrical phenomena of various gases in the electrodeless discharge; coronal discharge; ionization by impact; ionization and emission of radiation; X-ray emission.

Davis, Prof. Bradley Moore, University of Michigan, Ann Arbor, Mich. **Botany*. Chicago, 11, Nov. 19, 71. Indiana, 88-91; A.B., Stanford, 92; Harvard, 93, A.M., 94, Ph.D., 95. Asst. bot, Chicago, 95-96, assoc, 96-98, instr, 98-02, asst. prof, 02-06; Pennsylvania, 11-14, prof, 14-19; *Michigan*, 19- Head instr. bot, Woods Hole, 97-06, in charge bot, biol. surv, 03-09; assoc. ed, 'Genetics'; ed, statist. div, Food Ad, 18. A.A.; Soc. Nat. (sec'y, 13-19); Bot. Soc; Philos. Soc; Am. Acad; New Eng. Bot. Club; Int. Ass. Bot. Morphology and cytology of fungi, algae and liverworts; cytology and genetics of Oenothera; life histories; plant evolution.

Davis, Dr. Carl B(raden), 122 S. Michigan Ave, Chicago, Ill. *Surgery*. Chicago, Oct. 9, 77. A.B., Chicago, 00, M.D., Rush Med. Col, 03. Assoc. prof. surg, Rush Med. Col. Mem. surg. staff, Presb. Hosp, Chicago. Surg. Ass; Soc. Clin. Surg.

Davis, Charles Henry, Bass River, Cape Cod, Mass. *Engineering*. Montgomery Co, Pa, May 4, 65. C.E., Columbia, 87. Expert, Lynn factory, Thomson-Houston Elec. Co, 87; engineer

- and asst. to pres, Sawyer-Man Elec. Co, 87-88; engineer and supt. of construction, Westinghouse Elec. and Mfg. Co, 88-89; *consulting engineer*, Phila, Boston and N. Y. City, 89-Exec. officer in various companies. A.A.; Math. Soc.; Civil Eng; Elec. Eng; Mech. Eng; Min. Eng; Naval Archit. and Marine Eng; Naval Eng; Heat. and Vent. Eng; Franklin Inst; West. Soc. Eng; N. Y. Acad; Can. Soc. Civil Eng; British Iron and Steel Inst; British Inst. Elec. Eng; Scottish Inst. Eng. and Shipbuilders; N. of England Inst. Min. and Mech. Eng; Irish Inst. Civil Eng; New South Wales Eng. Ass. and other American and foreign societies. Railroad and street railway engineering, operation and management.
- Davis, Rear Admiral C(harles) H(enry)**, U. S. N., Navy Department, Washington, D. C. *Astronomy*. Cambridge, Mass, Aug. 28, 45. Grad, U. S. Naval Acad, 64. All grades from ensign to rear admiral, U.S.N., 61-; supt, U. S. Naval Observatory, 97-02 (except April-Sept, 98). Divisional commander, battle ship squadron, North Atlantic fleet, U.S.N. A.A.; Wash. Philos. Soc; hon. mem. Soc. Astron. de Mex. Differences of longitude measured by use of submarine cables.
- Davis, Dr. D(avid) J(ohn)**, 721 Elmwood Ave, Wilmette, Ill. *Pathology*. Racine, Wis, Aug. 9, 75. B.S., Wisconsin, 98; M.D., Rush Med. Col, 03, fellow, 03-04, research student, McCormick Inst. for Infectious Diseases, 04-05, Ph.D., Chicago, 05. Instr. path. and med, Rush Med. Col; *prof. path. and bact. and head of dept*, Illinois. Pathologist, Presb, St. Joseph and St. Luke's Hospitals, Chicago. A.A.; Ass. Path. and Baet; Soc. Clin. Invest; Am. Med. Ass. The spinal cord; influenza infections; bacteriology of meningitis; bacteriology of whooping cough; urinary infections; pathology of sporotrichosis.
- Davis, Prof. Donald W(alton)**, College of William and Mary, Williamsburg, Va. *Zoology*. Frazer, Pa, Feb. 25, 82. A.B., Harvard, 05, Ph.D, 13. Asst. zool, California, 05-06; *prof. biol*, Sweet Briar, 07-09; *instr*, Radcliffe, 09-12; *asst. prof*, Clark, 12-14; *prof. biol*, De Pauw, 14-16; *zool*, William and Mary, 16-17, 19- A.A. Genetics; asexual reproduction in sea anemones; inheritance in Impatiens.
- Davis, Dr. George G(ilbert)**, 122 S. Michigan Boulevard, Chicago, Ill. *Surgery*. Jan. 4, 79. A.B., Chicago, 01, M.D., Rush Med. Col, 04. Assoc. prof. surg, Univ. Philippines, 13-14; *asst. prof*, Rush Med. Col, 19; *attending surgeon*, Cook Co. Hosp; *chief surgeon*, Ill. Steel Co. Surgeon, Philippine Gen. Hosp; civil surgeon and hon. lieut. col, Royal Army M.C, 15-16; major, M.C, 17-19, lieut. col, 19; *assoc. attending physician*, Presb. Hosp, Chicago. Col. Surg; Am. Med. Ass. Cancer.
- Davis, Prof. Geo(rge) Jacob, Jr**, University of Alabama, University, Ala. *Engineering*. Washington, D. C, June 28, 76. C.E., Cornell, 02. Instr. civil eng, Wisconsin, 02-03, hydraulic eng, 05-07, *asst. prof*, 07-12; *prof. civil eng. and dean, col. eng, Alabama*, 12- Research asst. hydraulics, Wisconsin, summers, 13, 14. Civil Eng; Eng. Educ; Water Works Ass. Experimental hydraulics; sewage treatment.
- Davis, Prof. Grace E(vangelina)**, 8 Norfolk Terrace, Wellesley, Mass. *Physics*. North Chelmsford, Mass, June 6, 70. A.B., Wellesley, 98, A.M, 05. Instr. *physics*, Wellesley, 99-08, *assoc. prof*, 08- A.A.; Physical Soc.
- Davis, Dr. Harold S(immonds)**, Mellon Institute, Pittsburgh, Pa. *Chemistry*. Clifton, N. S, April 19, 89. B.A., Dalhousie, 10, M.A., 12; Ph.D., Harvard, 14. Demonstrator physics, Dalhousie, 10-12; lecturer chem, Manitoba, 14-18; head, research dept, Koppers Co, Mellon Inst, 18-19, *fellow*, 19- Chem. Soc. Solutions; thermochemistry; light oil recovery; sulphur.
- Davis, Prof. Harvey N(athaniel)**, 19 Ash St, Cambridge, Mass. **Physics*. Providence, R. I, June 6, 81. A.B., Brown, 01, A.M, 02; Harvard, 03, Ph.D., 06. Instr. math, Brown, 01-02; physics and math, Harvard, 05-10, *asst. prof. physics*, 10-19, *prof. mech. eng*, 19- Engineer, Gen. Elec. Co, 17-18; with A. S, U.S.A., 18-19. A.A.; Physical Soc; Math. Soc; Am. Acad; Wash. Acad. Thermal properties of matter.
- Davis, Dr. H(erbert) B(urnham)**, 3202 Iowa St, Pittsburgh, Pa. *Psychology*. Charlestown, Mass, Aug. 17, 67. A.B., Bates, 90; Ph.D., Clark, 08. *Principal*, Southwestern State Nor. Sch, California, Pa, 09-12; *Pittsburgh Training Sch. for Teachers*, 12- Special agent, Pa. Dept. Health. A.A.; Psychol. Ass. Experimental psychology and pedagogy; the raccoon, a study in animal intelligence; minute structure of the axis cylinder; time reaction in binocular vision: tests for intellectual level in children in the elementary school; measurement of fatigue by ciliary musele; adult learning tests.
- Davis, Prof. H(erbert) P(erry)**, Moscow, Idaho. *Dairy husbandry*. Montagu, Mich, Aug. 22, 89. B.S.A., Missouri, 11; M.S., Pa. State, 14. Asst. dairy husbandry, Illinois, 11; *asst. and later instr. exp. dairy husbandry and ed*, dairy div, U. S. Dept. Agr, 14-19; *prof. dairy husbandry, Idaho, and v. director, Exp. Sta*, 19- A.A.; Dairy Sci. Ass.; West. Dairy Instr. Ass. Feeding, management and genetics of dairy cattle.
- Davis, Prof. H(erbert) S(pencer)**, Gainesville, Fla. *Zoology*. Oneida, N. Y, March 28, 75. Ph.B., Wesleyan, 99; Ph.D., Harvard, 07. Instr. *zool*, Wash. State, 01-04, *asst. prof*, 04-06; *prof*, Florida, 07- Investigator, Bur. Fisheries. A.A.; Soc. Zool; Micros. Soc. Parasitology; spermatogenesis; parasites of fishes.
- Davis, Dr. Herman S(tearns)**, 4323 Andover Terrace, Pittsburgh, Pa. **Astronomy*. Milford, Del, Aug. 6, 68. A.B., Princeton, 92, A.M, 12; fellow, Columbia, 93-95, A.M, 94, Ph.D, 95. Asst. astronomer, U. S. scientific exped. to W. Africa, 89-90; tutor astron. and geod, Columbia, 95-99; in charge, Int. Latitude Observatory, 00-05; *consulting engineer*, 05- Expert computer and asst, U. S. Coast and Geod. Surv, 00; first asst, Allegheny Observatory eclipse exped, 00; *assoc. ed*, 'Astron. Jahresbericht,' 00-17. A.A.; Astron. Soc; Wash. Philos. Soc; Astron. Gesell. Variation of latitude; constant of aberration; mean star positions and proper motions; the history of astronomy; new reduction of

- Piazzini's observations; biographical cyclopedia of astronomers; bibliography of current astronomical literature in the United States; genealogy.
- Davis, John A (Ilen)**, Mining Experiment Station, Fairbanks, Alaska. *Mining engineering*. Sioux City, Iowa, June 13, 84. B.S. Mass. Inst. Tech. 07. Junior and asst. geologist, U. S. Geol. Surv. 07-11; *asst. mining engineer, U. S. Bur. Mines*, 11- Min. Eng. Modern tunneling, with special reference to mine and water supply tunnels; safety and efficiency in mine tunneling; mining and concentration of carnotite ores; geology of the Little Powder River coal field.
- Davis, Dr. J (ohn) J (efferson)**, University of Wisconsin, Madison, Wis. *Mycology*. Davis, Ill. 52. B.S. Illinois, 72; M.D. Hahnemann Med. Col. Chicago, 75. Medical practitioner, 75-11; *curator, herbarium, Wisconsin*, 11- A.A.; Bot. Soc.; Phytopath. Soc.; Wis. Acad. (pres. 02-05); Wis. Archeol. Soc. Mycology; parasitic fungus flora of Wisconsin.
- Davis, John J (une)**, Agricultural Experiment Station, La Fayette, Ind. *Entomology*. Centralia, Ill. Oct. 9, 85. B.S. Illinois, 07. Insectary asst. to state entomologist, Ill. summers, 05, 06; asst. entom. Illinois, 06-07; asst. to state entomologist, Ill. 07-11; in charge, La Fayette, Ind. Lab, U. S. Dept. Agr. 11-19, Japanese beetle control project, 19-20; *head, dept. entom. Purdue, and Agr. Exp. Sta.* 20- A.A.; Ass. Econ. Entom.; Entom. Soc.; Ill. Acad. Aphididae; green house, truck garden, cereal and forage crop insects.
- Davis, Dr. John Staige**, 1200 Cathedral St, Baltimore, Md. *Surgery*. Norfolk, Va, Jan. 15, 72. Ph.B. Yale, 95; M.D. Hopkins, 99. *Assoc. clin. surg. Hopkins*. Dispensary surgeon and asst. visiting surgeon, Hopkins Hosp. Am. Med. Ass.; Surg. Ass. Plastic surgery; transplantation of tissues.
- Davis, Prof. K (ary) C (admus)**, George Peabody College for Teachers, Nashville, Tenn. *Agriculture*. Decatur, Ill. Oct. 7, 67. B.S. Kansas State, 91, M.S. 94; Kansas State Nor. Sch. 92; Ph.D. Cornell, 00. Principal and science teacher, State High Sch. Austin, Minn. 92-98; prof. bot. and biol. State Nor. Sch. St. Cloud, 00-01; prof. hort. and instr. bot. West Virginia, and Exp. Sta. 01-02; principal, Dunn Co. Sch. of Agr. and Domestic Econ. Menomonie, Wis. 02-07; dean, State Sch. Agr. Canton, N. Y. 07-08; *prof. soils and agron. and principal, agr. short courses*, N. J. Col. 08-13; *agr. Peabody Col. for Teachers*, 14- Instr. agr. and nature study, summer sch. Virginia, 08-12. A.A. Agricultural education; farm manuals and farm life text books.
- Davis, Lewis**, 1454 Fairmount Ave, St. Paul, Minn. *Biological chemistry*. Worcester, Mass. May 15, 89. B.S. Worcester, 11; M.S. Mass. Inst. Tech. 12. Chemist, N. J. State Lab. Hygiene, 12; biol. chemist, Parke, Davis and Co. 12-20; *assoc. lab. director, Beebe Laboratories, Inc.* 20- Chem. Soc.; Soc. Bact.; Pub. Health Ass. Ultra-violet sterilization; chemical indicators of microbial life; peptone; diphtheria toxin; pepsin; concentration of serum; pollen.
- Davis, Dr. N (athan) S (mith)**, Jr, Pasadena, Calif. *Medicine*. Chicago, Ill. Sept. 5, 58. A.B. North-
- western, 80, A.M. 83; M.D. Chicago Med. Col. 83; Heidelberg and Vienna, 85. Assoc. prof. path. Chicago Med. Col. 84; principles and practise of med. Northwestern, 86, prof. principles and practise of med. and clin. med. 86-20. Formerly physician, St. Luke's, Mercy and Wesley Hospitals; consultant, Washingtonian Home and Marion-Sims Hosp; trustee, Northwestern; Chicago Y. M. C. A.; v. pres. U. S. Pharmacopœia Convention. Ninth Int. Med. Cong; Pan-Am. Med. Cong. A.A.; Am. Med. Ass. (sec'y, sect. med. and chairman, sect. therapeutic); Climat. Ass.; Therapeut. Ass.; Chicago Acad. (rec. sec'y, librarian). Batrachia and Reptilia of eastern North America; medical books.
- Davis, Prof. Nathaniel F (rench)**, 27 Everett St, Cambridge, Mass. *Mathematics*. Laconia, N. H. June 11, 47. A.B. Brown, 70, A.M. 73; Göttingen, 92-93; LL.D. Colby, 94. Instr. Riverview Mil. Acad. Poughkeepsie, N. Y. 71-73; v. principal and prof. math. and physics, State Nor. Sch. Kutztown, Pa. 73-74; instr. math. Brown, 74-79, asst. prof. 79-89, assoc. prof. 89-90, prof. pure math. 90-15, *emer. prof.* 15- Sec'y, New Eng. Col. Entrance Certificate Board, 02-13, pres. 13-15. A.A.; Math. Soc.; Math. Ass.; New Eng. Ass. Math. Teachers (v. pres. 06).
- Davis, Prof. Nelson F (ithian)**, Lewisburg, Pa. *Botany*. Seeley, N. J. B.S. Bucknell, 95, M.S. 96; Sc.D. 03. *Prof. biol. Bucknell*, 02- Instr. bacter. biol. lab. Cold Spring Harbor, 98-02; in charge zool. Vermont, summer, 14. A.A.; Soc. Nat.; Bot. Soc. Economic zoology; forestry; chestnut culture.
- Davis, Dr. Paul B (ell)**, Davison Chemical Co, Baltimore, Md. *Chemistry*. West Liberty, Ohio, Aug. 15, 89. A.B. Roanoke, 08, A.M. 09; Ph.D. Hopkins, 12. Asst. chem. Hopkins, 13-14, instr. 14-16, assoc. 16-19; *research chemist, Davison Chem. Co.* 19- Research assoc. Carnegie Institution, 16-17. Chem. Soc. Viscosity; silicic acid gels.
- Davis, Prof. Roland P (arker)**, 16 Demain Ave, Morgantown, W. Va. *Civil engineering*. Beverly, Mass. Aug. 2, 84. B.S. Mass. Inst. Tech. 06; M.C.E. Cornell, 08, Ph.D. 14. Draftsman, Am. Bridge Co. 06-07; instr. *civil eng.* Cornell, 08-11; assoc. prof. *West Virginia*, 11-12, *prof.* 12- Bridge engineer, W. Va. State Road Commission, 14- Civil Eng.; Eng. Educ.; R. R. Eng.; Soc. Test. Mat. Foundations of bridges and buildings; concrete; structural and hydraulic engineering.
- Davis, Dr. R (oyall) O (scar) E (ugene)** U. S. Department of Agriculture, Washington, D. C. *Chemistry*. Newberry, S. C. July 11, 80. Ph.B. North Carolina, 01, Ph.D. 03; Leipzig, 04. Asst. anal. chem. North Carolina, 01-03, instr. physical chem. 03-05, gen. chem. 05-09, assoc. prof. 09; soil physicist, *bur. soils, U. S. Dept. Agr.* 09-12, in charge soil water investigations, 12-16, *scientist fertilizer investigations, and in charge soil physics investigations*, 16- A.A.; Chem. Soc. (sec'y, N. C. sect. 06-08); Soc. Agron.; Physical Soc.; Wash. Acad.; N. C. Acad. Soils and fertilizers; synthesis of ammonia from hydrogen and nitrogen; atomic weight of thorium; phospho-platinum ammonia compounds; corrosion of iron; electrical conductivity of

- soil; soluble salts in soil; synthetic ammonia; ammonia absorbents.
- Davis, Prof. Vernon Hayes**, 236 W. Eighth Ave., Columbus, Ohio. *Horticulture*. Cambridge, Ohio, March 4, 77. B.S.(Agr), Ohio State, 00; M.S.A., Cornell, 01. Asst. hort. and forestry, Ohio State, 01-02, asst. prof. hort., 02-14, prof., 14-17; chief, bur. markets and marketing, Ohio, 17-20; *manager, Cataroba Orchard Co.*, 20- Soc. Hort. Sci. Soil physics; methods of orchard management and of truck gardening; marketing.
- Davis, Prof. William M(orris)**, 31 Hawthorn St., Cambridge, Mass. **Physical geography, Geology*. Philadelphia, Pa, Feb. 12, 50. B.S., Harvard, 69, M.E., 70; hon. Sc.D., Cape Town, 05; Melbourne, 14; Ph.D., Christiania, 11; Greifswald, 06. Asst. Arg. Nat. Observatory, Cordoba, 70-73; asst. geol., *Harvard*, 77-79, instr., 79-85, asst. prof. physical geog., 85-90, prof., 90-99, Sturgis-Hooper prof. *geol.*, 99-12, *emer. prof.*, 12- Asst. geologist, U. S. Geol. Surv., 90-15; assoc. ed., 'Science' and 'Am. Jour. Science'; adviser, geog. research, Carnegie Institution; physiographer, Pumpelly's Carnegie Institution exped. to Turkestan, 03; guest, British Ass. S. African meeting, 05; Australia meeting, 14; Harvard visiting professor, Berlin, 08-09; Paris, 11-12; Cullom medal, Am. Geog. Soc., 08; medal, Harvard Travellers Club, 11; Culver medal, Chicago Geog. Soc., 13; Kane medal, Phila. Geog. Soc., 13; Hayden medal, Phila. Acad., 18; Patron's medal, Royal Geog. Soc., 19; Vega medal, Swedish Geog. Soc., 20. Nat. Acad.; A.A. (sec'y, E, 87, v. pres, 03); Geol. Soc. (acting pres, 06, pres, 11); Ass. Geog. (pres, 05, 09); Harvard Travellers Club (pres, 02-10); Am. Acad. (cor. sec'y, 00-04, v. pres, 15-19); Philos. Soc.; Boston Soc. Nat. Hist.; cor. mem. Geog. Societies of Chicago, Philadelphia, London, Paris, Munich and Petrograd; Soc. Cient. Ant. Alz.; London Geol. Ass.; London Geol. Soc.; Meteor. Gesell.; hon. mem. Geog. Societies of New York, Berlin, Leipzig, Frankfurt, Amsterdam, Stockholm, Geneva, Greifswald, Vienna, Budapest, Rome, Madrid and Neuchâtel; cor. mem. Berlin Acad.; Paris Acad.; for. mem. Stockholm and Christiania Academies. Physical geography of the land; coral reefs.
- Davis, W(illiam) T(hompson)**, 146 Stuyvesant Place, New Brighton, N. Y. *Entomology, Botany*. New Brighton, Oct. 12, 62. Private schools. A.A.; Entom. Soc.; fel. N. Y. Acad.; Brooklyn Entom. Soc. (pres, 12-16, 20-); N. Y. Entom. Soc. (treas, 04-); Staten Isl. Inst. Arts and Sci. (v. pres, 05-); Phila. Acad.; Boston Soc. Nat. Hist. Entomology of cicadas of North America.
- Davison, A(lbert) W(atson)**, Parr, Va. *Chemistry*. Alexandria, Ohio, April 24, 88. B.S., Denison, 10; A.M., Ohio State, 11; Ph.D., Cornell, 14. Asst. chem., Ohio State, 10-12; Cornell, 13-14; research chemist, Int. Agr. Corp., 14; asst. prof. chem., Cincinnati, 14-17; with U.S.A., 17-19; *manager, Va. Haloid Co.*, 19- Electrochem. Soc. Thermo-electric currents; electro-deposition of metals; electrolytic oxidation; fats and soaps; leather; dyeing.
- Davison, Dr. Charles**, 2320 Jackson Boulevard, Chicago, Ill. *Surgery*. Barrington, Ill., Jan. 13,
58. M.D., Northwestern, 83, A.M., 17. Intern., Cook Co. Hosp., 83-84, attending surgeon, 94-, pres. staff, 17-19; prof. surg. anat., med. dept., Illinois, 99-00, adj. prof. clin. surg., 00-03, *surg. and clin. surg.*, 03-04, *prof.*, 04-, head, dept. surg., 17-; attending surgeon, Univ. Hosp., 08- Trustee, Illinois, 05-11. Am. Med. Ass.; Col. Surg. (governor, 13); Chicago Surg. Soc. (pres, 12). Transplantation of bone; autoplasmic bone surgery.
- Davisson, Dr. C(linton Joseph)**, Western Electric Co., 463 West St., New York, N. Y. *Physics*. Bloomington, Ill., Oct. 22, 81. B.S., Chicago, 08; fellow, Princeton, 10-11, Ph.D., 11. *Instr. physics*, Princeton, 05-10; *Carnegie Inst. Tech.*, 11- A.A. Thermionics.
- Davisson, Prof. S(chuyler) C(olfax)**, Indiana University, Bloomington, Ind. *Mathematics*. Galveston, Ind., Jan. 2, 66. A.B., Indiana, 90, A.M., 92; fellow, Clark, 95-96; Harvard, 98-99; Sc.D., Tübingen, 00. *Instr. math., Indiana*, 90-93, assoc. prof., 93-05, junior prof., 05-08, *prof.*, 08- Prof. math., N. Y. Univ., summer, 09. A.A.; Math. Soc.; Math. Verein. Geodesic lines in higher space.
- Davoll, D(avid) L(ake)**, Newport, R. I. *Chemistry*. Amesbury, Mass., Aug. 15, 69. Ph.C., Michigan, 93, B.S., 97; Chicago, summer, 98. Asst. qual. anal., Michigan, 92-94; research chemist, Parke, Davis and Co., 94-96; instr. org. chem., Michigan, 96-97; asst. prof. applied chem., sch. pharmacy, Northwestern, 97-98, prof., 98-99; chief chemist, Peninsular Sugar Ref. Co., Mich., 99-03, technical supt., 03-06; supt. and chief chemist, Guantanamo Sugar Co., 06-12; *consulting chemist*, 12- Expert sugar technique to Chas. E. Hughes, N. Y. City, 03-06. Fifth, sixth and seventh Congresses Applied Chem. (mem. organization committee). Chem. Eng. Technology of raw and refined sugar.
- Davy, J(oseph) Burt**, Botany School, The University, Cambridge, England. *Botany*. Findern, England, March 7, 70. Ikley Col., Leeds; Royal Bot. Gardens, Kew, 91-92; California, 93-02; Cornell, 07; Cambridge, England, 13, 20. Student asst. bot., California, 93-05, asst. and asst. botanist, Exp. Sta., 95-02, instr., 02-03; govt. agrostologist and botanist, Transvaal Dept. Agr., 03-10; Union of S. Africa Dept. Agr., 10-13. Asst. curator, U. S. Dept. Agr., 02-03. Medal, Acad. Int. Géog. Bot. A.A.; Int. Ass. Bot.; British Ass. (v. pres); Royal Geog. Soc.; London Linnean Soc.; Royal Hort. Soc.; Royal Soc. Arts; Royal Soc. S. Africa (councilor); Transvaal Biol. Soc. (v. pres); S. Africa A. A. S. (v. pres); S. Africa Biol. Soc.; S. Africa Bot. Soc. Systematic, economic and agricultural botany; ecology; Gramineae of California and South Africa; halophytic plants; the flora of Transvaal; origin and distribution of the raw materials of commerce; maize breeding.
- Dawes, Prof. H(enry) F(ranklin)**, 600 Manning Ave., Toronto, Can. *Physics*. Paisley, Ont., Oct. 15, 81. B.A., Toronto, 04, M.A., 05, Ph.D., 18; Cambridge, 06-08. Asst. demonstrator *physics*, Toronto, 04-06, lecturer, 08-11; *prof., McMaster*, 11- Physical Soc. Ionization by collision; image formation by crystalline media.

- Dawson, Prof. A (Iden) B(enjamin)**, 706 S. Lincoln St, Chicago, Ill. *Anatomy*. Tryon, P. E. Island, Oct. 12, 92. A.B, Acadia, 15; fellow, Harvard, 17-18, Ph.D, 18. Prof. biol, Mt. Allison, 18-19; *asst. prof. micros. anat.*, Loyola, 19-A.A; Ass. Anat. Development and structure of glands.
- Dawson, Prof. Bernhard H(ildebrandt)**, Astronomical Observatory, University of La Plata, Argentina. *Astronomy*. Kansas City, Mo, Sept. 21, 90. B.S, Michigan, 16. *Astronomer*, Nat. Univ. Observatory, La Plata, 12-14, 16- Astron. Soc; Soc. Cie. Argentina. Double stars; variable stars.
- Dawson, Dr. J(ames) A(rthur)**, Dalhousie University, Halifax, N. S. *Zoology*. Kings Co, N. S. B.A, Dalhousie, 15; A.M, Yale, 16, Ph.D, 18. Instr. zool, Yale, 19; Goucher, 19-20; *asst. prof.*, Dalhousie, 20- Instr. invert. zool, Woods Hole, 20. Soc. Zool. Protozoology.
- Dawson, Dr. Percy M(illard)**, University of Wisconsin, Madison, Wis. **Physiology*. Montreal, Can, May 19, 73. A.B, Hopkins, 94, M.D, 98, fellow, 98-99; Harvard Divinity Sch, 09-10. Asst. physiol, Hopkins, 99-00, instr, 00-01, assoc, 01-04, assoc. prof, 04-09; Unitarian clergyman, 10-12; instr. *physiol*, Wisconsin, 13-16, *asst. prof.*, 16- A.A; Physiol. Soc. Regeneration of nerves; circulation of the blood; biographies of Hale and Magendie; physical exercise and education.
- Dawson, Prof. R(alph) W(ard)**, 1105 N. 33d St, Lincoln, Nebr. *Entomology*. Lincoln, May 1, 87. B.S, Nebraska, 12. Instr. entom, Nebraska, 12-16, *asst. prof.*, 16- Classification of beetles.
- Dawson, Dr. William Bell**, Marine Department, Ottawa, Can. *Marine engineering*. Pictou, Can, May 2, 54. B.A, McGill, 74, M.A, 79, M.E, 80, Sc.D, 02; Ecole des Ponts et Chaussées, Paris, 75-78; Miller scholar, British Inst. of Civil Eng, 79-80. With various railways and indust. companies, 78-93; *supt. tidal surveys*, Naval Service, Ottawa, Can, 93- Gay prize, Paris Acad; Watt gold medal, British Inst. Civil Eng. Fel. Royal Soc. Can; Can. Civil Eng; British Inst. Civil Eng. Canals and reservoirs of France; mean sea level; topographical surveying; effect of wind upon currents and tidal streams; variation of the leading features of the tide in different regions; tides and tide levels.
- Dawson, W(illiam) Leon**, Santa Barbara, Calif. *Ornithology*. Leon, Iowa, Feb. 20, 73. A.B, Oberlin, 97, B.D, 99, A.M, 03. Missionary, Okanogan Co, Wash, 95-96; pastor, Columbus, Ohio, 00-02; author, Wheaton Pub. Co, 02-04; *director*, Museum Comp. Ool, and ed, 'Jour.' 16- Sec'y-treas, Occidental Pub. Co, 10-; Birds of Calif. Pub. Co, 11- Mem. Ornith. Union; life mem. Cooper Ornith. Club. Birds of Ohio, Washington and California.
- Day, Dr. Alexander Alfred**, 2421 S. Dearborn St, Chicago, Ill. *Bacteriology*. East Boston, Mass, Feb. 15, 84. A.B, 06, M.D, 11. Instr. bacter, Northwestern, 12-16, *asst. prof.*, 16- Chicago Path. Soc. Metabolism of anaerobic bacteria.
- Day, Dr. Arthur L(ouis)**, Carnegie Institution, Washington, D. C. **Physical geology*. Brook-
- field, Mass, Oct. 30, 69. A.B, Yale, 92, Ph.D, 94; hon. Sc.D, Groningen, 14; Columbia, 15; Princeton, 18. Instr. physics, Yale, 94-97; mem. scientific staff, Phys-Tech. Reichsanstalt, Charlottenburg, 97-01; physical geologist, U. S. Geol. Surv, 01-07; *director*, geophys. lab, Carnegie Institution, 07- In charge optical glass production, W. I. B, 17-18. Nat. Acad. (home sec'y, 13-19); Geol. Soc; Physical Soc; Chem. Soc; Am. Acad; Philos. Soc; Wash. Geol. Soc; Wash. Philos. Soc. (v. pres, 10); Wash. Acad. Physical phenomena at very high and very low temperatures; thermal studies of rock-forming minerals; absolute measurement of high temperatures; chemical and physical problems of volcanoes.
- Day, Dr. David T(albot)**, 715 19th St, N. W, Washington, D. C. *Geology, Chemistry, Mining*. Lakewood, Ohio, Sept. 10, 59. A.B, Hopkins, 81, Ph.D, 83. Chief, div. mining and mineral resources, U. S. Geol. Surv, 86-07, chemist in charge petrol. investigations, 07-14; *consulting chemist*, U. S. Bur. Mines, 14-20; *private practise*, 14- Ed-in-chief, 'Eng. and Min. Jour'; hon. chief, dept. mining and metal, La. Purchase Expos. Bene Merenti, Austria. Geol. Soc; Chem. Soc; Soc. Chem. Indust; Min. and Metal. Eng; Petrol. Inst. Constitution of petroleum and derivatives; oil shales.
- Day, Dr. Edward O(arroll)**, University of Cincinnati, Cincinnati, Ohio. *Zoology*. American Fork, Utah, Nov. 2, 84. A.B, Hamilton, 07; A.M, Harvard, 08, fellow, 08-11, Ph.D, 11, traveling fellow, at Bonn and Freiburg, 11-12, Berlin and Naples Zool. Sta, 12-13. Instr. zool, Syracuse, 13-16; lecturer, Bryn Mawr, 16-17. A.A; Soc. Zool; Physiol. Soc. Spectral light and pigment migration in the eye of the crayfish; photo-electric currents in the eye of the fish; physiology of the nerve ganglion in tunicates.
- Day, Dr. Jesse Erwin**, University of Wisconsin, Madison, Wis. *Chemistry*. Yorkshire, Ohio, Feb. 16, 88. A.B, Miami, 11; fellow, Ohio State, 11-12, A.M, 13, Ph.D, 16. Asst. chem, Ohio State, 12-15; instr, Louisiana, 15-17, Ohio State, 17-18, *asst. prof.*, 18-20, Wisconsin, 20- Chem. Soc. Organic chemistry; ethyl alcohol; manganese dioxid.
- Day, Dr. William S(cofield)**, 220 Hobart Ave, Summit, N. J. **Physics*. New York, N. Y, Jan. 2, 64. A.B, Columbia, 84; Ph.D, Hopkins, 97. Student asst. physics, Hopkins, 95-96; asst, Barnard, Columbia, 97-98, tutor, 98-03, lecturer, Columbia, 03-18. A.A; Physical Soc. New apparatus for exact comparison and testing of thermometers; experimental tests of electrical theories; residual rays in the infra-red spectrum.
- Dayton, William A(dams)**, U. S. Forest Service, Washington, D. C. *Forestry*. New York, N. Y, Dec. 14, 85. A.B, Williams, 05, A.M, 08. *Plant ecologist*, U. S. Forest Service, 10- Bot. Soc; Ecol. Soc; Forestry Ass; Wash. Bot. Soc. Forest protection; economic botany.
- Deaderick, Dr. W(illiam) H(eiskell)**, Hot Springs, Ark. *Medicine*. Knoxville, Tenn, Feb. 7, 76. Southwestern Presbyterian, 91-95; Louisville, 95-97; M.D, Vanderbilt, 98. *Practising physician*, 98- Mem. city and co. Boards of Health,

- Marianna, Ark, 99-12; ed. staff, 'Am. Jour. Trop. Diseases'; assoc. ed, 'Annals of Med'; 'Am. Jour. Syphilis'; mem. Commission for Study of Malaria. Soc. Trop. Med; Therapeut. Soc; Col. Physicians; Tri-State Med. Ass. (v. pres, 05, pres, 07); Soc. de Path. exot. Diseases of the southern states; malaria; radioactivity and metabolism.
- Deal, Dr. Don W(est)**, Leland Office Building, Springfield, Ill. *Surgery*. Riverton, Ill, July 9, 79. M.D, 04. Intern, Wesley Hosp, Chicago; *pres, surg. staff, Springfield Hosp.* A.A; Col. Surg; Ry. Surg; fel. Am. Acad. Med. Anastomosis of blood vessels, especially the reversing of blood stream in veins for gangrene of extremities.
- Deam, Cha(rie)s C(lemo)n**, Board of Forestry's Office, Indianapolis, Ind. *Forestry*. Bluffton, Ind, Aug. 30, 65. De Pauw. State forester, Ind, 09-13, acting state forester, 17-19, *state forester*, 19- A.A; Bot. Soc; fel. Ind. Acad. Trees, ferns and flowering plants of Indiana.
- Dean, Pres. Arthur L(yman)**, University of Hawaii, Honolulu, Hawaii. *Industrial chemistry*. Southwick, Mass, Oct. 1, 78. A.B, Harvard, 00; Ph.D, Yale, 02. Asst. plant physiol, Sheffield Sci. Sch, Yale, 02-03, instr, 03-07; Carnegie research asst, 04-05; chief, sect. wood chem, U. S. Forest Service, 05-07; in charge, lab. of A. D. Little, Boston, 07-08; instr. indust. chem, Sheffield Sci. Sch, Yale, 08-09, asst. prof, 09-14; *pres, Univ. Hawaii*, 14- A.A; Chem. Soc; Soc. Chem. Indust. Inulin; proteolytic enzymes; creosote oils; chaulmoogra oil in treatment of leprosy.
- Dean, Prof. Bashford**, Columbia University, New York, N. Y. **Zoology*. New York, Oct. 28, 67. A.B, Col. City of N. Y, 86; A.M, Columbia, 89, Ph.D, 90; Munich; Naples, 91; Misaki, Japan, 00-01, 05. Tutor nat. hist, Col. City of N. Y, 86-90; instr. zool, Columbia, 91-96, adj. prof, 96-03, *prof. vert. zool*, 03- Asst. N. Y. State Fish Commission, 86-88; U. S. Fish Commission, 89-92, biologist, 00-01, special investigator of oyster culture in England, France, Belgium, Spain, Portugal, Italy and Japan; director, biol. lab, Cold Spring Harbor, 90; mem. advisory board, N. Y. Aquarium, 02-; curator ichthyol. and herp, Am. Museum Nat. Hist, 03-10, hon. curator, 10-, of arms and armor, Metrop. Museum Art, 03- Major, ordnance dept, 17-18. Chevalier Légion d'honneur, 10. Soc. Nat. (treas); Soc. Zool; Ass. Anat; Geol. Soc; Paleont. Soc; Soc. Ichthyol. and Herp. (pres, 16); fel. Ass. Mus; Metrop. Mus; N. Y. Acad; N. Y. Zool. Soc; cor. Phila. Soc. Art; Soc. Zool. de Mex; London Zool. Soc; Moscow Soc. Nat; Paris Museum Nat. Hist. Biology of the oyster; insectivorous plants; biological stations; anatomy, embryology and paleontology of fishes; origin of vertebrate limbs; orthogenesis; paleontology of sharks; embryology of Homea, Chimaera, Cestracion and Chlamydoselachus; archeology of armor; armor in modern warfare.
- Dean, Dr. Ernest W(oodward)**, Bureau of Mines, Pittsburgh, Pa. *Chemistry*. Taunton, Mass, Sept. 28, 88. A.B, Clark, 08; A.M, Yale, 12, Ph.D, 14. Instr. chem, Hobart, 08-11; asst, Yale, 12-14; *chemist, U. S. Bur. Mines*, 14- Chem. Soc. Hydrolysis of aliphatic esters; petroleum.
- Dean, Prof. Geo(rge) A(dams)**, State College, Manhattan, Kans. *Entomology*. Topeka, Kans, April 19, 73. M.S, Kansas State, 05. Principal, ward sch, Topeka, 97-00; asst. *entom.*, Kansas State, 02-06, asst. prof, 06-12, assoc. prof, 12-13, *prof. and head of dept*, 13- Special investigator mill and stored grain insects, Europe, 11. A.A; Entom. Soc; Ass. Econ. Entom; Kans. Acad. Mill and stored grain insects; Hessian fly; effect of temperature and moisture on insect life.
- Dean, Prof. George Reinald**, Rolla, Mo. *Mathematics*. Waterloo, Ill, Oct. 21, 65. C.E, Mo. Sch. of Mines, 90, B.S, 91. Asst, Leander McCormick Observatory, 92-93; teacher *math*, Cent. High Sch, Kansas City, Mo, 94-97; *prof, Mo. Sch. Mines*, 97- Consulting engineer, Gen. Elec. Co. Ass. Prof. Pure and applied mathematics; thermodynamics; physical chemistry.
- Dean, Dr. J(ay) Atlee**, 614 S. 48th St, Philadelphia, Pa. *Chemistry*. Bellefonte, Pa, Sept. 28, 88. Phar.D. *Practising biol. chemist*. A.A; Pharmaceut. Ass; Soc. Bact; Chem. Soc; Pub. Health Ass. Clinical, pharmaceutical and physiological chemistry; bacteriology; serology.
- Dean, Prof. Paul Marshall**, University of Colorado, Boulder, Colo. *Chemistry*. Newcastle, Pa, March 24, 85. A.B, Colorado, 08, A.M, 11; Ph.D, Illinois, 16. Teacher science, high sch, Golden, Colo, 08-09; chemist, West. Chem. Mfg. Co, 09-10; instr. *chem*, Colorado, 11-14; asst, Illinois, 14-15; instr, Colorado, 15-17, asst. prof, 17-20, *assoc. prof*, 20- A.A; Chem. Soc. Organic, physical and analytical chemistry.
- Deane, Ruthven**, 112 W. Adams St, Chicago, Ill. *Ornithology*. Cambridge, Mass, Aug. 20, 51. Fel. Ornith. Union (mem. council); Ill. Audubon Soc. (pres, 98-14); hon. mem. Chicago Acad; Cooper Ornith. Club; Wilson Ornith. Club; cor. mem. Nuttall Ornith. Club.
- Deane, Walter**, 29 Brewster St, Cambridge, Mass. *Botany. Ornithology*. Boston, Mass, April 23, 48. A.B, Harvard, 70. Instr, St. Mark's Sch, Southborough, Mass, 71-78; John P. Hopkinson's Sch, Boston, Mass, 78-95; asst. to Wm. Brewster at his museum, Cambridge, Mass, 97-08. Mem. Ornith. Union; New Eng. Bot. Club (v. pres, 00-08, pres, 08-11); Nuttall Ornith. Club. Flora of northeastern North America.
- Dearborn, Prof. George Van Ness**, Sargent Normal School of Physical Education, Cambridge, Mass. *Physiology. Psychology*. Nashua, N. H, Aug. 15, 69. B.L, Dartmouth, 90; M.D, Columbia, 93, Ph.D, 99; A.M, Harvard, 96. Asst. philos, Harvard, 96-97, physiol, 99-00; asst. prof, Tufts, 00-04, prof, 04-15; *head, dept. psychol. and educ*, Sargent Nor. Sch. *Physical Educ*, 06- Consulting physiologist and psychologist, Forsyth Dental Infirmary, 13-; instr, Sch. for Nursing, U. S. A, neuro-psychiat. service, M. C; asst. physician diseases of the nervous system, Boston City Hosp, 19. A.A; Soc. Nat; Psychol. Ass; Philos. Ass; Anthropol. Soc; Am. Acad. Med; Am. Med. Ass; Medico-Psychol. Ass; Physical Educ. Ass; Boston Physical Educ. Soc; Boston Authors' Club; Boston Med. Library; Boston Soc. Med. Improv; Physiol. Col-

- loquium. Emotion; mental correlations with vasomotion; psychology of clothing; kinesthesia; biology of music.
- Dearborn, Dr. Ned**, Sacket Harbor, N. Y. *Ornithology, Mammalogy*. Alton, N. H., Nov. 24, 65. B.S., Dartmouth, 91; Sc.D., N. H. Col., 01. Asst. principal, acad., Gilmanton, N. H., 89-90; principal schools, Ashland, N. H., 92-93; supt, lens dept., Lord Bros. Mfg. Co., 93-97; instr. math. and physics, N. H. Col., 97-01; asst. curator ornith., Field Museum Nat. Hist., 01-09; asst. biologist, biol. surv., U. S. Dept. Agr., 09-20; *fur culturist*, Ont. Stock Farm, 20- Scientific exped. to Guatemala, 06; to Venezuela, 08. Soc. Mammal.; Wash. Biol. Soc. Adaptability of fur-bearing animals to domestication.
- Dearborn, Prof. Walter F(ennio)**, Harvard University, Cambridge, Mass. **Psychology*. Marblehead, Mass., July 19, 78. A.B., Wesleyan, 00, A.M., 03; Ph.D., Columbia, 05; M.D., Munich, 13. Instr. educ. psychol., Wisconsin, 05-07, asst. prof., 07-09; assoc. prof. educ., Chicago, 09-12; *Harvard*, 12-17, *prof.*, 17- Trustee, Mass. State Infirmary, 13-14, 15- A.A.; Psychol. Ass. Retinal local signs; the psychology of reading; the relative standing of pupils in school and university; the practise experiment in learning; forms of infantilism; measures of intelligence and school training; mental hygiene.
- Dearing, Cha(ri)le**s, U. S. Department of Agriculture, Washington, D. C. *Horticulture*. Wichita, Kans., March 25, 88. B.S.A., Missouri, 09. Asst. hort., Missouri, 08-09, instr., 09-10; scientific asst., U. S. Dept. Agr., 10-18, asst. horticulturist, 18-19, horticulturist, 19-; asst. director in charge, branch exp. sta., N. C. Dept. Agr., 20- A.A.; Soc. Hort. Sci.; Pomol. Soc. Viticulture; pomology; plant breeding.
- Dearness, John**, Provincial Normal School, London, Ont., Can. *Biology*. Hamilton, Ont., May 13, 52. Teachers' and inspectors' certificate, Ont. Prof. biol. med. dept., Western, 88-14; *principal*, Provincial Nor. Sch., 14- Lecturer biol., Western. Ont. Entom. Soc. (past pres). Mycology.
- Deatrick, Dr. Eugene P(eyton)**, Cornell University, Ithaca, N. Y. *Agronomy*. Rimmersburg, Pa., April 7, 89. A.B., Franklin and Marshall, 11; Ph.D., Cornell, 17. Instr. high sch., Boyertown, Pa., 11-13; instr. soils, Cornell, 14-17; prof., Pa. Forestry Acad., 17-20; *instr.*, N. Y. Col. Agr., Cornell, 20- Agron. Soc.; Chem. Soc. Manganese fertilizers; nodules on honey locust.
- DeBarr, Prof. Edwin**, Norman, Okla. *Chemistry*. Lansing, Mich., Jan. 14, 59. B.S., Mich. Agr. Col., 91, M.S., 93; B.Ped., Mich. Nor. Col., 92; Ph.B., Michigan, 92, Ph.D., 99. Supt. schools, Almont, Mich., 86-90; *prof. chem. and biol.*, Albion, 91-92; *chem.*, Oklahoma, 92- Chem. Soc.; Pharmaceut. Ass.; Agr. Chem. Esterification of α , β , γ chlor acids with water at 150°; commercial values of plaster and cement bodies in Oklahoma.
- DeBord, George G(orham)**, Harvard Medical School, Boston, Mass. *Bacteriology*. Freeport, Kans., Dec. 16, 92. B.S., Okla. Col., 14; M.S., Iowa State, 16. Asst. bacter., Iowa State, 16; bacteriologist, bur. chem., U. S. Dept. Agr., 17-20; *research fellow*, dept. prev. med. and hygiene, *Harvard Med. Sch.*, 20- Asst. to bacteriologist, Great Bear Water Co., N. Y. Soc. Bact.; Pub. Health Ass. Food bacteriology; fuchsin-aldehyde reaction on the endo medium.
- DeCamp, Prof. Joseph Edgar**, State College, Pa. *Psychology*. Desha, Ark., Feb. 19, 87. B.S., Arkansas, 05; A.M., Michigan, 12, fellow, 13-14, Ph.D., 14. Asst. *psychol.*, Michigan, 12-13; Illinois, 14-15; instr., California, 15-16; Stanford, 16-19; *asst. prof.*, Pa. State, 19- Asst. psychol., Michigan, summer, 14; instr., California, summer, 16. A.A.; Psychol. Ass.; West. Soc. Nat. Animal behavior; retroactive inhibition; influence of color upon apparent weight.
- Decker, Prof. Charles E(lijah)**, University of Oklahoma, Norman, Okla. *Geology*. Dixon, Ill., Sept. 27, 68. A.B., Northwestern, 06; A.M., Chicago, 08, Ph.D., 17. Instr. geol., Northwestern, 08-09; geol. and biol., Allegheny, 09-10, acting prof., 10-12, asst. prof., 12-16; *instr. geol.*, Oklahoma, 16-17, asst. prof., 17-19, *assoc. prof.*, 19- A.A. Petroleum and natural gas of the United States; minor faults and folds in the Great Lakes region.
- Decker, Prof. F(loyd) F(iske)**, 312 Marshall St., Syracuse, N. Y. *Mathematics*. Dennison, Tex., March 23, 81. A.B., Syracuse, 01, A.M., 05, Ph.D., 10. Instr. *math.*, Syracuse, 04-10, asst. prof., 10-14, *assoc. prof.*, 14-17, *prof.*, 17- A.A.; Math. Soc. Matrices; symmetric function tables.
- Decker, Dr. H(arry) Ryerson**, 1126 Highland Building, Pittsburgh, Pa. *Anatomy*. Jackson, Mich., Feb. 26, 83. A.B., Princeton, 03; M.D., Columbia, 07. Intern, Presb. Hosp., N. Y. City, 07-09; St. Francis Hosp., Pittsburgh, 10; *instr. anat. and surg.*, Pittsburgh, 11- Consultant and lecturer, Carnegie Inst. Tech., 15-; capt. and major, M. C., 18-19. Col. Surg.; Am. Med. Ass. Surgery.
- De Cou, Prof. E(dgar) E(zekiel)**, University of Oregon, Eugene, Oregon. *Mathematics*. Thamesville, Ont., July 13, 63. B.S., Wisconsin, 94; M.S., Chicago, 97, 99-00; Yale, 00-01. Prof. math., Bethel, 97-99, 01-02, acting pres., 02; *prof. math.*, Oregon, 02- Math. Soc.; Math. Ass. The conform representation by the function $w = as^2 - 2bz + c$, and the inverse function.
- Dederer, Prof. P(auline) H(amilton)**, Connecticut College, New London, Conn. *Cytology*. Hoboken, N. J., Oct. 2, 78. A.B., Columbia, 01, A.M., 07, Ph.D., 15. Asst. *zool.*, Barnard, Columbia, 03-05, tutor, 05-09, instr., 09-17; *assoc. prof.*, Conn. Col. for Women, 17- Spermatogenesis and oogenesis in Lepidoptera.
- Dederick, Dr. L(ouis) S(erle)**, U. S. Naval Academy, Annapolis, Md. *Mathematics*. Chicago, Ill., May 8, 83. A.B., Kenyon, 05; A.M., Harvard, 07, Ph.D., 09. Instr. *math.*, Princeton, 09-17; U. S. Naval Acad., 17-20, *asst. prof.*, 20- A.A.; Math. Soc. Singularities of transformations of two variables.
- Deel, Prof. S(amuel) A(sher)**, 703 Tenth St. Baldwin, Kans. *Physics*. Miami Co, Kans., Feb. 4, 78. Ph.B., Baker, 01. Magnetic observer, U. S. Coast and Geod. Surv., 01-08, in charge, magnetic observatory, Honolulu, 03-06, Baldwin, Kans., 06-08; *prof. physics*, Baker, 08- Kans. Acad. Terrestrial magnetism.

- Deere, Prof. Emil O(laf)**, Bethany College, Lindsborg, Kans. *Biology, Geology*. Moline, Ill, Aug. 8, 77. A.B, Bethany, 04, A.M, 07; Colorado, 04; Kansas, 07; M.S, Chicago, 11. Instr. biol. and mech. drawing, *Bethany*, 04-09, *prof. biol. and geol.*, 09-, *v. pres. and dean*, 18- Curator of museum, Bethany. A.A; Ecol. Soc; Micros. Soc; Kans. Acad. Ecology; pathology; geology.
- Deerr, Noël (Fielding)**, India Sugar Corporation, 5 Wallace St, Fort Bombay, India. *Chemistry*. Warwickshire, England, Dec. 30, 74. Assoc. London Inst, 96, fellow, 11. Sugar technologist, Hawaiian Sugar Planters' Ass, 02-14; special agent, Cuban Govt, 14; tech. adviser, Cuban Co, 14-17; supt. Arbuckle Bros'. Refinery, 17-20; *technical director, India Sugar Corp.*, 20- Chem. Soc; London Chem. Soc. Sugar manufacture.
- Deetz, Cha(rls) H(enry)**, U. S. Coast and Geodetic Survey, Washington, D. C. *Geodesy*. Sellersville, Pa, April 10, 64. Mass. Inst. Tech. Field worker and later *cartographer, U. S. Coast and Geod. Surv.*, 88- Cartography, with reference to nautical charts and map projections.
- Defoe, Prof. L(uther) M(arion)**, 810 Virginia Ave, Columbia, Mo. *Mechanics*. California, Mo, Sept. 6, 60. Missouri, 86; A.B, Harvard, 93; Cambridge, England, 02-03. Asst. prof. math, *Missouri*, 93-02, *prof. mech. in eng.*, 02-A.A; Math. Soc; Eng. Educ; Econ. Ass; Acad. Polit. and Social Sci; Royal Soc. Arts; London Math. Soc.
- Defren, George**, 289 Park St, Newton, Mass. *Chemistry*. Cincinnati, Ohio, April 16, 74. B.S, Mass. Inst. Tech, 95, M.S, 96. *Consulting chemist*, 96-; *v. pres. Avery Chem. Co.* A.A; Chem. Soc. Industrial biology; refined, edible lactic acid; maltose syrup and sugar industries; beers with low alcoholic content.
- DeGhué, Dr. J(oseph) A(lbert)**, 511 Fifth Ave, New York, N. Y. *Chemistry*. Brooklyn, June 26, 70. Ph.B, Columbia, 90, A.M, 92, Ph.D, 93. Asst. demonstrator physiol. chem. and toxicol, Columbia, 90-96; asst. chemist, Health Dept, N. Y. City, 96-02, chief chemist, 02-04; anal. and consulting chemist, 04-10; *pres.*, Lederle Laboratories, 10-18; *Lederle Antitoxin Laboratories*, 15- Chemist, Hygeia Distilled Water Co; U. S. Wood Preserving Co. A.A; Chem. Soc; Soc. Chem. Indust; Soc. Med. Juris. Organic non-sugar in cane juice; determination and use of preservatives in food; food analysis.
- DeGolyer, E(verette) Lee**, 65 Broadway, New York, N. Y. *Geology*. Greensburg, Kans, Oct. 9, 86. A.B, Oklahoma, 11. Field asst, U. S. Geol. Surv, 06-09, junior geologist, 10-15; geologist, Mex. Eagle Oil Co, 09-11, chief geologist, 12-15, *consulting geologist, Mex. Eagle Oil Co. and other companies*, 12- Special lecturer petroleum, Oklahoma, 16- A.A; Geol. Soc; Min. Eng; Seismol. Soc; Econ. Geol; Ass. Petrol. Geol; Am. Geog. Soc; N. Y. Acad; British Inst. Petrol. Technol. Economic geology of oil and gas; geology of Mexican oil fields and coastal plain; geology of north coast of Cuba; geothermal gradients in oil bearing regions.
- Dehn, Prof. William M(aurice)**, University of Washington, Seattle, Wash. *Chemistry*. Chesning, Mich, June 24, 72. A.B, Hope, 93, A.M, 96; Ph.D, Illinois, 03. Instr. *chem.*, Illinois, 00-07; *prof.*, *Washington (Seattle)*, 07- A.A; Chem. Soc. Organic chemistry.
- Deimel, Prof. E(ichard) F(rancis)**, Stevens Institute, Hoboken, N. J. *Mathematical physics*. New York, N. Y, June 27, 81. B.S, Col. City of N. Y, 02; A.M, Columbia, 03. Asst. mech, Columbia, 03-05, lecturer, physics, 05; instr. math. and physics, Col. City of N. Y, 05-06; math. and mech, *Stevens*, 06-09, *asst. prof. mech.*, 09- A.A; Math. Soc; Eng. Educ; Circolo Mat. di Palermo. Age of the earth; mechanics of deformable media.
- DeKalb, Courtenay**, National Arts Club, New York, N. Y. *Mining engineering*. Loudon Co, Va, Sept. 18, 61. Syracuse. Mining engineer in S. Dak, 86, Brazil and Peru, 89-90, Nicaragua, 92, Pa, 96, Mont, 97, Mex, 01, Calif, 02-08; prof. mining and metal, Missouri, 95-98; Queen's (Can), 98-01; ed, Mining and Scientific Press, 09-10; mining engineer, Mexico, 10-15, Ariz, 15-16, Calif, 17-19; mineralogist in Spain, U. S. Dept. Commerce, 19-20. Min. Eng; Am. Geog. Soc; Lima Geog. Soc; Soc. Mines du Chile. Geology; metallurgy; explosives; mechanics of ore-crushing; cyanid process; copper leaching.
- DeKruif, Prof. P(aul) H(enry)**, 724 Tappan St, Ann Arbor, Mich. *Bacteriology*. Zealand, Mich, March 2, 90. Ph.D, Michigan, 16. Asst. *bacter.*, *Michigan*, 12-14, instr, 14-15, *asst. prof.*, 15-Mil. service, 17-19. Anaphylatoxin; anaphylaxis; toxin of *Bacillus welchii*; hemolysin of *Streptococcus*.
- Delabarre, Prof. E(dmund) B(urke)**, 9 Arlington Ave, Providence, R. I. **Psychology*. Dover, Maine, Sept. 25, 63. Brown, 82-83; A.B, Amherst, 86; Berlin, 87-88; A.M, Harvard, 89; Ph.D, Freiburg, 91; Paris, 91-92. Assoc. prof. *psychol.*, *Brown*, 91-96, *prof.*, 96- Director, psychol. lab, Harvard, 96-97. A.A; Soc. Nat; Psychol. Ass; Am. Acad; cor. mem. Phila. Geog. Soc. Muscular contributions to consciousness; space-perception; emotions; effects of drugs; individual temperament.
- Delafield, Maturin L(ivingston)**, 29 Ave. Davel, Lausanne, Switzerland. *Botany*. New York, N. Y, Sept. 29, 69. Columbia; foreign study. A.A; Bot. Soc; Torrey Bot. Club (librarian, 89-92, treas, 98-00); Phytopath. Soc; Ecol. Soc; N. Y. Acad; Soc. Bot. de France; Soc. Bot. Suisse; Soc. Helvétique des Sci. nat; Soc. Vaudoise des Sci. nat; Acad. Int. Geog. Bot. Taxonomy of vascular plants; phytogeography; botanical bibliography.
- Delany, Patrick B(ernard)**, Nantucket, Mass. *Electrical engineering*. Kings Co, Ireland, Jan. 23, 45. Nat. and private schools, Ireland; parochial schools, U. S. Chief operator, manager and supt. telegraphs, U. S, 68-78; *elec. engineer*, 78- Newspaper correspondent, 68-78. Gold medal, Inventions Exhib, London, 85; Elliott Cresson gold medal, Franklin Inst, 85, 96 and 08; John Scott medal, 85; gold medal, Pan-Am. Expos, 01; La. Purchase Expos, 04. A.A; Elec. Eng; Franklin Inst; Old Timer Telegraph Ass. Synchronous multiple telegraphy; automatic high speed telegraphy; cable telegraphy; anti-induction cables; telepost.

- Delbridge, Dr. T(homas) G.** 3144 Passyunk Ave, Philadelphia, Pa. *Chemistry*. Batavia, N. Y., Feb. 20, 84. A.B. Union, 03; Ph.D. Cornell, 07. Instr. chem, Cornell, 04-09; chemist, *Atlantic Ref. Co.*, 09-14, asst. supt, 14-18, *chief chemist*, 18- Chem. Soc.; Soc. Test. Mat.; Franklin Inst. Tetrachlorgallein; tetrachlorphthalic acid.
- Dellenbaugh, Frederick S(amuel)**, 226 W. 78th St, New York, N. Y. *Anthropology, American history, Geography*. McConnellsville, Ohio, Sept. 13, 53. Artist and asst. topographer, Powell's explor. exped. to Colo. River, 71-73; librarian, Am. Geog. Soc, 09-12. A.A.; Anthropol. Ass; fel. Ethnol. Soc. American archeology and ethnology; history of western United States; western explorations; location of the towns of the Rio Grande valley, New Mexico, etc, prior to 1700; location of Escalante's trail and the old Spanish trail.
- Dellinger, Dr. J(ohn) H(oward)**, Bureau of Standards, Washington, D. C. **Physics*. Cleveland, Ohio, July 3, 86. A.B. George Washington, 08; fellow, Princeton, 12-13, Ph.D. 13. Lab. instr. *physics*, Western Reserve, 06-07; *physicist*, Bur. Standards, 07- Physical Soc; Wash. Acad. Conductivity and temperature coefficient of copper; electric units and standards; radio instruments; principles of radio communication.
- Dellinger, Prof. O(ris) P(olk)**, Pittsburg, Kans. *Histology, Physiology*. Bicknell, Ind, Aug. 14, 77. Chicago, 00-01; A.B. Indiana, 05; fellow, Clark, 05-07, Ph.D. 07. Asst. physiol, Clark, 04-07, instr. *biol.*, 07-08; *prof.*, Winona Nor. Col, 08-09; *State Manual Training Nor. Sch.*, Pittsburg, Kans, 09- Instr. nature study, *biol.* sta, Indiana, summers, 06, 07. A.A.; Physiol. Soc; Nature Study Soc. Locomotion of the Amoeba and allied forms; the cilium as a key to the structure; contractile protoplasm; structure and function in Amoeba proteus; fibrillar structure of flagella; biology of the Amoeba proteus.
- Del Mar, William A(rthur)**, 10 E. 43d St, New York, N. Y. *Electrical engineering*. San Francisco, Calif, 80. Assoc. City and Guilds Inst, London, 00. Tech. asst, N. Y. Cent. R. R, 04-15; asst. elec. engineer, Interborough Rapid Transit Co, 15-17; *chief engineer*, *Habirshaw Elec. Cable Co*, 17- Elec. Eng. Electric cables; insulating materials.
- DeLoach, Prof. R(obert) J. H.** 10154 Longwood Drive, Chicago, Ill. *Botany*. Statesboro, Ga, Dec. 21, 73. A.B. Georgia, 98, fellow, 04-05, A.M. 05. Botanist, Ga. Exp. Sta, 05-08, director, 13-16, prof. cotton indust, Georgia, 08-13; *director*, bur. agr. and econ. research, *Armour and Co*, 16- A.A.; Meteor. Soc. Mendel's law applied to cotton breeding; by-products of the packing industry.
- DeLong, D(ewight) M(oores)**, Department of Plant Industry, Harrisburg, Pa. *Entomology*. Corning, Ohio, April 6, 92. B.S. Ohio Wesleyan, 14; M.S. Ohio State, 16. Asst. zool, Ohio State, 14-17, instr, 18; *scientific asst*, bur. plant indust, Pa. Dept. Agr, 18- Field asst, bur. entom. U. S. Dept. Agr, summers, 15, 17; state nursery inspector, Wis, summer, 16. A.A.; Entom. Soc; Ass. Econ. Entom; Ohio Acad; Ohio Sci. Soc. Hemiptera-Homoptera; control of grape berry moth.
- DeLong, Prof. Ira M(itchell)**, 1341 Broadway, Boulder, Colo. *Mathematics*. Monroe, Iowa, Jan. 7, 55. A.B. Simpson, 78, A.M. 81, LL.D. 14. *Prof. math*, Central (Iowa), 78-86; Latin, Iowa Wesleyan, 86-88; *math*, Colorado, 88-Ed, problem dept, 'School Sci. and Math.' A.A.; Math. Soc; Math. Ass; Colo. Math. Soc. (pres).
- DeLong, Prof. James H(enry)**, 906 McCartney St, Easton, Pa. *Chemistry*. B.S. Lafayette, 04. Asst. instr. and later asst. *prof. chem*, Lafayette, 04- Chemist, Republic Iron and Steel Co; Atlantic Potash Co. Chem. Soc. (see'y and treas, Lehigh Valley sect, 18).
- DeLury, Prof. Alfred T(ennison)**, University of Toronto, Toronto, Can. *Mathematics*. Manila, Ont, May 13, 64. A.B. Toronto, 90, A.M. 02; Clark, 90-91. Lecturer *math*, Toronto, 92-02, assoc. prof, 02-08, *prof*, 08- Lecturer *math*, Ont. Nor. Col, 94-96. Math Soc.
- De Lury, Prof. J(ustin) S(arsfield)**, University of Manitoba, Winnipeg, Man, Can. *Mineralogy*. Manila, Ont, Jan. 15, 84. B.A. Toronto, 05, 05-06. Asst. miner, Toronto, 05-06; *prof. geol. and miner*, Idaho, 06-13; *Manitoba*, 16- Asst. to Dominion paleontologist, summer, 04; to Provincial geologist, summers, 05, 06; advisory committee, Can. Munitions Board, 18. Can. Min. Inst. (see'y, Winnipeg sect). Geology; chemistry.
- De Lury, Dr. Ralph E(merson)**, Dominion Observatory, Ottawa, Can. *Astronomy*. Manila, Ont, Nov. 23, 81. B.A. Toronto, 03, fellow, 03-06, M.A. 04, Ph.D. 07; Chicago, 05. Research asst. physical chem, Princeton, 06-07; observer, *Dominion Observatory*, 07-13, asst. astronomer, 13-19, *research astronomer*, 19-, in charge, *solar physics div*, 13- A.A.; Astron. Soc; Chem. Soc; Meteorol. Soc; Statist. Ass; Ornith. Union; Wilson Ornith. Club; fel. Royal Astron. Soc. Can. (councilor, Ottawa Centre, 13, 19, see'y, 13-15); fel. Royal Astron. Soc; fel. London Chem. Soc; mem. fond. Soc. Astron. de France; Int. Astron. Union (solar rotation committee). Kinetics; potential; spectroscopy; rotation; spots; wave lengths; arc spectra; solar variations and related phenomena of the earth and solar system.
- Delwiche, Prof. E(dmond) J(oseph)**, Route 3, Green Bay, Wis. *Agriculture*. Orbais, Belgium, March 25, 74. B.S. (Agr), Wisconsin, 06, M.S. 09. Teacher, pub. schools, Wis, 97-02; supt, agr. substations, *Wisconsin*, 06-09, asst. prof. and assoc. prof. *agron*, 10-20, *prof*, 20- A.A.; Soc. Agron. Grain and forage crop breeding; hardy wheats; early corn; high yielding peas.
- Deming, Prof. H(orace) G(rove)**, 1909 E St. Lincoln, Nebr. *Chemistry*. San Bernardino, Calif, Feb. 25, 85. B.S. Washington (Seattle), 07; M.S. Wisconsin, 09, Ph.D. 11. Teacher, high sch, Juneau, Alaska, 08-09; instr. chem. Wisconsin, 10-11; assoc. prof, agr. col, Univ. Philippines, 11-15, prof. and chief of dept, Univ. Philippines, 15-16; assoc. Illinois, 16-18; *prof. physical chem*, Nebraska, 18- Chem. Soc. Cellulose solvents; chemical nomography; the

- vacuum cathode; diffusion of gases through metals.
- Demorest, Prof. D(ana) J(ames)**, Ohio State University, Columbus, Ohio. *Metallurgy*. Marysville, Ohio, Aug. 21, 82. B.S., Ohio State. Chemist, U. S. Bur. Mines, 87; U. P. R. R., 08; asst. prof. *metal*, Ohio State, 08-12, *prof.*, 12- Chem. Soc.; Soc. Test. Mat.; Electrochem. Soc.; Steel Treaters Soc.; Min. and Metal. Eng. Metallurgical analysis; engineering chemistry.
- Dempster, Prof. A(rthur) J(effrey)**, University of Chicago, Chicago, Ill. *Physics*. Toronto, Can., Aug. 14, 86. B.A., Toronto, 09, M.A., 10, fellow, 10-11, 1851 Exhibition scholar, 12-14; Ph.D., Chicago, 16. Asst. *physics*, Chicago, 15-17, instr., 17-19, *asst. prof.*, 19- Positive rays.
- Dengler, Dr. F(elton) S(amuel)**, Port Neches, Tex. *Chemistry*. Steelton, Pa., May 19, 86. B.S., Pennsylvania Col., 09; Ph.D., Hopkins, 12. *Chemist*, Texas Co., 12- A.A.; Chem. Soc.
- Denis, Dr. W(illey) G(lover)**, Tulane University, New Orleans, La. *Chemistry*. New Orleans, La., Feb. 26, 79. A.B., Tulane, 99, A.M., 02, 09-11; Bryn Mawr, 99-00, fellow, 02-03; Ph.D., Chicago, 07. Instr. anal. chem., Grinnell, 07; asst. chemist, bur. chem., U. S. Dept. Agr., 07-09; Mass. Gen. Hosp., 13-20; *asst. prof. physiol. chem.*, Tulane, 20- A.A.; Chem. Soc.; Soc. Biol. Chem. Animal metabolism; analytical technic.
- Dennett, Dr. W(illiam) S(awyer)**, 36 Gramercy Park, New York, N. Y. *Ophthalmology*. Bangor, Maine, March 1, 49. A.B., Bowdoin, 71; M.D., Harvard, 74. Surgeon, N. Y. *Eye and Ear Infirmary*, 88-01, *hon. surgeon*, 07- A.A.; Math. Soc. (treas., 97-07); Physical Soc.; Ophthal. Soc.
- Dennis, Dr. Frederic S(hepard)**, 62 E. 55th St., New York, N. Y. *Surgery*. Newark, N. J., April 17, 50. A.B., Yale, 72; M.D., Bellevue Med. Col., 74; F.R.C.S., London, 77. Prof. principles and practise of surg., Univ. and Bellevue Hosp. Med. Col., 83-98; *clin. surg.*, med. col., Cornell, 98-10, *emer. prof.*, 10- Surg. Ass. General surgery.
- Dennis, Prof. L(ouis) M(unroe)**, Cornell University, Ithaca, N. Y. **Chemistry*. Chicago, Ill., May 26, 63. Ph.B., Michigan, 85, B.S., 86; Aachen, Munich, Dresden and Wiesbaden, 89-91. Instr. chem., Cornell, 87-89, asst. prof. anal. chem., 91-03, *assoc. prof. inorg. and anal. chem.*, 93-00, *prof.*, 00-, *head, dept. chem.*, 03- A.A.; Chem. Soc. Inorganic chemistry; rare earths; hydronitric acid; gas analysis; rare elements.
- Denniston, Prof. R(ollin) H(enry)**, University of Wisconsin, Madison, Wis. *Botany*. Oakfield, Wis., March 21, 74. Ph.G., Wisconsin, 97, B.S., 99, fellow, 99-00, Ph.D., 04. Asst. instr. *bot.*, Wisconsin, 00-03, instr., 03-07, *asst. prof.*, 07- A.A.; Bot. Soc.; Wis. Acad. (treas., 05). Structure of the starch grain; adulteration of powdered drugs; carbohydrates in plants; fleshy fungi of Wisconsin; cytology of flowering plants.
- Denny, Dr. Francis P(arkman)**, 111 High St., Brookline, Mass. *Medicine, Bacteriology*. Brookline, Jan. 2, 69. A.B., Harvard, 91, M.D., 95. Asst. bacter., Harvard Med. Sch., 99-04, *clin. med.*, 04-06. Health officer and bacteriologist, Brookline Board of Health; visiting physician, House of the Good Samaritan. Pub. Health Ass.
- Denny, Dr. F(rank) E(arl)**, 142 S. Anderson St., Los Angeles, Calif. *Plant physiology*. Tekama, Nebr., March 31, 83. A.B., Nebraska, 06; Ph.D., Chicago, 16. Asst. hort., Nebraska, 06-08; plant physiol., Chicago, 16; plant physiologist, U. S. Dept. Agr., 16-18, *assoc. chemist*, 19- Bot. Soc. Biochemistry; permeability of plant membranes; physiology of citrus fruits; maturity of fruits and vegetables.
- Densmore, Prof. Hiram D(elos)**, Beloit, Wis. *Botany*. Richmond, Wis., Jan. 20, 62. A.B., Beloit, 86, A.M., 90; Cornell, 87-88; California, 06, Harvard, 16. Principal, high sch., Prairie du Chien, 86-87; instr. *bot.*, Beloit, 88-90, *prof.*, 90- Soc. Nat.; Bot. Cent. States; Wis. Acad. Spindle formation and vegetative mitosis; text books in botany.
- Denton, Dr. W(illiam) W(ells)**, University of Michigan, Ann Arbor, Mich. *Mathematics*. Detroit, Mich., Aug. 18, 82. A.B., Michigan, 07; A.M., Illinois, 09, Ph.D., 12. Asst. *math.*, Illinois, 07-11, instr., 11-16; Worcester, 17; Michigan, 18-19, *asst. prof.*, 20- Math. Soc. Projective differential geometry; foundations of mathematics.
- DePorte, Prof. J(oseph) V(ital)**, New York State College for Teachers, Albany, N. Y. *Mathematics*. Korop, Russia, Jan. 1, 89. A.B., Oklahoma, 12; A.M., Princeton, 14; Ph.D., Cornell, 16. Asst. *math.*, Cornell, 15-16; instr., N. Y. State Col. Teachers, 16-18, *asst. prof.*, 18- Math. Soc.; Statist. Ass. Algebraic geometry; vital statistics.
- Derby, Dr. George S(trong)**, 23 Bay State Road, Boston, Mass. *Ophthalmology*. Boston, May 29, 75. A.B., Harvard, 96, M.D., 00; European study, 01-02. Instr. *ophthal.*, Harvard Med. Sch. Ophthal. surgeon, Mass. Charitable Eye and Ear Infirmary; consulting ophthal. surgeon, Carney Hosp., 08-; mem. advisory committee, Mass. Commission for Blind. Am. Med. Ass. (sec'y, sect. ophthal., 12-); Ophthal. Soc.; Col. Surg.; New Eng. Ophthal. Soc.; Ophthal. Gesell.
- Derby, Dr. I(ra) H(arris)**, 5460 University Ave., Indianapolis, Ind. *Chemistry*. Lyme, N. H., Sept. 20, 73. B.S., Harvard, 99; Ph.D., Chicago, 10. Instr. chem., Cornell, 99-00; Illinois, 00-01; asst., Chicago, 01-03; instr. med. chem., Minnesota, 03-07, *asst. prof. physical chem.*, 07-18; *chief chemist*, Republic Creosoting Co., 18- Chem. Soc. Physical chemistry; coal tar products.
- Dercum, Prof. F(rancis) X(avier)**, 1719 Walnut St., Philadelphia, Pa. *Nervous and mental diseases*. Philadelphia, Aug. 10, 56. M.D., Ph.D., Pennsylvania, 77. Instr. nervous diseases, Pennsylvania, 83-92; *prof. nervous and mental diseases*, Jefferson Med. Col., 92- Ass. Anat.; Neur. Ass. (past pres); Philos. Soc.; Phila. Neur. Soc. (past pres); Phila. Path. Soc.; Phila. Col. Physicians; cor. mem. Soc. Neur. de Paris; Budapest Royal Med. Soc.; Vienna Neur. and Psychiat. Soc. Clinical and pathological neurology; insanity.

- Derick, Prof. Carrie M.**, McGill University, Montreal, Can. *Botany*. Clareneville, Que. A.B., McGill, 90, A.M., 96; Woods Hole, 95, 96, 97, 00; Royal Col. Science, London, 98; Bonn, 01-02. Demonstrator bot, McGill, 91-95, lecturer, 96-04, asst. prof, 04-07, acting-head of dept, 10-12, *prof. morphol. bot.* 12- A.A.; Bot. Soc; Soc. Nat. Holdfasts of the Rhodophyceae; nuclear changes in growing seeds; anabiosis; nuclear differences between resting and active cells.
- Derick, Dr. C(larence) G(eorge)**, National Aniline and Chemical Co., Buffalo, N. Y. **Chemistry*. Sutton, Que, Oct. 29, 83. B.S., Worcester, 06; Mass. Inst. Tech, 06-07; M.S., Illinois, 09, Ph.D., 10. Research asst. org. chem, Mass. Inst. Tech, 06-07; lecturer and research asst, Illinois, 07-08, asst, 08-10, instr, 10; with *Nat. Aniline and Chem. Co.*, 16- A.A.; Chem. Soc; Ill. Acad. Water-proofing of concrete; rearrangements in organic chemistry; thermo-dynamic positivity and negativity.
- Derickson, Prof. S(amuel) H(offman)**, Lebanon Valley College, Annville, Pa. *Biology*. Newport, Pa, April 9, 79. B.S., Lebanon Valley, 02, M.S., 03; Hopkins; Brooklyn Inst; Tropical Bot. Lab, Jamaica. *Prof. biol. sciences, Lebanon Valley*, 04-, acting pres, 12. Land zoologist, exped. to Bahamas, 04. A.A.; Bot. Soc; Phytopath. Soc.
- Derleth, Prof. C(harles), Jr.**, University of California, Berkeley, Calif. *Civil engineering*. New York, N. Y., Oct. 2, 74. B.S., Col. City of N. Y., 94; C.E., Columbia, 96. Asst. civil eng, Columbia, 96-99, lecturer, 99-01; prof, Colorado, 02-03; assoc. prof. structural eng, California, 03-07, *prof. civil eng. and dean, col. civil eng.* 08- Instr. math. and drawing, evening schools, N. Y., 96-99; instr, summer sch. surv. and geod, Columbia, 96-00; consulting engineer. Civil Eng; Soc. Test. Mat; Eng. Educ. Structural engineering.
- Derr, Dr. Homer M(unroe)**, Minneapolis, Minn. *Physics, Geology*. Turbotville, Pa, Feb. 5, 72. A.B., Stanford, 98; A.M., Columbia, 01; Tyndale fellow, Pennsylvania, 01-03, Ph.D., 03. Asst. physics, Columbia, 99-01; instr. geol. and mining, Wyoming, 01-02; supt, Santa Margarita Gold Mining Co, Columbia, S. Am, 03-04; prof. physics and geol, Epworth, 04-05; math. and civil eng, Thomas S. Clarkson Mem. Sch. Tech, 05-07; civil eng, S. Dak. Col, 07-13; state engineer, S. Dak, 13-20. Inst. math, Palo Alto Summer Sch, 98; engineer, S. Dak. R. D. Commission, 08-10. Geol. Soc; Civil Eng; Min. Eng. Petrographic analysis; siliceous oolites of Sweet-water County, Wyo.
- Derr, Prof. Louis**, 83 Center St, Brookline, Mass. *Physics*. Pottsville, Pa, Aug. 6, 68. A.B., Amherst, 89, A.M., 92; B.S., Mass. Inst. Tech, 92. Asst. physics, Mass. Inst. Tech, 92-93, instr, 93-01, asst. prof, 01-04, assoc. prof, 04-09, *prof.* 09- Physical Soc; Astron. Soc; Optical Soc; Am. Acad; Royal Photog. Soc. Photography.
- Dershem, Dr. Elmer**, 2507 Webster St, Berkeley, Calif. *Physics*. Norwood, Kans, Dec. 31, 81. B.S., Kansas, 12; M.S., Iowa, 15, Ph.D., 17. Asst. physics, Iowa, 14-17; *instr. astron.* Illinois, 17-19; *physics, California*, 19- Assoc.
- Physical Soc; assoc. Elec. Eng; Astron. Soc. X-rays; photo-electric photometry.
- Desha, Prof. L(ucius) J(unius)**, Washington and Lee University, Lexington, Va. *Chemistry*. Cynthiana, Ky, June 14, 83. A.B., Washington and Lee, 06; Ph.D., Hopkins, 09. Chemist, Tenn. Food and Drugs Inspection, 09-12; prof. gen. and biol. chem, col. med, Tennessee, 12-20, acting dean, 17, registrar-bursar, 19-20; *prof. chem, Washington and Lee*, 20- Capt, Sanit. C, 17-19. A.A.; Chem. Soc. Drug analysis; applications of chemistry to clinical diagnosis; hydrogen electrode; fluorimetry.
- Detjen, L(ouis) R(einhold)**, West Raleigh, N. C. *Horticulture*. Algoma, Wis, Feb. 27, 84. B.S., Wisconsin, 09; M.S., N. C. Col, 11. *Asst. horticulturist, N. C. Col*, 09- Asst. nursery inspector, Wisconsin, summer, 09. Soc. Hort. Sci; N. C. Acad. Sterility in fruits; pollination; breeding of grapes.
- Detlefsen, Prof. (John) A.**, University of Illinois, Urbana, Ill. *Zoology*. Norwich, Conn, Sept. 12, 83. A.B., Dartmouth, 08; A.M., Harvard, 10; Sc.D., 12. Austin teaching fellow, Harvard, 08-12; asst. prof. *genetics, Illinois*, 12-18, assoc. prof, 18-19, *prof.* 19- A.A.; Soc. Nat; Soc. Zool; Ky. Acad. Genetics; coat color, size, growth and fertility in mammals and mammalian species crosses; heredity and breeding in domestic animals.
- Detmers, Dr. Freda**, Ohio State University, Columbus, Ohio. *Plant pathology*. Dixon, Ill, 67. B.S., Ohio State, 87, M.S., 91, Ph.D., 12. Asst. botanist, Ohio Exp. Sta, 90-93; *instr. bot, Ohio State*, 07-, *asst. botanist, Exp. Sta.*, 18- A.A.; Bot. Soc; Phytopath. Soc; Ohio Acad. Anthracnose of wheat; potato diseases.
- DeTurk, Prof. E(mest) E.**, 707 W. Green St, Urbana, Ill. *Agricultural chemistry*. Martinsville, Ind, Sept. 24, 87. B.S.A., Purdue, 13; M.S., Pa. State, 16; fellow, Illinois, 17-19, Ph.D., 19. Asst. agr. chem, Pa. State, 13-14, instr, 14-16, asst. prof, 16-18; assoc. *soil fertility, Illinois*, 19-20, *asst. prof.* 20- A.A.; Ill. Acad. Soil potassium; soil fertility.
- Detwiler, Samuel B(ertolet)**, U. S. Department of Agriculture, Washington, D. C. *Forestry*. Mont Clare, Pa, Sept. 18, 81. B.S.F., Minnesota, 06; Yale, 01-02. Forest asst, U. S. Forest Service, 06-07; asst. prof. forestry, Minnesota, 07-08; forester, Forest Products Co, 08-11; gen. supt, Pa. Chestnut Tree Blight Commission, 11-13; forest engineer, 13-16; *forest pathologist in charge, office blister rust control, U. S. Dept. Agr.*, 16- Ecol. Soc; Phytopath. Soc; Soc. Foresters. Sanitation cutting in controlling chestnut blight.
- Detwiler, Dr. S(amuel) R(andall)**, Peking Union Medical College, Peking, China. *Anatomy*. Ironbridge, Pa, Feb. 17, 90. Ph.B., Yale, 14, A.M., 16, Ph.D., 18. Asst. instr. biol, Yale, 14-17, instr. anat, 17-20; *assoc. Peking Union Med. Col.*, 20- Junior physiologist, Bur. Mines, 17-18. A.A.; Ass. Anat; Soc. Zool. Retinal physiology; experimental morphogenesis of the peripheral nervous system.
- Deussen, Alexander**, Stewart Building, Houston, Tex. *Geology*. San Antonio, Tex, Jan. 19, 82.

- B.S., Texas, 03, fellow, 03-04, M.S., 04. Student asst. zool., Texas, 02-03, tutor geol., 04-05, instr., 05-08; asst. geologist, U. S. Geol. Surv., 08-15, geologist, Gulf Production Co., 15-16; *consulting geologist*, 16- Geol. Soc.; Min. and Metal. Eng.; Ass. Petrol. Geol. (pres, 18). Stratigraphy and economic geology of the Texas coastal plains; gulf coast salt domes.
- De Voss, Prof. J(ames) C(larence)**, Kansas State Normal School, Emporia, Kans. *Animal psychology*. Knox Co, Nebr. A.B., 11, A.M., 12. Asst. psychol., Colorado, 12-13; principal, high sch., Fairview, Kans., 12-13; supt. pub. schools, Horton, 13, *director, bur. educ. measurements and standards*, Kans. State Nor. Sch. Capt., Sanit. C., 18. Color vision of cats; cat's use of paws.
- Dewey, Bradley**, 29 Raymond St., Cambridge, Mass. *Chemistry*. Burlington, Vt., Aug. 23, 87. A.B., Harvard, 08; B.S., Mass. Inst. Tech., 09. Director, research lab., Am. Sheet and Tin Plate Co.; pres., Dewey and Almy Co. Col., C.W.S. Chem. Soc.; Electrochem. Soc.; Soc. Test. Mat.; Am. Iron and Steel Inst.
- Dewey, Frederic P(erkins)**, U. S. Treasury Department, Washington, D. C. *Chemistry, Metallurgy*. Hartford, Conn., Oct. 4, 55. Ph.B., Yale, 76. Instr. chem., Lafayette, 76-77; chemist building stones, tenth census, 81; mineralogist, U. S. Geol. Surv., 82; curator econ. geol. and metal, U. S. Nat. Museum, 82-89; expert in chem. and metal. patents, 89-03; *assayer, bur. of the mint*, U. S. Treas. Dept., 03-, acting director, 13-15. Chem. Soc. (pres, Wash. Sect., 93, treas., 01-); Min. Eng.; Soc. Chem. Indust.; Electrochem. Soc. Analytical chemistry and its application to metallurgy.
- Dewey, Prof. John**, Columbia University, New York, N. Y. **Philosophy*. Burlington, Vt., Oct. 20, 59. A.B., Vermont, 79; Ph.D., Hopkins, 84; LL.D., Wisconsin, 04; Michigan, 13. Instr. and asst. prof. philos., Michigan, 84-88; prof., Minnesota, 88-89; Michigan, 89-94; Chicago, 94-04, director, sch. of educ., 02-04; *prof. philos.*, Columbia, 04- Nat. Acad.; A.A. (v. pres, 08); Soc. Nat.; Philos. Soc.; Psychol. Ass. (pres, 99); Philos. Ass. (pres, 05). Logical theory; social psychology; ethical history; history of moral beliefs and practises of humanity.
- Dewey, Lyster H(oxie)**, 4512 Ninth St., N. W., Washington, D. C. **Botany*. Cambridge, Mich., March 14, 65. A.B., Mich. Agr. Col., 88. Instr. bot., Mich. Agr. Col., 88-90; *botanist in charge fiber investigations*, U. S. Dept. Agr., 90- A.A.; Wash. Bot. Soc.; Wash. Biol. Soc.; Wash. Acad. Grasses; weeds troublesome to agriculture; fiber plants; origin and classification of varieties of cotton; production of fiber from hemp, flax, sisal and manila plants.
- DeWitt, Dr. Lydia M**, Sprague Memorial Institute, Chicago, Ill. **Pathology*. Flint, Mich., Feb. 1, 59. M.D., Michigan, 98, B.S., 99. Demonstrator anat., Michigan, 96-97, asst. histol., 98-02, instr., 02-10; path., Washington (St. Louis), 10-12; *mem. Sprague Mem. Inst.*, 12-, asst. prof. path., Chicago, 12-18, *assoc. prof.*, 18- Am. Med. Ass.; Ass. Path. and Bact.; Ass. Tuber.; Chicago Path. Soc. Nerve endings in muscle, tendon and esophagus; morphology of kidneys; morphology and function of areas of Langerhans; pathology of muscle; myositis ossificans; membranous dysmenorrhea; sino-ventricular connecting system of mammalian heart; chemotherapy of tuberculosis; bactericidal action of copper salts.
- DeWolf, Frank W(albridge)**, State Geological Survey, Urbana, Ill. *Geology*. Vail, Iowa, March 22, 81. B.S., Chicago, 03, 03-04. Asst. geol., Chicago, 03-04; geol. aid to geologist, U. S. Geol. Surv., 04-08; asst. state geologist, Ill. Geol. Surv., 08-09, acting director and director, 09-17, *chief*, 17- Asst. director, U. S. Bur. Mines, 17-18; mem. div. states relations and div. geog. and geol., Nat. Research Council, 17- A.A.; Geol. Soc.; Ass. Petrol. Geol.; Ass. State Geol. (past pres); Min. Eng.; West. Soc. Eng.; Ill. Soc. Eng. (past v. pres); Ill. Acad. (past pres). Administration of geological investigations; coal and oil.
- Dexter, Prof. Edwin G(rant)**, Panama, Panama. *Psychology, Education*. Calais, Maine, July 21, 68. B.P., Brown, 91. A.M., 92; Ph.D., Columbia, 99. Science master, high sch., Colo. Springs, 92-95; prof. psychol., Colo. State Nor. Sch., 95-00; educ., Illinois, 00-07, director, sch. educ., 05-07; commissioner of educ., P. R. and chancellor, Univ. Porto Rico, 07-12; *rector, Inst. Nacional de Panama*, 12- A.A.; Psychol. Ass.; Soc. Sci. Educ.; Am. Geog. Soc.; Ill. Child-study Soc. The influence of the weather on conduct; history of education in the United States.
- Dexter, Prof. Franklin**, 247 Marlborough St., Boston, Mass. **Anatomy*. Boston, May 10, 57. M.D., Columbia, 87. Asst. demonstrator anat., Columbia, 92-93; asst. histol., *Harvard Med. Sch.*, 93-94, demonstrator anat., 94-95, asst. prof., 96-99, *assoc. prof.*, 00- Ass. Anat. Medulla of the rabbit; abdomen, vitelline vein and brain of the cat; paraphysis of Mammalia.
- Dexter, Prof. John S(mith)**, University of Saskatchewan, Saskatoon, Sask., Can. *Zoology*. Shiocton, Wis., Aug. 21, 85. A.B., Ripon, 08; A.M., Wisconsin, 09; fellow, Columbia, 13-14, Ph.D., 14. *Prof. biol.*, Northland, 09-12; Olivet, 14-15; *Saskatchewan*, 15- A.A.; Soc. Mammal. Heredity of Drosophila.
- Dice, Dr. Lee E(aymond)**, University of Michigan, Ann Arbor, Mich. *Zoology*. Savannah, Ga., July 15, 87. A.B., Stanford, 11; M.S., California, 14, Ph.D., 15. Deputy fur warden, Alaska Fisheries Service, 11-13; instr. zool., Kansas State, 16-17; asst. prof. biol., Montana, 17-18; *curator mammals, museum zool.*, Michigan, 19- Field asst. biol. surv., U. S. Dept. Agr.; asst. zool., Illinois, 19. A.A.; assoc. mem. Ornith. Union; Cooper Ornith. Club; Paleont. Soc.; Soc. Mammal.; Ecol. Soc.; West. Soc. Nat.; Wash. Biol. Soc. Behavior of Daphnia; ecology of land vertebrates in Alaska, California, Kansas, Montana and Washington; evolution of rodents and lagomorphs.
- Dick, Dr. George F(rederick)**, 25 E. Washington St., Chicago, Ill. *Bacteriology*. Fort Wayne, Ind., July 21, 81. M.D., Rush Med. Col., 05. Intern, Cook Co. Hosp., 05-06; instr. path., Chicago, 10-11; *mem. McCormick Inst. for Infectious Diseases*, 11-14; pathologist, St. Luke's

- Hosp, 16-18. Major, M. C, 18-19. Ass. Path. and Bact; Am. Med. Ass. Medicine.
- Dickens, Prof. Albert**, Kansas State College, Manhattan, Kans. *Horticulture, Forestry*. Anoka, Minn, Oct. 24, 67. B.S., Kansas State, 93, M.S., 01. Principal, pub. schools, Bushton, Kans, 94-96; Ellinwood, Kans, 96-98; asst. horticulturist, *Kansas State*, 99-01, *prof. hort, 01-; state forester, Kans, 09- Soc. Hort. Sci; Pomol. Soc; Forestry Ass; Kans. Hort. Soc. (trustee)*. Apple growing; vegetable spraying; forest tree nursery.
- Dickerson, E(dgar) L(eek)**, Central High School, Newark, N. J. *Entomology*. Newark, N. J., Jan. 13, 78. B.S., Rutgers, 02. Asst. to state entomologist, N. J., 02-11; instr. entom, dept. agr, Rutgers, 02-11; *head, dept. biol, Cent. High Sch, Newark, N. J., 11- Lecturer, farmers' institutes; lecturer science, pub. schools, Newark. A.A; Entom. Soc; Ass. Econ. Entom; N. Y. Entom. Soc; N. J. Micros. Soc; Brooklyn Entom. Soc. Economic entomology.*
- Dickerson, Miss M(ary) C(ynthia)**, American Museum of Natural History, New York, N. Y. *Zoology*. Hastings, Mich, March 7, 66. Michigan, 86-91; Woods Hole, 94, 97-98, 05-06; B.S., Chicago, 97. Instr. biol, Cent. High Sch, Grand Rapids, Mich, 91-94; high sch, La Grange, Ill, 94-95; head, dept. zool. and bot, Nor. Sch, Providence, R. I., 97-05; instr. zool, Stanford, 07-08; with *Am. Museum Nat. Hist, 08-, curator, dept. woods and forestry, 10-, asst. curator herp, 10-13, assoc. curator, 13-19, curator, 19- Assoc. ed, 'Am. Mus. Jour,' 08-10, ed, 10-19; 'Natural Hist,' 19- A.A; Soc. Ichthyol. and Herp; Ecol. Soc; Soc. Mammal; Forestry Ass; fel. N. Y. Acad. Morphology, ecology and life histories of amphibians and reptiles; education.*
- Dickerson, Dr. R(oy) E(mest)**, California Academy of Sciences, San Francisco, Calif. *Geology*. Monticello, Ill, Aug. 8, 77. B.S., California, 00, M.S., 10, Ph.D., 14. Principal and science teacher, various high schools, Calif, 00-07; science teacher, high schools, San Francisco, 07-18; asst. curator, *dept. paleont, Calif. Acad. Sciences, 14-17, curator, 17-19, hon. curator, 19- Geologist, Standard Oil Co. of Calif; asst. paleont, California, summers, 10-12, instr, 12-13. A.A; Geol. Soc; Paleont. Soc. (sec'y, Pacific div, 12, v. pres, 13, pres, 14); Calif. Acad; Le Conte Geol. Club (sec'y, 18). Paleontology; paleontology and geology of the Pacific Coast and Mexico; the fauna of the Eocene; the Tertiary of Peru, southern California and the Philippines.*
- Dickey, Donald R(yder)**, San Rafael Heights, Pasadena, Calif. *Zoology*. Dubuque, Iowa, March 31, 87. A.B., Yale, 10. A.A; mem. Ornith. Union; Cooper Ornith. Club; Soc. Mammal. Ornithology; mammalogy; habit studies of birds; photography of birds and big game.
- Dickey, Prof. Robert W(illiam)**, Washington and Lee University, Lexington, Va. *Physics*. Bath Co, Va, May 13, 91. B.S., Washington and Lee, 10, A.B., 11, A.M., 12; Hopkins, 15, fellow, 15-16, Ph.D., 16. Instr. physics and math, Washington and Lee, 10-13; *physics, Hopkins, 14-15; assoc. prof. and director, physical lab, Washing-*
- ton and Lee, 16- Tech. adviser on instruments and photog. equipment, A. S., 17-19, lieut, 19. Index of refraction for gases; airplane instruments.*
- Dickinson, Dr. H(obert) C(utler)**, Bureau of Standards, Washington, D. C. **Physics*. Bangor, Maine, Oct. 11, 75. A.B., Williams, 00, A.M., 01; Clark, 02-03, Ph.D., 10. Lab. asst., Williams, 00-02; *Bur. Standards, 03-06, asst. physicist, 06-10, assoc. physicist, 10-16, physicist, 16- A.A; Physical Soc; Mech. Eng; Soc. Test. Mat; Soc. Automotive Eng; Refrig. Eng; Wash. Acad; Wash. Philos. Soc; Soc. de Physique. Thermometry; calorimetry; specific heats of liquids; heats of combustion and fusion; thermal properties of refrigerants; thermal conductivities; internal combustion engines.*
- Dickson, Dr. Charles W(illiam)**, Kelowna, B. C., Can. *Chemistry, Geology*. Hamilton, Ont, Jan. 13, 78. M.A., Queen's (Can), 96-00, sch. mining, 00-01; science research scholar, Royal Exhib. of 1851, London, England, 01, 02, 03; Ph.D., Columbia, 03; Heidelberg and Freiburg, 03-04. Demonstrator anal. chem, Queen's (Can), 01-02, lecturer chem, sch. mining, 03-09; *rancher. Chemist, assay office, Ont. Bur. Mines, 00; Dominion Iron and Steel Co, 01; lieut, C.E.F, 16-20; chemist, British Cellulose and Chem. Mfg. Co, 17-18. Min. Eng; Can. Min. Inst. Genetic relations of ore deposits; ore deposits of Sudbury, Ont; platinum contents of nickel and copper ores.*
- Dickson, Prof. Ernest C(harles)**, Lane Hospital, San Francisco, Calif. *Bacteriology*. Newmarket, Ont, 81. B.A., Toronto, 04, M.B., 06, M.D., 17. Asst. demonstrator physiol, Toronto, 04-05, George Brown research scholar, 06-07; intern, Toronto Gen. Hosp, 07; asst. demonstrator path, Toronto, 07; asst. resident physician, Hopkins Hosp, 07-08; instr. path. and baeter, Cooper Med. Col, 08-10; asst. prof. path, *Stanford, 10-13, 13-18, assoc. prof. med, 18- Fellow, Rockefeller Inst, 10-13. Ass. Path. and Bact; Soc. Exp. Biol; Soc. Clin. Invest; Am. Med. Ass; Calif. Acad. Med. Experimental chronic nephritis; botulism.*
- Dickson, Prof. James G(eere)**, University of Wisconsin, Madison, Wis. *Plant pathology*. Yakima, Wash, Feb. 7, 91. B.S., Wash. State, 15; M.S., Wisconsin, 17, Ph.D., 20. Asst. soil chem. and asst. librarian, Wash. State, 15; asst. bot, Wisconsin, 16-17; *pathologist, office cereal investigations, bur. plant indust, U. S. Dept. Agr, 18-; asst. prof. plant path, Wisconsin, 19- Bot. Soc; Phytopath. Soc. Plant physiology; plant chemistry; cereal diseases.*
- Dickson, J(ohn) B(ernard)**, 105 Beyers Ave, Akron, Ohio. *Physical chemistry*. Zanesville, Ohio, Sept. 8, 89. A.B., Ohio (Athens), 12; A.M., Ohio State, 13; Austin fellow, Mass. Inst. Tech, 16-17, Ph.D., 17. Asst. chem, Ohio State, 12-15; instr. physical chem, Mass. Inst. Tech, 17-18; *research chemist, B. F. Goodrich Rubber Co, 19- Chemist, Bur. Mines, and capt, C.W.S., 18-19. Chem. Soc; Physical Soc. Free energy; colloids.*
- Dickson, Prof. L(eonard) E(ugene)**, University of Chicago, Chicago, Ill. **Mathematics*. Independence, Iowa, Jan. 22, 74. B.S., Texas, 93,

- teaching fellow, 93-94, A.M., 94; fellow, Chicago, 94-96, Ph.D., 96; Leipzig and Paris, 96-97. Chemist, Tex. Geol. Surv., 92-93; instr. math, California, 97-99; assoc. prof., Texas, 99-00; asst. prof., Chicago, 00-07, assoc. prof., 07-10, prof., 10- Visiting prof. math, California, 14; mem. Nat. Research Council, 19- Nat. Acad.; Philos. Soc.; Math. Soc. (pres., 16-18, ed., 'Trans'); Am. Acad.; London Math. Soc.; cor. Paris Acad.; Int. Math. Union (chairman, Am. sect.). Theory of groups (finite and infinite); theory of numbers; projective geometry; applications of group theory; the theory of groups in a general field; invariants; history of mathematics.
- Diefendorf, Dr. A (Ilen) Ross**, 108 Huntington St., New Haven, Conn. *Psychiatry*. Savannah, N. Y., Dec. 21, 71. A.B., Yale, 94, M.D., 96. Junior asst. physician, Worcester Insane Hosp., 96-97, senior asst. physician, 97-98; asst. physician and pathologist, Conn. Insane Hosp., 98-08; *lecturer psychiat.*, med. sch., Yale, 98- Neur. Ass.; Medico-Psychol. Ass. Clinical psychiatry; mental and neurological diagnosis.
- Diehl, William W (ebster)**, U. S. Department of Agriculture, Washington, D. C. *Botany*. Logansport, Ind., Jan. 15, 91. A.B., Miami, 14; M.S., Iowa State, 15. Teaching fellow, Iowa State, 14-16; instr. bot., Clemson, 16-17; scientific asst. mycol., bur. plant indust., U. S. Dept. Agr., 17-19, asst., 19- Phytopath. Soc.; Iowa Acad. Mycology; fungous diseases of plants; mycological exchange.
- Diemer, Prof. Hugo**, La Salle Extension University, 4046 Michigan Ave., Chicago, Ill. *Mechanical engineering*. Cincinnati, Ohio, Nov. 18, 70. M.E., Ohio State, 96; A.B., Pa. State, 13. With Addyston Pipe and Steel Co., 88-92; Westinghouse Elec. and Mfg. Co., 96-98; indust. engineer, Bullock Mfg. Co., 98-00; asst. prof. mech. eng., Mich. Agr. Col., 00-01; assoc. prof., Kansas, 01-04; supt., Nat. Motor Vehicle Co., 04-06; production manager, Goodman Mfg. Co., 06-08; prof. indust. eng., Pa. State, 08-19; personnel supt., Winchester Repeating Arms Co., 19-20. Consulting engineer various indust. firms; major, ordnance dept. Consulting engineer for Int. Harvester Co., Atlas Engine Works, Cincinnati Milling Machine Co., Nat. Motor Vehicle Co. and others. A.A.; Mech. Eng.; Eng. Educ.; Acad. Polit. and Social Sci.; Taylor Soc.; Nat. Ass. Corp. Schools; Pa. Eng. Soc. Industrial economics; automobiles; motor boats and motor cycles; factory organization and administration; wage systems; time elements in machine shop operations.
- Diemer, Dr. Melvin E (dison)**, Forest Products Laboratory, Madison, Wis. *Chemistry*. Dakota, Ill., March 7, 87. A.B., Wisconsin, 08, A.M., 09, Ph.D., 11. *With forest products lab, U. S. Dept. Agr.*, 11- Gaseous content of lake water; selenium acid; aurous chlorid; scientific photography.
- Dietrich, Prof. W (illia)m**, Preston, Minn. *Animal husbandry*. Black River Falls, Wis., March 24, 71. B.S.A., Wisconsin, 99; M.S., Illinois, 06. Soil expert, bur. soils, U. S. Dept. Agr., 03-04; instr. and later asst. prof. swine husbandry, Illinois, 04-12, asst. and later asst. chief, Exp. Sta., 08-12; asst. prof. dairy and animal husbandry, Minnesota, 13-18; *county agent*, Fillmore Co., Minn., 18- A.A.; Soc. Animal Nutrition. Animal nutrition; swine husbandry.
- Dietz, Harry F (rederic)**, U. S. Department of Agriculture, Washington, D. C. *Entomology*. Indianapolis, Ind., Dec. 8, 90. A.B., Butler, 14; Ohio State, 16. Asst. state entomologist, Ind., 14-16; *entom. inspector, fed. hort. board and bur. entom.*, U. S. Dept. Agr., 17- A.A.; Entom. Soc.; Ass. Econ. Entom.; Ind. Acad.; Ohio Acad. Coccidae of Indiana; insect pests of the Canal Zone.
- Dietz, S. M.**, 158 Hyland, Ames, Iowa. *Plant pathology*. Garner, Iowa, April 6, 93. B.S.A., Iowa State, 17, M.S., 18. Field asst. cereal investigations, bur. plant indust., U. S. Dept. Agr., 17, asst. pathologist, 18- Second lieut., F. A., 18. Phytopath. Soc. Rust of oats; resistant varieties; limits of the host.
- Diggs, Dr. S (terling) H (enry)**, 1074 Superior Ave., Whiting, Ind. *Chemistry*. Mathews Co., Va., May 16, 79. B.S., M.S., Virginia, 12, Ph.D., 14. Instr. physics, Virginia, 10-11, psychol., 12-13, chem., 13-14; *research chemist*, Standard Oil Co. of Ind., 14- Teacher physics and psychol., Virginia, summer seh. Chem. Soc. Diffusion of iodine; reactions of phosphorus and copper; racial psychology.
- Dike, Prof. Paul H (arrison)**, Robert College, Constantinople, Turkey. *Physics*. Crystal Lake, Ill., Feb. 22, 78. B.S., Northwestern, 01, fellow, 02-03, M.S., 03; Berlin, 05-06; Cambridge, 06; Ph.D., Wisconsin, 11. Magnetic observer, U. S. Coast and Geod. Surv., 04-05; dept. terrestrial magnetism, Carnegie Institution, 05-09; asst. physics, Wisconsin, 09-11; Cornell, 11-14; instr., Missouri, 14-15; *prof.*, Robert Col., Constantinople, 15- Lieut., Sig. C., A.E.F., 17-19; acting scientific attaché, U. S. Embassy, Paris, 19. A.A.; Physical Soc. On magnetic surv. yacht 'Galilee,' 07-08. Radioactive emanation in atmosphere; atmospheric electrical conductivity at sea; dip circle corrections; photo-electric potentials; radio telegraphy; sound ranging of air-planes.
- Dill, Prof. Homer E (ay)**, State University of Iowa, Iowa City, Iowa. *Zoology*. Gardiner, Maine, Oct. 30, 77. Curator, Maine State Museum, 00-06; taxidermist, Brooklyn Museum; asst. prof. zool. and director, vert. museum, dept. zool., Iowa. In charge, exped. to Laysan Isl., 11; La. Gulf Coast, 18, 19; Cascade Mountains, 20. Iowa Acad. Ornithology; habits of Laysan birds.
- Diller, J (oseph) S (ilas)**, U. S. Geological Survey, Washington, D. C. **Geology, Petrography*. Plainfield, Pa., Aug. 27, 50. B.S., Harvard, 79; Heidelberg, 80-83. Teacher, State Nor. Sch., Westfield, Mass., 73-77; *geologist*, Assos exped., 81-82; U. S. Geol. Surv., 83- Assoc. ed., 'Am. Jour. of Science.' Diploma, Paris Expos., 00. A.A.; Geol. Soc. (v. pres., 07); Wash. Acad. (rec. sec'y, 08); Wash. Geol. Soc. (pres., 01); Wash. Philos. Soc. (sec'y, 88-94). General and economic geology; petrography; geology of Crater Lake National Park, Lassen Peak, Redding, Klamath Mountains and Taylorsville region in California; sandstone dikes; igneous rocks of Pacific Coast; chromite; asbestos; talc.

- Dimick, Chester E(dward)**, 47 Squire St, New London, Conn. *Mathematics*. Manchester, N. H. Nov. 6, 80. A.B. Harvard, 01; A.M. Pennsylvania, 07. *Instr. math*, Pennsylvania, 03-06; *U. S. Coast Guard Acad*, 06- A.A.; Math. Soc.
- Dimmock, Dr. George**, 531 Berkshire Ave, Springfield, Mass. *Entomology*. Springfield, May 17, 52. A.B. Harvard, 77; Ph.D. Leipzig, 81; Paris, 81-82. *Private research*, 82- Ed, 'Psyche,' 77-90. A.A.; Soc. Nat.; Boston Soc. Nat. Hist.; Soc. entom. de France. Mouth parts of Diptera; scales and glands of insects; early stages of Carabidae, Coccinellidae and Chrysomelidae.
- Dimock, Dr. William Wallace**, Lexington, Ky. *Veterinary science*. Tolland, Conn., Feb. 20, 80. B.S.A. Conn. Col, 01; D.V.M. Cornell, 05; Univ. de Cuba, 08. Asst. chief animal husbandry, Cuban Exp. Sta, Santiago, 06-08; chief veterinarian, Nat. Board of Health, Cuba, 08-09; prof. path. and bacter, Iowa State, 09-19; head, dept. vet. science, Ky. Exp. Sta, 19- A.A.; Vet. Med. Ass. Biology; pathology; bacteriology; animal parasites; immunology; sanitary science.
- Diner, Prof. Jacob**, 316 W. 84th St, New York, N. Y. *Internal medicine*. Königsberg, Germany, Aug. 26, 70. Gymnasium, Altstadt, 84; Ph.G. Strassbourg; M.D. Fordham, 13. Demonstrator bacter, Fordham, 09-10, instr, 10-11, path. and bacter, 11-13, asst. prof, 13-14, prof. pharmacol. and lab. diagnosis, 13- A.A.; Pharmaceut. Ass; Soc. Bact.; Therapeut. Soc; N. Y. Acad. Med; N. Y. Soc. Clin. Serol. and Hematol. Immunology; hematology.
- Dines, Dr. Charles R(oss)**, Federal Reserve Bank, Chicago, Ill. *Mathematics*. Shelbyville, Mo., Aug. 22, 87. A.B. Northwestern, 08, A.M. 09; Ph.D. Chicago, 15. Instr. math, Grinnell, 09-10; Dartmouth, 11-12; Northwestern, 13-15; instr. and asst. prof, Dartmouth, 15-18; master computer, Aberdeen Proving Ground, Md, 18; Federal Reserve Board, 20- General analysis.
- Dines, Prof. Lloyd L(yne)**, University of Saskatchewan, Saskatoon, Sask, Can. *Mathematics*. Shelbyville, Mo, March 29, 85. A.B. Northwestern, 06, fellow, 06-07, A.M. 07; fellow, Chicago, 08-11, Ph.D. 11. Instr. math, Evanston Acad, 07-08; Columbia, 11-13; assoc. prof, Arizona, 13-14; asst. prof, Saskatchewan, 14-19, prof, 19- Math. Soc; Circolo Mat. di Palermo. Theory of numbers; elimination; implicit functions; postulate systems.
- Dinwiddie, Dr. J(oseph) G(ray)**, Young Men's Christian Association, Wilmington, Del. *Chemistry*. Charlottesville, Va, Oct. 27, 89. B.S. Virginia, 11, M.S. 12; Ph.D. Yale, 16. Asst. prof. chem, Louisville, 16-17; research chemist, Fed. Dyestuff and Chem. Co, 17-18; Chem. Eng. and Research Corp, 18; E. I. duPont de Nemours and Co, 18- Chem. Soc; N. Y. Chemists Club. Bromination of phenol; hydrofluosilicic acid; fluorids; sulphur colors.
- Dinwiddie, W(illiam) W(alter)**, 32 Edisona Terrace, West Orange, N. J. *Astronomy, Physics*. Greenwood, Va, Nov. 4, 76. Virginia, 95-00. Instr. physics, Virginia, 98-99; asst. U. S. Naval Observatory, 00-06; Ames-Bonner Co, 06-08; Alvan Clark and Sons Corp, 08-12; production engineer educ. film, Edison Lab, 12-13, electroplating and disc moulding investigations, 13-16; manager, disc record mfg. div, Thos. A. Edison, Inc, 16-18; research engineer, Edison Lab, 18- Eclipse expeditions to Georgia, Sumatra and Africa. Astron. Soc; Mech. Eng. Astronomical instruments; motion picture photography; phonograph record manufacturing; electroplating.
- Dionne, C(harles) E(usèbe)**, Laval University, Quebec, Can. *Zoology*. St. Denis, Kamouraska Co, Can, July 11, 46. A.M. by private masters, 02. Curator, zool. museum, Laval, 83- Two first prizes, two medals and two diplomas, Expos. Prov. Quebec, 87. Assoc. Ornith. Union. Arthropoda; birds and mammals of Canada.
- Ditman, Dr. Norman E(dward)**, 449 Park Ave, New York, N. Y. *Pathology*. Brooklyn, N. Y., May 28, 77. Ph.B. Yale, 96; M.D. A.M. Columbia, 00, Ph.D. 08. Asst. clin. path, Columbia, 02-03, instr. path, 03-09. House physician, St. Luke's Hosp, 01-02; pathologist, Sloane Maternity and Roosevelt Hospitals, 02-09. A.A.; Health League; N. Y. Acad. Med. Deficient oxidation in its relation to the etiology, pathology and treatment of nephritis; economic value of education in preventive medicine; opsonins and vaccines in medicine and surgery.
- Ditmars, R(aymond) L(ee)**, Zoological Park, New York, N. Y. *Natural history*. Newark, N. J., June 20, 76. Pub. and private schools. Asst. curator entom, Am. Museum Nat. Hist, 91-97; stenographer, 97-99; reporter, 'N. Y. Times,' 99-00; curator reptiles, N. Y. Zool. Park, 00- Soc. Ichthyol. and Herp. (treas, 16); N. Y. Zool. Entom. and Linnean Societies. Herpetology; diseases of reptiles and mammals; educational motion pictures.
- Dixon, Joseph S(cattergood)**, University of California, Berkeley, Calif. *Zoology*. Cottonwood Falls, Kans, March 5, 84. Grad, Throop Acad, 08; Stanford, 07-10. Asst. curator mammals, museum vert. zool, California, 15-18, econ. mammalogist, 18- Mem. Alexander exped. to Alaska, 07, 08; Harvard exped. to Alaska and Siberia, 13-14. Ornith. Union; Cooper Ornith. Club; Soc. Mammal; West. Soc. Nat; Calif. Acad. Ornithology; economic mammalogy.
- Dixon, Prof. Roland B(urrage)**, Peabody Museum, Cambridge, Mass. **Anthropology*. Worcester, Mass, Nov. 6, 75. A.B. Harvard, 97, A.M. 98, Ph.D. 00. Asst. anthrop, Harvard, 98-00, instr, 01-05, asst. prof, 06-16, prof, 16- Ethnographer, Am. Commission to Negotiate Peace, Paris, 18-19; mem. Nat. Research Council, 19- A.A. (sec'y, H, 03, v. pres, 10); Anthropol. Ass. (pres, 13-15); fel. Ethnol. Soc; Folk-lore Soc. (pres, 07, 08); Antiq. Soc; fel. Am. Acad; Polynesian Soc; Anthropol. Inst. Gt. Britain and Ireland; cor. mem. Soc. des Américanistes; for. assoc. Paris Anthropol. Soc. Ethnology and archeology of America and of the peoples of the Pacific; languages and culture of the Indians of the Pacific Coast, especially California.
- Doan, Prof. Frank C(arleton)**, 10 S. Gilbert St, Iowa City, Iowa. *Psychology, Physiology*. Nelsonville, Ohio, Feb. 13, 77. Hiram, 92-95; Ph.B. Ohio State, 98; A.M. Harvard, 00, Ph.D. 04; Heidelberg, 08; Col. de France, 10. Prof. philos, Ohio (Athens), 00-04; theol. and philos.

- of religion, Meadville Theol. Sch., 04-13. A.A.; Psychol. Ass; Philos. Ass; Soc. Psychical Research; Religious Educ. Ass. Types of religious experience; phenomenalism in ethics; cosmic humanism; the cosmic character; religion and the modern mind.
- Doane, Prof. R(ennie) W(ilbur)**, Stanford University, Calif. *Entomology*. Des Moines, Iowa, March 11, 71. A.B, Stanford, 96. Instr. zool. and entom. Wash. State, 96-98, asst. prof., 98-01, supt. fisheries, Exp. Sta., 01-06; asst. entom., Stanford, 05-06, instr., 06-09, asst. prof., 09-15, *assoc. prof.*, 15- A.A.; Entom. Soc; Ass. Econ. Entom. Economic and medical entomology; propagation of oysters and salmon; economic food fishes; the fisheries of Washington.
- Doane, S(amuel) E(verett)**, 471 Park Ave, New York, N. Y. *Electrical engineering*. Swampscott, Mass, Feb. 28, 70. High sch. Foreman, various rooms, incand. lamp dept, Thomson-Houston Co, 86-90, asst. manager, 90-93; asst. engineer and later supt. and asst. engineer, Edison Lamp Works, Harrison, N. J, 93-96; manager, repair lamp dept, Thomson-Houston Co, 95-96; engineer, Gen. Elec. Co, Schenectady, N. Y, 97; supt, Bryan Marsh Co, 97-00; *chief engineer*, Nat. Lamp Works, Gen. Elec. Co, 01-Elec. Eng. Incandescent electric lamp making.
- Dochez, Dr. A(iphonse) R(aymond)**, Johns Hopkins University, Baltimore, Md. **Medicine*. San Francisco, Calif, April 21, 82. A.B, Hopkins, 03, M.D, 07. Fellow path, Rockefeller Inst, 08-10, bacteriologist, Hosp, 10-11, asst. res. physician, 10-13, res. physician, 14, asst. med, 11-14, *assoc.*, 14-16, *assoc. mem.*, 16-19; *assoc. prof. med.*, Hopkins, and *assoc. physician*, Hopkins Hosp, 19- Am. Physicians; Soc. Bact; Soc. Exp. Path; Soc. Exp. Biol; Soc. Clin. Invest; Harvey Soc. Pathology; bacteriology and immunity; clinical medicine.
- Dock, Dr. George**, Washington University, St. Louis, Mo. **Medicine*. Hopewell, Pa, April 1, 60. M.D, Pennsylvania, 84, hon. Sc.D, 04; hon. A.M, Harvard, 95. Asst. clin. path, Pennsylvania, 87-88; *prof. path*, Tex. Med. Col. and Hosp, 88-91; *med.*, Michigan, 91-08; Tulane, 08-10; *Washington (St. Louis)*, 10- Physician, Univ. Hosp. Dispensary, Phila; v. pres, Int. Med. Cong, Moscow, 97; London, 13. A.A; Am. Physicians (pres, 17); Am. Med. Ass. Pathology of malaria, dysentery, Protozoa, diseases of the blood and of pernicious anemia; ductless glands; hookworm.
- Dockeray, Prof. F(loyd) C(arlton)**, Ohio Wesleyan University, Delaware, Ohio. *Psychology*. A.B, Michigan, 07, A.M, 09, Ph.D, 15. Asst. instr. *psychol.*, Michigan, 08-09; instr., Kansas, 10-13, asst. prof, 13-16, *assoc. prof.*, 16-20; *prof.*, Ohio Wesleyan, 20- In charge, psychol. dept, Air Service, med. research lab, A.E.F. A.A; Psychol. Ass; Kans. Acad. Physiological psychology; neurology; the span of vision in reading; physical fatigue and mental efficiency; volumetric measurements of brain of a human fetus; psychology of aviation.
- Dodd, Dr. Edward L(ewis)**, 2505 Guadalupe St, Austin, Tex. *Mathematics*. Cleveland, Ohio, Nov. 1, 75. A.B, Western Reserve, 97, A.M, 01; A.M, Yale, 02, Ph.D, 04. Instr. *math.*, Iowa, 04-06; Illinois, 06-07; *Texas*, 07, *assoc. prof.* Cashier and asst. bookkeeper, Browning, King and Co, 97-00. Math. Soc. Iterated limits.
- Dodds, Prof. G(ideon) S(tanhope)**, University of West Virginia, Morgantown, W. Va. *Zoology*. Parnassus, Pa, July 11, 80. A.B, Colorado, 04, A.M, 05; Ph.D, Pennsylvania, 10. Instr. *biol.*, Colorado, 05-08; Harrison fellow, Pennsylvania, 08-10; *asst. prof. biol.*, St. Louis, 10-11; *zool.*, Missouri, 11-18; *histol. and embryol.*, West Virginia, 18- Instr. *zool.*, Woods Hole, 09, 11; mountain lab, Colorado. A.A; Soc. Zool; Ecol. Soc. Sex cells in teleosts; ecology and taxonomy of Crustacea and insects.
- Dodge, Austin Richardson**, General Electric Co, Schenectady, N. Y. *Steam engineering*. Southbridge, Mass, April 20, 69. B.S, Worcester, 93, M.S, 98, M.E, 01. *With Gen. Elec. Co*, 96-Medal, Panama-Pacific Expos, 15. Mech. Eng. Steam turbines; specific heat of superheated vapors; development of steam and air meters.
- Dodge, Dr. Bernard O(gilvie)**, U. S. Department of Agriculture, Washington, D. C. *Botany*. Mauston, Wis, April 18, 72. Ph.B, Wisconsin, 09; Ph.D, Columbia, 12; N. Y. Bot. Garden, 10, 14. Principal, high sch, Greenwood, Wis, 95-00; Algoma, Wis, 02-08; asst. bot, Columbia, 09-13, instr, 13-20; *pathologist fruit diseases*, *bur. plant indust.*, U. S. Dept. Agr, 20- Bot. Soc; Torrey Bot. Club (sec'y-treas, 11-20); Phytopath. Soc; Wis. Acad. Morphology of Ascomycetes; cytology of slime moulds; infection and immunity.
- Dodge, Dr. Carroll W(illiam)**, Pawlet, Vt. *Botany*. Danby, Vt, Jan. 20, 95. A.B, Middlebury, 15, A.M, 16; fellow, Washington (St. Louis), 15-18, Ph.D, 18. Instr. *bot.*, Brown, 19-20, *asst. prof.*, 20- A.A; Bot. Soc; Micros. Soc; Phytopath. Soc. Mycology; plant physiology and pathology; biochemistry; bacteriology.
- Dodge, Prof. Charles Wright**, University of Rochester, Rochester, N. Y. *Biology*. Cape Vincent, N. Y, Jan. 15, 63. B.S, Michigan, 86, M.S, 89. Instr. *bot. and zool.*, high sch, Detroit, 86-90; *biol.*, Rochester, 90-92, *prof.*, 92- Biologist, Rochester Health Dept, 94- A.A; Soc. Nat; N. Y. State Sci. Teachers Ass. (pres, 00); Rochester Acad. (cor. sec'y, 92-02, pres, 02). Limnology.
- Dodge, Dr. Francis D(espard)**, 291 Henry St. Brooklyn, N. Y. *Chemistry*. Washington, D. C, Jan. 14, 68. Ph.B, Columbia, 88, fellow, 88-90, Ph.D, 90; Heidelberg, 90-91. *Engaged in technical work with Dodge and Olcott Co*, Bayonne, N. J, 91- Chem. Soc; N. Y. Chemists Club. Organic chemistry; essential oils; synthetic products.
- Dodge, F(rank) E(lsworth)**, 60 S. 19th St, Flushing, N. Y. *Chemistry*. Barre, Vt, Oct. 23, 66. Ph.B, Vermont, 89. Chemist, Occidental Oil Co, 89-90; N. Y. Tartar Co, 91-95; Edw. Smith and Co, 95-99; manager, Palmetto Co, 99-00; supt, Barrett Mfg. Co, 00-06; chemist, United Gas Improv. Co, 06-09; consulting chem. engineer, 09-12; *chem. engineer*, Barrett Co, 12- Chem. Soc. (librarian, 92-99, sec'y, Phila. sect, 99-09, counselor, 20); Chem. Eng; N. Y. Chemists Club. Recovery of pyridin bases from the di-

rect ammonium sulphate process; neutral sulphate of ammonia.

Dodge, Prof. Homer L(evi), University of Oklahoma, Norman, Okla. *Physics*. Ogdensburg, N. Y., Oct. 21, 87. A.B., Colgate, 10; M.S., Iowa, 12, Ph.D., 14. Asst. instr. *physics*, Iowa, 10-12, demonstrator, 12-13, instr., 13-15, asst. prof., 15-19; *prof. and head of dept.*, Oklahoma, 19-Ed. research in physics, 'Sch. Science and Math,' 16- Junior topographer, U. S. Geol. Surv., 11-14. Course expert physics, committee on educ. and special training, War Dept., 19; director, Okla. Bur. Standards, 19- A.A.; Physical Soc.; Okla. Acad. Elasticity; electrical measurements and instruments.

Dodge, Prof. Raymond, 79 Lawn Ave., Middletown, Conn. **Psychology*. Woburn, Mass., Feb. 20, 71. A.B., Williams, 93, hon. Sc.D., 18; Ph.D., Halle, 96. Asst. to Prof. B. Erdmann, Halle, 96-97; *prof. philos.*, Ursinus, 97-98; instr., *Wesleyan*, 98-99, assoc. prof., 99-02, *prof. psychol.*, 02- Asst. librarian, Williams, 93-94; *prof. psychol.*, summer session, California, 06; Columbia, 09, 11; cooperating ed., 'Psychol. Bul.', 04-10; advisory ed., 'Psychol. Review,' 10-16; 'Jour. Exp. Psychol.', 16-; exp. psychologist, nutrition lab, Carnegie Institution, 12-14; non-res. lecturer, Columbia, 16, Ernest Kempton Adams research fellow, 16-17; chairman, sub-committee on vision, Nat. Research Council, 18; consulting psychologist, C. W. S., 18; lieut. commander, U. S. N. R., 18. A.A.; Psychol. Ass. (pres, 16); Philos. Ass. Dynamic psychology; psychology of reading; registration of eye movements; visual fixation; visual space perception and perception of motion; ocular reactions of the insane; nervous fatigue; reflexes; differential tests of nervous efficiency; psychological effects of alcohol; theory of inhibition; elementary conditions of variability.

Dodge, Prof. Richard E(lwood), Storrs, Conn. **Geography, Agriculture*. Wenham, Mass., March 30, 68. A.B., Harvard, 90, A.M., 94. Asst. geol., Harvard, 91-94, instr., 94-95; instr. and assoc. prof. nat. science, *Teachers Col., Columbia*, 95-97, *prof. geog.*, 97-16, *emer. prof.*, 16- Asst. U. S. Geol. Surv., 90-95; ed., 'Jour. of Sch. Geog.', 97-01; assoc. ed., 'Geog. Rev.', 99-; ed., 'Jour. of Geog.', 02-10. A.A.; Geol. Soc.; Ass. Geog. (sec'y and ed); fel. N. Y. Acad; hon. mem. Australasian Royal Geog. Soc. Scientific geography for elementary and secondary schools; geographical factors in agriculture.

Dodson, Dr. John Milton, 5817 Blackstone Ave., Chicago, Ill. *Medicine*. Berlin, Wis., Feb. 17, 59. A.B., Wisconsin, 80, A.M., 88; M.D., Rush Med. Col., 82, Jefferson Med. Col., 83; Berlin and Vienna, 96. Lecturer and demonstrator anat., *Rush Med. Col.*, 89-93, *prof. physiol. and demonstrator anat.*, 93-94, *physiol. and histol.*, 94-00, *med.*, 00-, junior dean, 98-99, *dean*, 99-; *professorial lecturer med. and dean, med. courses, Chicago*, 01- Prof. diseases of children, woman's med. sch., Northwestern, 93-97; Rush Med. Col., 99- A.A.; Soc. Nat; Ass. Anat; Am. Med. Ass. Diseases of children.

Dodson, Prof. W(illiam) R(ufus), Baton Rouge, La. *Botany, Agronomy*. Belton, Tex., July 17, 67. Fellow, Missouri, 89-90, B.S., 90; A.B., Har-

vard, 94. Asst. prof. biol., Missouri, 90-94; asst., Harvard, 94; prof. bot., Louisiana, 94-02, asst. director, Exp. Sta., 02-05, director, 05-12, dean, col. agr., 12-20; *pres.*, *W. R. Dodson Seed and Livestock Co., Inc.*, 20- In charge, La. forestry exhibit, La. Purchase Expos., 04; mem. La. State Museum Board; La. Board of Agr; La. State Conservation Commission; La. Commissioner, Jamestown Expos., 07; head, agr. relations sect., Food Ad., 18. A.A.; Soc. Agron; La. Nat. Soc. Bacteriology; root tubercles of legumes; rice; forage crops.

Dohme, Dr. A(lfred) R(obert) L(ouis), Roland Park, Baltimore, Md. *Pharmaceutical chemistry*. Baltimore, Feb. 15, 67. A.B., Hopkins, 86, Ph.D., 89. Asst. Fresenius's lab, Wiesbaden, 90-91; *chemist and pres.*, *Sharp and Dohme, Baltimore*, 91- Instr. pharmacy, med. sch., Hopkins, 00-12; mem. revision committee, U. S. Pharmacopeia. Chem. Soc.; Pharmaceut. Ass; Soc. Chem. Indust. Alkaloids; assay of drugs, especially vegetable drugs; chemistry, pharmacognosy and histology of drugs; Cascara sagrada; Podophyllum; scammony.

Doisy, Edward A., Washington University Medical School, St. Louis, Mo. *Biological chemistry*. Ill., Nov. 13, 93. A.B., Illinois, 14, M.S., 16. Asst. *biol. chem.*, Harvard Med. Sch., 15-17; *instr.*, *Washington (St. Louis)*, 19-20, *assoc.*, 20- Chem. Soc. Metabolism.

Doll, Dr. Edgar A(rnold), State House, Trenton, N. J. *Psychology*. Cleveland, Ohio, May 2, 89. A.B., Cornell, 12; Pd.M., N. Y. Univ., 16; fellow, Princeton, 19-20, Ph.D., 20. Instr. exp. psychol., Wisconsin, 12; asst. psychologist, research lab, N. J. Training Sch. for Feeble-Minded Boys and Girls, 12-17; *psychologist*, N. J. Dept. Institutions and Agencies, 19- Asst. educ. psychol., Cornell, summers, 12-13; lecturer abnormal and educ. psychol., N. Y. Univ., Cornell, California and Montana, summers. Lieut. Sanit. C., 17-18. A.A.; Psychol. Ass. Mental tests; anthropometry; experimental and criminal psychology; feeble-mindedness.

Dolley, Dr. Charles S(umner), summer, Nelson, N. H., winter, Nassau, N. P., Bahamas. *Biological chemistry*. Elyria, Ohio, June 16, 56. Syracuse, 78; M.D., Pennsylvania, 82; Hopkins, 83-84; Leipzig and Naples Zool. Sta., 84-85. Prof. biol., Swarthmore, 85-88; Pennsylvania, 85-92; Cent. High Sch., Phila., 92-07; *private technical research in biol. chem.*, 00- Soc. Nat; Philos. Soc.; Franklin Inst; Phila. Acad.

Dolley, Dr. D(avid) H(ough), Medical Building, Columbia, Mo. *Pathology*. Lexington, Va., July 18, 78. A.B., Randolph-Macon, 97, A.M., 98; M.D., Hopkins, 02. Res. pathologist, Charity Hosp., Cleveland, Ohio, 02-03; Lakeside Hosp., 03-04; research, 04-06; *prof. path.*, North Carolina, 06-10; *Missouri*, 10- A.A.; Ass. Path. and Bact; Ass. Anat; Am. Med. Ass. Neurocytology of normal and abnormal conditions; pathological physiology.

Dolley, Prof. W(illiam) L(ee), Jr., Ashland, Va. *Zoology*. Staunton, Va., April 13, 87. A.B., A.M., Randolph-Macon Col., 08; Ph.D., Hopkins, 15. *Prof. biol.*, *Randolph-Macon*, 15- A.A.; Soc. Zool. General physiology.

- Dolmage, Dr. Victor**, Geological Survey of Canada, Ottawa, Can. *Geology*. Souris, Man. B.A., Manitoba, 12; Austin fellow, Mass. Inst. Tech., 16-17, Ph.D., 17. Asst. geologist, *Can. Geol. Surv.*, 17-20, *assoc. geologist*, 20- Economic geology; geology of British Columbia and Vancouver Island.
- Dolt, Dr. Maurice L(ouis)**, 225 W. 18th St, Chicago, Ill. *Chemistry*. Dollon, France, April 16, 83. Ph.B. Brown, 06, M.S., 07, Ph.D., 08. Instr. chem, Brown, 06-08; indust. chem, Lehigh, 09-10; asst. prof. org. and anal. chem, N. Dak. Col., 10-14, prof., 14-19; *research chemist*, *Am. Cotton Oil Co.*, 19- A.A.; Chem. Soc.; Electrochem. Soc. Action of acetic anhydride on derivatives of phenyl propionic acid; simple synthetic media for the growth of *B. coli* and for its isolation from water; organic qualitative and quantitative analysis.
- Dominian, Leon**, Cosmos Club, Washington, D. C. *Geography*. Constantinople, Turkey, April 13, 80. A.B., Robert Col, Constantinople, 98; Liège, 98-00. Explorer in Turkey, Mex. and the southwest, 01-17; geographer and ed. writer, *Am. Geog. Soc.*, 12-17; *special asst.*, *U. S. Dept. State*, 18- *Ass. Geog.*; *Oriental Soc.* Frontiers of language and nationality in Europe.
- Donaldson, Prof. H(enry) H(erbert)**, Wistar Institute of Anatomy, 36th St. and Woodland Ave, Philadelphia, Pa. **Neurology*. Yonkers, N. Y., May 12, 87. A.B., Yale, 79, hon. Sc.D., 06; Ph.D., Hopkins, 85. Instr. biol, Hopkins, 83-84, *assoc. psychol.*, 87-88; *asst. prof. neur.*, Clark, 89-92; *prof.*, Chicago, 92-06; *Wistar Inst.*, 06-Dean, Ogden Sch. of Science, Chicago, 92-98. *Nat. Acad.* (mem. council, 19); A.A.; Soc. Nat.; *Anthrop. Soc.*; *Psychol. Ass.*; *Ass. Anat.* (pres, 16); *Soc. Exp. Biol.*; *Soc. Mammal.*; *Physiol. Soc.*; *Neur. Ass.*; *Philos. Soc.* (councilor, 11-13); *Phila. Acad.* Anatomy of the nervous system, with special reference to growth and the changes due to age.
- Donaldson, Prof. John C(alvert)**, University of Cincinnati, Cincinnati, Ohio. *Anatomy*. Rondout, N. Y., Aug. 29, 88. Ph.B., Yale, 10; M.D., Hopkins, 14. Intern psychiat, Hopkins Hosp., 14-15; *instr. anat.*, *Cincinnati*, 15-19, *asst. prof.*, 19- A.A.; *Ass. Anat.* Ductless glands; histology of the adrenal glands.
- Doneghy, J(ohn) T(empleman)**, Jr, William Compton Co, St. Louis, Mo. *Paleontology*. La Plata, Mo., April 14, 89. A.B., Yale, 11, A.M., 12. *Geol. Soc.*; *Paleont. Soc.*; *Am. Geog. Soc.* Financial advertising.
- Doolittle, R(oscoe) E(dward)**, 2217 Grant St, Evanston, Ill. *Chemistry*. Fowlerville, Mich., Jan. 17, 74. B.S., Mich. Agr. Col., 96. Asst. state analyst, Mich., 96-99, state chemist, 99-04; chief, N. Y. lab, bur. chem, *U. S. Dept. Agr.*, 04-10, 12-16, *assoc. chemist* and acting chief, *bur. chem.*, 11, chief, east. dist, 17, *cent. dist.*, 18- A.A.; Chem. Soc.; Agr. Chem.; Pharmaceut. Ass.; Pub. Health Ass. Food chemistry; composition and methods of analysis of vinegar, tea, maple products and spices.
- Doran, Dr. Edwin W(ortham)**, Ruston, La. *Zoology*. Leitchfield, Ky., April 28, 86. B.S., Lincoln; A.M., Grant, 87; Ph.D., Cumberland, 90; Illinois. Pres, Ozark Col, and Baird Col, Mo., 85-89; state entomologist, Tenn., 86-90; prof. zool. and comp. anat., Md. Col., 91-92; teacher biol., James Millikin, 05-06; pres, Belvirino Col, Miss., 07-08; prof. biol., La. Indust. Inst. Investigator animal parasites, bur. animal indust., U. S. Dept. Agr. A.A.; *Ass. Econ. Entom.*; *Miss. Nat. Hist. Ass.* (pres, 07). Entomology; Entozoa; synonymy of vernacular names of animals; anatomy of circulating organs of Diplocardia; compound vernacular names of insects and vertebrates; vocabularies of students; physiology of rotifers.
- Doran, Prof. William L(eonard)**, New Hampshire State College, Durham, N. H. *Plant pathology*. Dartmouth, Mass., July 28, 93. B.S., Mass. Col., 15, M.S., 17. Instr. bot. and asst. botanist, N. H. Exp. Sta., 16-17; exten. plant pathologist, bur. plant indust., U. S. Dept. Agr., 17-19; *asst. prof. bot.*, N. H. Col., 19-, *asst. botanist*, *Exp. Sta.*, 20- *Scientific asst.*, U. S. Dept. Agr., summer, 19. *Phytopath. Soc.* Fungus spore germination; rust of snapdragon.
- Doremus, Dr. Charles A(very)**, 205 W. 57th St, New York, N. Y. **Chemistry*. New York, Sept. 6, 51. A.B., Col. City of N. Y., 70; Ph.D., Heidelberg, 73; hon. M.D., Buffalo, 79. Asst. chem, toxicol. and med. juris, Bellevue Hosp. Med. Col., 75-79, adj. prof., 79-97; prof. chem. and toxicol., med. dept., Buffalo, 77-82; chem., *Am. Vet. Col.*, 82, emer. prof., 92-98; *asst. chem.* and physics, Col. City of N. Y., 82-97, *asst. prof.*, 97-03, acting prof., 03-04. Reporter, Vienna Expos., 73; U. S. delegate, Int. Cong. Applied Chem., Paris, 96; chairman, Am. committee on organization, Paris, 00, and sect. X, Berlin, 03. A.A.; Chem. Soc.; Electrochem. Soc.; Soc. Chem. Indust.; *assoc. mem. Elec. Eng.*; *Medico-Legal Soc.*; *assoc. Mass. Medico-Legal Soc.*; fel. N. Y. Acad.; *Soc. chim. de Paris*; *Soc. de Chim. indust.* Foods and sanitary chemistry; toxicology; physiological chemistry; alumina; electrochemistry; bauxite; fluorides; hydrofluoric and hydrofluosilicic acid; arsenic; titanium oxid; metallurgical furnaces; zirconia; potash; manganese.
- Dorland, Dr. W(illiam) A(lexander) Newman**, 7 W. Madison St, Chicago, Ill. *Medicine*. Hilton Head, S. C., Dec. 26, 64. A.B., Cent. High Sch., Phila., 82, A.M., 90; M.D., Pennsylvania, 86. *Assoc. prof. gynec.*, Phila. Polyclinic, 92-10; *prof. obstet. and gynec.*, Loyola, 10-14; gynec., Valparaiso, 14-19; *Post-Grad. Med. Col.*, *Chicago*, 18- Lieut., M. R. C., 97-03, capt., 17, major, 18. Fel. Am. Med. Ass.; Col. Surg.; fel. Am. Acad. Med. (past v. pres); fel. Phila. Col. Physicians; Chicago Gynec. Soc. (pres, 20). Surgery; hydatidiform mole; chorio-epithelioma; placental transmission; age of mental virility.
- Dorner, Prof. H(erman) B(ernard)**, Urbana, Ill. *Horticulture*. La Fayette, Ind., April 10, 78. B.S., Purdue, 00, M.S., 01. Asst. bot., Ind. Exp. Sta., 01-02; Wabash, 06-08; *floriculture*, *Illinois*, 08-11, *asst. prof.* and *asst. chief*, 11-18, *prof. and chief*, 18- A.A. Window gardening.
- Dorr, John V(an) N(ostrand)**, 101 Park Ave, New York, N. Y. *Metallurgy*. Newark, N. J., Jan. 6, 72. B.S., Rutgers, 94, hon. M.E., 14. Edison's lab, 88-90; in indust. research, 94-95;

- indust. chemist, 95-01; managing partner, Lundberg, Dorr and W. Terry, 02-13; *consulting metallurgist*, 03-; *pres.*, Dorr Cyanide Machinery Co., 10-15; *Dorr Co. engineers*, 16- Min. and Metal. Soc.; Min. Eng.; Electrochem. Soc.; Chem. Eng.; Colo. Sci. Soc.; London Inst. Min. and Metal.; S. African Chem. Metal. and Min. Soc. Hydrometallurgical apparatus.
- Dorset, Dr. M(arion)**, U. S. Department of Agriculture, Washington, D. C. *Bacteriology, Chemistry*. Columbia, Tenn, Dec. 14, 72. B.S., Tennessee, 93; Pennsylvania, 93-94; M.D., George Washington, 96. Asst. *biochem. div.*, U. S. Dept. Agr., 94-01, *asst. chief*, 01-04, *chief*, 04- Demonstrator path, George Washington, 97-98. A.A.; Soc. Bact.; Chem. Soc.; Pub. Health Ass.; Ass. Tuberc. Chemistry and biology of B. tuberculosis; etiology and prevention of hog cholera; chemistry and bacteriology of meats.
- Dorsett, P(alemon) H(oward)**, U. S. Department of Agriculture, Washington, D. C. *Agriculture*. Carlinville, Ill, April 21, 62. A.B., Missouri, 84. Special agent, *bur. plant indust.*, U. S. Dept. Agr., 01-04, in charge of plant introduction sta, Chico, Calif., 04-07, *plant introducer, office foreign seed and plant introduction*, 09- Leader, U. S. agr. expd. to Brazil, 13-14. A.A.; Wash. Bot. Soc. Hydrocyanic acid for fumigating greenhouses; culture of violets; Bahia navel orange; Brazilian fruits.
- Dorsey, F(rank) M.**, National Lamp Works, Nela Park, Cleveland, Ohio. *Chemical engineering*. Dresden, Ohio, Jan. 22, 79. B.S., Ohio State, 08. Chief chemist, Shelby Elec. Co., 08-09, *asst. supt.*, 09-11; *gen. manager*, Youngstown Turpentine Co., 11-12; *chem. engineer*, *Nat. Lamp Works*, 12-17, *director, exp. eng. lab.*, 18- In charge, development div., C. W. S., 17-18. D. S. medal. Chem. Soc.; Chem. Eng.
- Dorsey, Dr. Geo(rge) A(mos)**, Granville, Ohio. **Anthropology*. Hebron, Ohio, Feb. 6, 68. A.B., Denison, 88, LL.D., 09; A.B., Harvard, 90, Ph.D., 94. Instr. *anthrop.*, Harvard, 95-96; *asst. curator anthrop.*, Field Museum Nat. Hist., 96-97, *curator*, 97-15; *prof. comp. anat.*, Northwestern, 00-13; *asst. prof. anthrop.*, Chicago, 05-09, *assoc. prof.*, 09-15. Assoc. ed., 'Am. Anthropologist,' 99-; *nat. delegate*, Cong. d'Archeol. et d'Ethnol. Prehist., Paris, 00. A.A. (v. pres., 03); Soc. Nat.; Ass. Anat.; Folk-lore Soc. (pres., 02); Mus. Ass.; Wash. Acad.; Chicago Geog. Soc. (pres., 08); *cor. mem. Soc. d'Anthrop. de Paris*. The lumbar curve; comparative sizes of heads of long bones; anthropology of American aborigines.
- Dorsey, Dr. Geo(rge) Edwin**, 1432 John St., Baltimore, Md. *Geology*. Baltimore, July 13, 92. A.B., Hopkins, 14, Ph.D., 18. Structure and stratigraphy of the Newark system.
- Dorsey, Dr. Herbert Grove**, 1 Essex Ave., Gloucester, Mass. *Physics*. Kirkersville, Ohio, April 24, 76. B.S., Denison, 97, M.S., 98; Hopkins, 97; Harvard, 00-01; Ph.D., Cornell, 08. Instr. *physics*, Maine, 98-00; *asst. prof.*, Florida, 01-03; *instr.*, Mechanics Inst., Rochester, 03-04; *asst.*, Cornell, 04-05, *instr.*, 05-10; *engineer*, research branch, West. Elec. Co., 10-12; *elec. engineer*, Nat. Cash Register Co., 12-16; *physicist*, *Hammond Radio Research Lab.*, 16- A.A.; Physical Soc.; Elec. Eng.; Radio Eng. Effects of magnetism on the elasticity of rods; coefficients of expansion at low temperatures; magnetostriction; electroculture; sound controlled submarine mines; radio-sonic control of torpedos; acoustical apparatus.
- Dorsey, Prof. M(axwell) J(ay)**, University Farm, St. Paul, Minn. *Horticulture*. Dresden, Ohio, May 3, 80. B.S., Mich. Agr. Col., 06; M.S., Cornell, 10, Ph.D., 13. Instr. *hort.*, Maine, 06-07; *asst. horticulturist*, N. Y. Exp. Sta., Geneva, 07-10; *asst. plant breeding*, Cornell, 10-11; *in charge fruit breeding*, Minn. Exp. Sta., 11-A.A.; Soc. Hort. Sci.; Minn. Hort. Soc. Fruit breeding; history and taxonomy of fruits; sterility, inheritance and hardness in fruits; flower types in the grape; winter injury; adaptation; bud variation.
- Dorsey, Dr. N(oah) Ernest**, 3702 Keokuk St., N. W., Washington, D. C. **Physics*. Annapolis Junction, Md., March 15, 73. A.B., Hopkins, 93, fellow, 96-97, Ph.D., 97; research fellow, Yerkes Observatory, summer, 99. Student *asst. physics*, Hopkins, 93-96, *asst.*, 97-99, *assoc.*, 99-01; *asst. physicist*, *bur. of soils*, U. S. Dept. Agr., 01, *scientist*, 02-03; *asst. physicist*, *Bur. Standards*, 03-07, *assoc. physicist*, 07-12; research *assoc.*, Carnegie Institution, 12-13; *assoc. physicist*, *Bur. Standards*, 13-17, *physicist*, 17-; *consulting physicist*, 20- A.A.; Physical Soc.; Wash. Acad.; Wash. Philos. Soc.; Soc. de Physique. Capillarity; light; physics of soils; ratio of electrical units; absolute measurements in electricity; radioactivity; self-luminous materials; X-rays; physics of medical sciences.
- Doten, Prof. S(amuel) B(radford)**, University of Nevada, Reno, Nev. *Entomology*. Gold Hill, Nev., Dec. 14, 75. B.S., Nevada, 98, fellow, 98-99, A.M., 12. Asst. *entom.*, Nevada, 99-02, *asst. prof.*, 02-06, *prof.*, 06-, *director*, *Exp. Sta.*, 13-A.A.; Entom. Soc.; Pacific Coast Entom. Soc. Economic entomology; Anabrus; Gossyparia spuria; ecological relationships of the San José scale; parasites of the codling moth; relation of nutrition to reproduction and longevity in hymenopterous parasites; photography of insects.
- Doubleday, Dr. Arthur William**, 220 Marlborough St., Boston, Mass. *Microchemistry*. Springfield, Vt., March 20, 78. D.M.D., Tufts, 03. A.A.; Am. Med. Ass.; Chem. Soc.; Micros. Soc.; fel. Am. Acad. Dental Sci.; Nat. Dental Ass. Diagnosis by salivary analysis; chemical changes of foodstuffs during digestion; photomicrographs of chemical salts.
- Doubt, Prof. Sarah L(ucinda)**, Topeka, Kans. *Botany*. Louisville, Ky., Feb. 6, 80. B.S., Nebraska, 03; M.S., Chicago, 08, Ph.D., 15. Instr. *bot.*, St. Clara, 13-14; *prof. biol.*, Winona, 16-17; McKendree, 17-20; *bot.*, *Washburn*, 20-A.A.; Bot. Soc. Plant physiology; genetics.
- Doubt, Prof. Thomas E(aton)**, 5402 Drexel Ave., Chicago, Ill. *Physics*. Louisville, Ky., Feb. 15, 70. B.S., Nebr. Wesleyan, 92; fellow, Nebraska, 94-97, A.M., 96; fellow, Chicago, 03-04, Ph.D., 04. Instr. *physics*, Nebr. Wesleyan, 92-94; *prof.*, Washington (Seattle), 97-02; *assoc. prof.*, *Armour*, 04- A.A.; Physical Soc. Absolute color equation; effect of the intensity upon the

- velocity of light; effect of the motion of the medium upon the velocity of light; Talbot's bands and the resolving power of the spectro-scope; the absorption of gases by charcoal.
- Doughty, Prof. Howard W(aters)**, Amherst, Mass. *Chemistry*. Baltimore, Md, Aug. 13, 71. Proficient in elec. eng, Hopkins, 93, fellow, 03-04, Ph.D, 04, fellow by courtesy, 04-05. Carnegie research asst, 04-05; instr. *chem*, Missouri, 05-06; Wisconsin, 06-07; *Amherst*, 07-08, asst. prof, 08-09, assoc. prof, 09-13, *prof*, 13- A.A; Chem. Soc. Organic chemistry; diphenylsulphoneorthocarboxylic and benzeneselenonic acids and their related compounds; derivatives of trimethylparaconic and of camphoric acids; organo-selenic acids; reactions with various metals of compounds containing the trihalogen methyl group.
- Douglas, Prof. F(rank) W(illiam)**, Colorado College, Colorado Springs, Colo. *Chemistry*. Galesburg, Mich, Oct. 19, 78. A.B, Albion, 05; A.M, Michigan, 08; Ph.D, Cornell, 19. Asst. prof. *chem*, Albion, 08-18; *assoc. prof*, Colo. Col, 19- Chem. Soc. Germanium.
- Douglas, Dr. Gertrude E(lizabeth)**, New York State College for Teachers, Albany, N. Y. *Botany*. Gardner, Mass, 83. A.B, Smith, 04; A.M, Cornell, 07, fellow, 14-15, Ph.D, 17. *Instr.* bot, Randolph-Macon, 09-13; Lake Erie, 15-17; N. Y. State Col. Agr, Cornell, 17-19; *biol*, N. Y. State Col. Teachers, 19- A.A; Bot. Soc. Morphology of agarics; histology of higher plants.
- Douglas, Prof. John F. H.**, College Station, Tex. *Physics*. Bucksport, Maine, Oct. 9, 84. B.S, Mass. Inst. Tech, 05; Ph.D, Cornell, 14. *Instr. physics*, Cornell, 07-14; Iowa State, 14-17; *asst. prof*, Tex. Col, 17- Eng. Educ. Electricity; magnetism; electrical measurements; resistance.
- Douglass, Dr. A(ndrew) E(lliott)**, University of Arizona, Tucson, Ariz. *Astronomy*. Windsor, Vt, July 5, 67. A.B, Trinity (Conn), 89, hon. Sc.D, 08. Asst, Harvard Col. Observatory, 89-94; first asst, Lowell Observatory, 94-01; probate judge, Coconino Co, Ariz, 02-06; *prof. physics and astron*, Arizona, 06-, *director*, *Steward Observatory*, 18- *Instr.* Northern Ariz. Nor. Sch. A.A; Astron. Soc; Meteorol. Soc; Ecol. Soc; Pacific Astron. Soc; fel. Royal Astron. Soc. Mars; Jupiter's satellites; observatory sites; climatic cycles and tree growth.
- Douglass, Earl**, Jensen, Utah. *Geology*. Medford, Minn, Oct. 28, 62. South Dakota, 88; S. Dak. Col, 89, 92; B.S, Iowa State, 93; M.S, Montana, 00; fellow, Princeton, 00-02. Teacher pub. schools, 83-97; supt. schools, Virginia City, Mont, 97-98; teacher sciences, Montana, 99-00; *asst. dept. vert. paleont*, *Carnegie Museum*, 02- Asst. to Prof. Wm. Trelease, Mo. Bot. Gardens, St. Louis, 90-91. Vertebrate paleontology; Tertiary geology and paleontology of western Montana; geology and paleontology of the Uintah Basin, Utah and Colorado; excavation of new genera and species of Jurassic or Comanchean dinosaurs.
- Douty, D(aniel) E(llis)**, 340 Hudson St, New York, N. Y. *Physics, Engineering*. Omro, Wis, April 3, 72. B.S, Washington (Seattle), 92; fellow, Clark, 98-01; Cornell, 01, 03. Asst. and tutor physics, Washington, 95-98; supervisor, dept. physics, math. and chem, high sch, Seattle, Wash, 01-03; asst. physicist, and later assoc. physicist, Bur. Standards, 03-12; *gen. manager*, *U. S. Test. Co, Inc*, 12- A.A; Physical Soc; Soc. Test. Mat; Wash. Philos. Soc. Textile testing.
- Dove, Prof. Leonard P(ercy)**, University, N. Dak. *Geology*. Guthrie Co, Iowa, April 20, 83. B.S, Simpson, 09; Chicago, 12-13. *Instr.* science and principal, high sch, Carroll, Iowa, 09-12; instr. science, high school, Lead, S. Dak, 13-16; *geol*, Northwestern, 18-19; *asst. prof*, *North Dakota*, 19- Field asst. and asst. geologist, U. S. Bur. Mines, 18; Ind. Geol. Surv, 18; asst. geologist, N. Dak. Geol. Surv, 19. Iowa Acad. Pyrite in the coals of Indiana; clays and shales.
- Dover, Dr. Mary Violette**, University of Missouri, Columbia, Mo. *Chemistry*. Peterboro, Can. B.A, McGill, 98, M.S, 00; Ph.D, Breslau, 08. Demonstrator *chem*, McGill, 00-05; instr, Mt. Holyoke, 09-14; instr. and later *asst. prof*, *Missouri*, 15- Chemist, Hercules Powder Co, 18-19. Chem. Soc. Heats of combustion of oils and gases.
- Dow, A(rlan) W(ade)**, 131 E. 23d St, New York, N. Y. *Chemical engineering*. New York, Aug. 24, 66. Ph.B, Columbia, 88. Asst. chemist, Barber Asphalt Paving Co, 88-94; inspector asphalt and cements, D. C, 94-06; *consulting chem. engineer*, 06- A.A; Chem. Soc; Chem. Eng; Soc. Chem. Indust; Soc. Test. Mat; Int. Ass. Test. Mat. Road building; manufacture and testing of petroleum, bitumens and paving materials.
- Dow, Herbert H(enry)**, Midland, Mich. **Chemistry*. Belleville, Ont, Can, Feb. 26, 66. Grad. Case, 88. Prof. chem. and toxicol, Huron Hosp. Col, 88-89; *with Midland Chem. Co*, *Dow Process Co*, and *Dow Chem. Co*, 89-, *gen. manager*, *Dow Chem. Co*, 97-, *pres*, 18- Mem. advisory board, dept. eng. research, Michigan; mem. corp, Case. Chem. Soc. (chairman, Midland sect); Chem. Eng; Electrochem. Soc; Franklin Inst; London Soc. Chem. Indust. Manufacture of bromids from natural brine; electrolytic cells.
- Dowd, Dr. Charles N(orth)**, 127 W. 72d St, New York, N. Y. *Surgery*. New Britain, Conn, 58. A.B, Williams, 79, A.M, 82; M.D, Columbia, 86. Attending surgeon, Gen. Mem. Hosp, 94-14; St. Mary's Free Hosp. for Children, 04-14; *prof. clin. surg*, *Columbia*, 06-; *attending surgeon*, *Roosevelt Hosp*, 14- Consulting surgeon, Gen. Mem. and other hospitals. Fel. Surg. Ass; Col. Surg; Am. Med. Ass; N. Y. Acad. Med; Int. Soc. Surg. Surgery of the neck.
- Dowell, Dr. C(arr) T(homas)**, Stillwater, Okla. *Chemistry*. Mt. Sylvan, Tex, Dec. 3, 78. B.S, Texas, 02, fellow, 03-04; Ph.D, California, 15. Instr. chem, Texas, 11-16; teaching fellow, California, 13-14; assoc. prof, Tulane, 16-18; *chemist*, *Okla. Exp. Sta*, 18- A.A; Chem. Soc. Reactions between chlorin and ammonia, and chlorin and urea; cyanogenesis in sorghum.
- Dowell, Dr. N(orah) E(loise)**, Geological Survey, Washington, D. C. *Geology*. Ogden, Utah, June 14, 91. Ph.B, Brown, 13, A.M, 14, Ph.D,

16. Instr. psychol, pedag. and geog, State Nor. Sch, Plymouth, N. H., 16-17; asst. geol. Smith, 17-18, instr. 18-20; *asst. geologist, U. S. Geol. Surv.*, 20- Am. Geog. Soc. Economic geography; psycho-geography.
- Dowell, Dr. Philip**, 86 Bond St, Port Richmond, N. Y. *Botany*. Attica, Ind., Dec. 3, 64. A.B., Augustana, 85, Ph.D., 00; Nebraska, 93; Ph.B., Yale, 95, A.M., 96, forest sch., 01; Columbia, 96-97; Woods Hole, 96, 99. Instr. bot., Augustana, 89-90; Hope Acad., Moorhead, Minn., 90-91; asst. biol., Yale, 95-96; prof. science, Upsala, 96-97; nat. and applied sciences, Muhlberg, 97-02; *asst. teacher biol., high schools, N. Y. City*, 02- Bot. asst., U. S. Nat. Museum, summers, 02, 03, 04, 08; asst. curator, summers. A.A.; Bot. Soc.; Entom. Soc.; Fern Soc. (pres, 11, ed, 11, 12); Nature Study Soc.; Torrey Bot. Club (assoc. ed, 07-10, ed, 11, 12); N. Y. Ass. Biol. Teachers; N. Y. Entom. Soc.; Wash. Biol. Soc.; Staten Isl. Ass. Arts and Sci. (chairman, pub. committee, hon. curator bot.). North American species of Calceolaria; new ferns as hybrids in the genus Dryopteris; violets of Staten Island; flora of New York; ferns; violets; nature bibliography.
- Dowling, D(onaldson) B(ogart)**, Geological Survey of Canada, Ottawa, Can. *Geology*. Nananee, Ont., Nov. 5, 58. B.S., McGill, 83. Civil engineer, N. T. and Q. Ry., 83-84; asst. geologist, *Can. Geol. Surv.*, 84-91, *geologist*, 91- Geol. expeditions, Can. Govt, 84-; mem. Geog. Board, Can., 98-; lecturer geol. of coal, McGill, 10; mem. Dominion Power Board, 18. Fel. Royal Soc. Can; Can. Min. Inst. (pres, 18); Ottawa Field Nat. Club. The formation of coal; exploration of western Alberta.
- Dowling, Prof. L(innaeus) W(ayland)**, 2 Roby Road, Madison, Wis. **Mathematics*. Medina, Mich., Dec. 7, 67. Adrian, 89-90; Ph.D., Clark, 95. Instr. *math, Wisconsin*, 95-97, asst. prof., 98-14, *assoc. prof.*, 14- Math. Soc.; Math. Ass.; Circolo Mat. di Palermo. Analytic and projective geometry; forms of plane quintic curves; higher plane curves; conformal representation of plane triangles upon the upper half-plane; the branches of a plane sextic curve; involutions in the plane.
- Downey, Prof. Hal**, University of Minnesota, Minneapolis, Minn. *Histology*. State College, Pa., Oct. 4, 77. A.B., Minnesota, 03, A.M., 04, Ph.D., 09. Asst. instr., and *prof.*, animal biol., *Minnesota*, 04-17, *histol.*, 17- A.A.; Ass. Anat.; Minn. Path. Soc. Hematology.
- Downey, Prof. John F(lorin)**, 2109 Blaisdell Ave, Minneapolis, Minn. *Mathematics*. Hiramshurg, Ohio, Jan. 10, 46. B.S., Hillsdale, 70, A.M., 78; Michigan, 72-73; C.E., Pa. State, 77; Edinburgh and Göttingen, 01-02. Instr. *math*, Hillsdale, 70-71; principal, high sch., Cassopolis, Mich., 71-72; *prof. math*, Pa. State, 73-80; *Minnesota*, 80-14, *emer. prof.*, 14-, dean, col. sci., lit. and arts, 03-14. A.A.; Math. Soc. The shortening of various algebraic operations.
- Downey, Prof. June B(etta)**, University of Wyoming, Laramie, Wyo. *Psychology*. Laramie, July 13, 75. A.B., Wyoming, 95; A.M., Chicago, 98, fellow, 06-07, Ph.D., 07. Instr. *English*, *Wyoming*, 98-05, *prof. philos.*, 05-15, *psychol.* and *philos.*, 15-; principal, dept. univ. exten., 08-16. A.A.; Psychol. Ass. Handwriting; psychology of literature; will-profile; volitional tests; unidexterity.
- Downing, Dr. E(lliott) R(owland)**, University of Chicago, Chicago, Ill. *Zoology, Education*. Boston, Mass., Nov. 21, 68. B.S., Albion, 89, M.S., 94; Ph.D., Chicago, 01. Instr. science, Beloit, 91-96; asst. zool., Chicago, 00-01; *prof. biol.*, Northern State Nor. Sch., Mich., 01-11; *asst. prof. nat. science, Chicago*, 11-14; *assoc. prof.*, 14-, *asst. dean*, 12-16. Ed., 'Univ. Chicago Nature Study and Science Series.' A.A.; Nature Study Soc. (sec'y-treas., and ed, 11-17); Mich. Acad. Spermatogenesis of Hydra and Arenicola; ovogenesis of Hydra; muscle movement in Pelecypoda; heredity; pedagogy of science.
- Downs, Dr. Charles R(aymond)**, The Barrett Co., 17 Battery Place, New York, N. Y. *Chemistry*. New Haven, Conn., March 17, 88. Ph.B., Yale, 09, Ph.D., 12. Chemist, *Barrett Co.*, 12-16, *chief chemist, research dept.*, 16- Chem. Soc.; Chem. Eng. Coal tar chemistry.
- Downs, Dr. Edgar S(elah)**, Commonwealth Building, Philadelphia, Pa. *Experimental physics*. Southington, Conn., Sept. 25, 74. A.B., Yale, 98, Sloane fellow, 99-01, Ph.D., 01. Asst. physics, Yale, 99-01; asst. ed., 'N. Y. Elec. Rev.', 01-02; instr. science, De Lancey Sch., Phila., 02; Thurston Prep. Sch., 02-03; eng. apprentice, Westinghouse Elec. and Mfg. Co., 03-05; erecting engineer, 05-06; instr. elec. eng., Cooper Union, 06-07; tutor, Columbia, 07-08; *pres, E. S. Downs Co.*, 11- A.A. Spectrum analysis.
- Dox, Dr. Arthur W(ayland)**, Parke, Davis and Co., Detroit, Mich. *Chemistry*. Corning, N. Y., Sept. 19, 82. B.S., Pennsylvania, 04; A.M., Columbia, 05; Ph.D., Yale, 09. Chemist, dairy div, U. S. Dept. Agr., 05-10; chief chemist, Iowa Exp. Sta., 10-20; *research chemist, Parke, Davis and Co.*, 20- Capt., food div, Sanit C., 17-19. A.A.; Chem. Soc.; Agr. Chem.; Soc. Biol. Chem.; Iowa Acad. Organic and biological chemistry; animal nutrition; synthesis of naphthotetrazin; cheese ripening; enzymes of fungi; polysaccharids of lower fungi; thiobarbituric acid; silage; gelatinization of starch; synthetic drugs.
- Drain, Prof. B(rooks) D(aniel)**, French Hall, Amherst, Mass. *Horticulture*. Roxbury, Ohio, Dec. 9, 91. B.S., Ohio State, 17. Instr. *pomol.*, Ohio State, 17-18; *asst. prof.*, Mass. Col. 19- Soc. Hort. Sci. Pomology.
- Drake, Dr. N(eah) F(ields)**, Fayetteville, Ark. *Geology*. Summers, Ark., Jan. 30, 64. C.E., Arkansas, 88; A.M., Stanford, 95, Ph.D., 97. Asst. geologist, Ark. Geol. Surv., 87; Tex. Geol. Surv., 89-93; U. S. Geol. Surv., 97; *prof. geol. and mining*, Imperial Tientsin Univ., 98-00; consulting geologist, Am-China Development Co., 02-04; *prof. geol. and mining*, Pei Yang Univ., 05-11; *assoc. prof. econ. geol.*, Stanford, 11; head, dept. geol. and mining eng., Arkansas, 12-19; *consulting geologist*, 20- Asst. topographer, U. S. Geol. Surv., 94; engineer, pub. works dept., Tientsin Provisional Govt., 00-01. Geol. Soc.; Min. Eng. Chinese coal-fields; wind-blown materials in North China.

- Draper, Dr. Daniel**, Hastings-on-Hudson, N. Y. *Meteorology, Mechanics*. New York, N. Y., April 2, 41. Grammar sch. and private instruction; hon. Ph.D., N. Y. Univ., 80. Asst. physiol. and chem. to Prof. J. W. Draper; director, N. Y. Meteorol. Observatory, 68-11; *pres*, *Mech. and Meteorol. Co.*, 11- Apprentice, Novelty Iron Works, N. Y., 60; asst. port engineer, Star Line to New Orleans, La., 65; mem. Board of Health, N. Y. City. A.A.; Philos. Soc. Mechanical meteorology.
- Draper, Dr. George**, 116 E. 63d St., New York, N. Y. *Medicine*. New York, 80. A.B., Harvard, 03; M.D., Columbia, 06. Am. Physicians; Soc. Clin. Invest; Soc. Exp. Biol. Clinical medicine; heart; acute poliomyelitis; cerebrospinal syphilis; scarlet fever.
- Draper, Dr. William K(innicutt)**, 121 E. 36th St., New York, N. Y. *Medicine*. New York, Feb. 2, 63. A.B., Harvard, 85; M.D., Columbia, 88. Intern, Roosevelt Hosp., 88-90; attending physician, Bellevue Hosp; consulting physician, N. Y. Orthop. Hosp; *prof. clin. med.*, Columbia, 10- Am. Med. Ass; N. Y. Acad. Med.
- Drayton, Frank L(isle)**, 333 Fairmont Ave., Ottawa, Can. *Botany*. Barbados, B. W. I., Aug. 13, 92. B.S.A., McGill. Asst. plant path. and bacter. *div. bot.*, Can. Dept. Agr., 14-19, *plant pathologist*, 19- Infantry officer, 15- Phytopath. Soc. Phytopathology; Rhizoctonia in potatoes.
- Drechsler, Dr. Charles**, U. S. Department of Agriculture, Washington, D. C. *Botany*. Butternut, Wis., May 1, 92. B.S., Wisconsin, 13, M.S., 14; Ph.D., Harvard, 17. Field asst., *bur. plant indust.*, U. S. Dept. Agr., 17-18, *scientific asst.*, 19- Phytopath. Soc; Wis. Acad. Morphology of Actinomyces and Urophycetes; fungous parasites of cereals and grasses.
- Dresbach, Prof. Melvin**, Albany Medical College, Albany, N. Y. *Physiology*. Kingston, Ohio, July 8, 74. B.S., Ohio State, 97, M.S., 00; M.D., Starling-Ohio Med. Col., 03; Würzburg, 04; Leyden, 12. Asst. physiol., Ohio State, 97-02, *instr.*, 02-05; Starling-Ohio Med. Col., 00-04; Cornell, 05-09, asst. prof. pharmacol., 09-11, *physiol.*, 11-18; *prof.*, Albany Med. Col., 18- A.A.; Physiol. Soc; Soc. Exp. Biol. Human erythrocytes; physiological action of phenolphthalein; ocular defects of students; interpolated extra systoles; inhibition; diabetes mellitus; physiologic action of nitrobenzin; retinal adaptation; tonicity of muscle; vagus action on heart.
- Dresden, Dr. Arnold**, University of Wisconsin, Madison, Wis. **Mathematics*. Amsterdam, Holland, Nov. 23, 82. Amsterdam, 01-03; M.S., Chicago, 06, Ph.D., 09. *Instr. math.*, Univ. High Sch., Chicago, 06-09; *Wisconsin*, 09-12, *asst. prof.*, 12- A.A.; Math. Soc; Math. Ass. Calculus of variations.
- Dresser, John A(lexander)**, 709 Bank of Nova Scotia Building, Montreal, Can. *Geology, Petrography*. Richmond, Que., June 27, 66. B.A., McGill, 93, M.A., 97; Harvard, 94-95. Principal, St. Francis Col., Richmond, 03-11; lecturer geol., McGill, 07-09; geologist, Can. Geol. Surv., 09-11; manager, lands dept., Algonoma Cent. and Hudson's Bay Ry., 11-15; *consulting mining geologist*, 15- Assoc. ed., 'Jour. Geog.'; lecturer, Prov. Agr. Col., Compton, Que., 02-03; econ. geol., McGill, 12. Min. Eng; Geol. Soc; Royal Soc. Can; Can. Min. Inst. Petrographic studies in the Monteregian Hills, Quebec; geology of the copper-bearing rocks of southeastern Quebec; geology of the asbestos and chromite deposits of Quebec; geology of Lake St. John district; petroleum resources of the Peace River district.
- Dresslar, Prof. F(letcher) B(ascom)**, George Peabody College for Teachers, Nashville, Tenn. *Education, Psychology*. Banta, Ind., Sept. 21, 58. A.B., Indiana, 89, A.M., 92; Ph.D., Clark, 94. Principal, high sch., Princeton, Ind., 89-90; supt. schools, Princeton, 90-91; *prof. educ.*, Los Angeles State Nor. Sch., 94-97; asst. prof., California, 97-02, *assoc. prof.*, 02-09; *prof. philos. and educ. and dean*, dept. educ., Alabama, 09-11; *specialist sch. hygiene*, bur. educ., U. S. Dept. Int., 11-13; *prof.*, Peabody Col. for Teachers, 13- Acting head, dept. educ., California, 01-02; mem. Calif. State Board of Educ., 01-02, 05-09. Calif. Council Educ; Tenn. Acad. Ichthyology; rural school houses and grounds; open air schools.
- Drew, Prof. Gilman A(rthur)**, Woods Hole, Mass. **Zoology*. Newton, Iowa, Nov. 15, 68. B.S., Iowa, 90; fellow, Hopkins, 97-98, Ph.D., 98, Adam T. Bruce fellow, 98. Asst. zool., Hopkins, 98-00; *prof. biol.*, Maine, 00-11; *res. asst. director*, Woods Hole, 11- *Instr.* in charge zool., Woods Hole, 01-08, *embryol.*, 08-, asst. director, 09-11. A.A.; Soc. Nat; Soc. Zool. (see'y and treas., 03-04, *pres*, 20); Am. Acad. Anatomy, habits and embryology of Yoldia limatula; habits, anatomy and embryology of the Protobranchia; locomotion in Solenomya and its relatives; the life history of Nueula delphinodonta; habits and movements of the razor shell clam, and physiology of its nervous system; habits, anatomy, embryology and circulatory and nervous systems of the giant scallop; breeding habits and spermatophores of the squid; spermatophores of the octopus.
- Dreyer, Prof. Geo(rge) P(eter)**, 424 S. 6th Ave., La Grange, Ill. **Physiology*. Baltimore, Md., Sept. 22, 66. Baltimore City Col., 79-84; A.B., Hopkins, 87, fellow, 88-89, Ph.D., 90; Col. Physicians and Surg., Baltimore, 91-92. Assoc. prof. *physiol.*, Hopkins, 90-00; *prof. med. dept.*, Illinois, 00- A.A.; Physiol. Soc. Blood proteids; differential respiration; internal secretion of adrenals.
- Dreyfus, Dr. W(olfram) E**, 427 E. 57th St., New York, N. Y. *Chemistry*. Baden, Germany, Dec. 21, 64. Grad. Humanist. Gymnasium, Germany, 84; Ph.D., Munich, 00. *Instr. chem.*, Columbia, 00-02; chemist, Dept. Pub. Charities, N. Y. City, 02-04; *consulting chemist*, 04-; *proprietor*, Cambridge Soap and Chem. Co. Chem. Soc; Chem. Gesell; Chem. Verein. Tragacanth; relation of chemical constitution to the physiological action of modern anesthetics; disinfectants and antiseptics; chemistry of cooking; relation of chemical constitution to physiological action of modern remedies; soap making.

- Drinkard, Dr. A(lfred) W(ashington), Jr.**, Blacksburg, Va. *Horticulture*. Appomattox, Va, Jan. 10, 83. B.S., Va. Polytech, 06, M.S., 08; Ph.D., Cornell, 13. Record clerk horticulture, *Va. Exp. Sta.*, 06-08, asst. horticulturist, 08-12, assoc, 12-16, *director*, 16- A.A.; Soc. Hort. Sci. Plant breeding; plant physiology.
- Drinker, Prof. C(ecil) K(ent)**, Harvard Medical School, Boston, Mass. *Applied physiology*. Philadelphia, Pa, March 17, 87. B.S., Haverford, 08; M.D., Pennsylvania, 13. Med. house officer, Peter Bent Brigham Hosp, Boston, 14-15; instr. physiol, Hopkins, 15-16; *Harvard Med. Sch.*, 16-17, asst. prof, 17-18, *assoc. prof. applied physiol*, 18- Physiol. Soc. Physiology and pathology of blood formation and destruction.
- Drinker, Mrs. C(ecil) K(ent)**, (Dr. Katherine R(otan)), Harvard Medical School, Boston, Mass. *Physiology*. Waco, Tex, Jan. 12, 89. A.B., Bryn Mawr, 10; M.D., Woman's Med. Col. of Pa, 14; Harvard Med. Sch, 14-15, 16-17; Hopkins, 15-16. Asst. res. physician, Peter Bent Brigham Hosp, Boston, 17; *managing ed.*, *Jour. Indust. Hygiene*, 18- Physiol. Soc. Coagulation of blood; blood formation.
- Drinker, Pres. Henry S(turgis)**, Lehigh University, S. Bethlehem, Pa. *Mining engineering*. Hong Kong, China, Nov. 8, 50. E.M., Lehigh, 71; admitted to bar, Phila, 77; LL.D., Lafayette, 05; Franklin and Marshall, 10; Pennsylvania, 11; Princeton, 18. Lehigh Valley Coal Co, 71-72; eng. dept, Lehigh Valley R. R, 72-75, gen. solicitor, 85-05; *pres.*, *Lehigh*, 05- Pres. Soc. Nat. Reserve Corps, 13-15. A.A.; Min. Eng. (v. pres, 20); Eng. Educ; Min. and Metal. Soc.; Soc. Test. Mat; Forestry Ass. (pres, 12-15); Pa. Forestry Ass. (pres, 18-20); Mil. Training Camps Ass. (chairman, 15-20); v. pres, Nat. Conservation Cong. Tunneling; explosive compounds; rock drills; railroad and telegraph laws of Philadelphia.
- Drisko, Prof William J(ohnson)**, Massachusetts Institute of Technology, Cambridge, Mass. *Experimental physics*. Addison, Maine, Sept. 8, 66. B.S., Mass. Inst. Tech, 95. Asst. *physics*, Mass. Inst. Tech, 95-96, instr, 96-99; *prof.*, Colby, 99; instr, *Mass. Inst. Tech.*, 01-05, asst. *prof.*, 05-10, *assoc. prof.*, 10- Am. Acad.
- Drogin, Dr. I(saac)**, Mellon Institute, Pittsburgh, Pa. *Chemistry*. Russia, Dec. 8, 90. A.B., Col. City of N. Y., 13; M.S., Pittsburgh, 17, fellow, 17-19, Ph.D., 19. *Fellow, Mellon Inst.*, 19- Chem. Soc; N. Y. Chemists Club. Halogens in organic compounds; inversion of cane sugar.
- Drowne, Henry B(ernardin)**, 40 Converse St, Longmeadow, Mass. *Civil engineering*. Providence, R. I, June 28, 82. C.E., Brown, 03. Instr. civil eng, Brown, 05-06, 08-11; highway eng, Columbia, 11-16; *engineer, Lane Construction Corp.*, 12- Engineer, Am. Bridge Co, South. Ry. Co. and R. I. State Board of Pub. Roads, 03-12. A.A.; assoc. Civil Eng; Nat. Highways Ass; Road Ass; Soc. Munic. Improv; Mass. Highway Ass; Ass. Int. Cong. de la Route. Highway engineering.
- Drummond, Dr. I(saac) W(yman)**, 436 W. 22d St, New York, N. Y. *Chemistry*. Boston, Mass, June 19, 55. E.M., Columbia, 78, Ph.D., 79. *Chemist and mfg. director, Devoe and Reynolds Co.*, 80- A.A.; Chem. Soc; Soc. Chem. Indust. Colors; pigments; dyes.
- Drushel, Prof. J. A(ndrew)**, Park and Theresa Aves, St. Louis, Mo. *Geology*. Mt. Hope, Ohio, Nov. 24, 72. A.B., Nat. Nor. Univ, 95, A.M., 97; A.B., Yale, 05. Instr. geol. and biol, E. Tex. Nor. Col, 95-98; *prof.* geol. and bot, Nat. Nor. Univ, 00-04; *nature study and geol.*, *Harris Teachers Col.*, St. Louis, 05- Asst. ed, 'Nature Study Rev.' A.A.; Nature Study Soc. (pres, 20); St. Louis Acad. (rec. sec'y, 13). Glacial drift beneath St. Louis loess; plants new to St. Louis and vicinity.
- Drushel, Dr. W(illiam) A(llen)**, Grand Rapids, Mich. *Chemistry*. Mt. Hope, Ohio, March 21, 74. A.B., Nat. Nor. Univ, 97, LL.B., 00; A.B., Yale, 05, Ph.D., 08. Principal, high sch, Lebanon, Ohio, 01-04; asst. chem, Yale, 07-08, instr, 08-12, asst. *prof.*, 12-18; *director, research lab.*, *Haskelite Mfg. Corp.*, 18- A.A.; Chem. Soc. Analytical and organic chemistry; reaction velocity of organic compounds; estimation of potassium, lanthanum and organic nitrogen; hydraerylic esters.
- Dryer, Prof. C(harles) R(edway)**, Oak Knoll, Fort Wayne, Ind. *Geography*. Victor, N. Y., Aug. 31, 50. A.B., Hamilton, 71; M.D., Buffalo, 76. Teacher science, high sch, Fort Wayne, Ind, 77-90; *prof.* chem. and toxicol, Fort Wayne Col. of Med, 78-93; geog. and geol, Ind. State Nor. Sch, 93-13. Instr. physical geog, Cornell, 06; lecturer, sch. of geog, Oxford, 08. A.A.; Ass. Geog. (pres, 19); Ind. Acad. (pres, 10); Royal Geog. Soc. Organization and pedagogy of geography; regional geography of Indiana.
- Duane, Dr. Alexander**, 139 E. 37th St, New York, N. Y. *Pathology*. Malone, N. Y., Sept. 1, 58. A.B., Union, 78, hon. Sc.D., 19; M.D., Columbia, 81. Asst. surgeon, N. Y. Eye and Ear Infirmary, 85-88; Ophthal. and Aural Inst, 90-01, surgeon, 02-12. Surgeon, Vanderbilt Clinic, 94-95; instr. ophthal, med. col, Cornell, 02-04. A.A.; Am. Med. Ass. (chairman, ophthal. sect, 18); Ophthal. Soc; Harvey Soc; Illum. Eng; N. Y. Acad. Med. (chairman, ophthal. sect, 03-05); N. Y. Ophthal. Soc. (pres, 17). Physiology; physiology and pathology of blood-corpuscles; accommodation and motility of eye; medical lexicography.
- Duane, Prof. William**, Harvard University, Cambridge, Mass. **Physics*. Philadelphia, Pa, Feb. 17, 72. A.B., Pennsylvania, 92; A.B., Harvard, 93, A.M., 95; Ph.D., Berlin, 97. Asst. physics, Harvard, 93-95; *prof.*, Colorado, 98-07; investigator, Curie Radium Lab, 07-13; asst. *prof.* physics and research fellow Cancer Commission, *Harvard*, 13-17, *prof. biophysics*, 17- Nat. Acad; A.A.; Philos. Soc; Physical. Soc; Am. Acad. Electricity; velocity of chemical reactions; short electrical waves; differential telephone; radium emanation and induced activity; hysteresis; α -rays of radium; heat effects of radioactive substance; heat generated by phosphorescent substances; value of h by X-rays; ionization, absorption and emission spectra of X-rays.
- Dubilier, William**, 217 Center St, New York, N. Y. *Wireless telegraphy*. New York, June 25,

88. N. Y. Tech. Inst; Cooper Union. Chief engineer, *Dubilier Elec. Syndicate*, London, and *Dubilier Condenser Co*, N. Y. City, 11—Gold medal, Seattle Expos, 00. Elec. Eng; Radio. Eng; London Soc. Arts. Wireless telegraphy and telephony; submarine detection apparatus; aeroplane wireless apparatus; high frequency currents.
- Dubin, Dr. H(arry) E(nnis)**, 122 Hudson St, New York, N. Y. *Biochemistry*. Russia, March 4, 91. B.S., Col. City of N. Y., 12; fellow, Pennsylvania, 15—16, Ph.D., 16. Chemist, Phila. Polyclinic, 13—15; instr. research med, Pennsylvania, 16—17; in charge, chem. laboratories, Montefiore Home and Hosp, N. Y. City, 17—18; chief chemist, Grain Chem. Co, 18—20; *research chemist*, *H. A. Metz*, 20— A.A.; Chem. Soc. Chemotherapy; metabolism.
- Dublin, Dr. Louis I(srael)**, 1 Madison Ave, New York, N. Y. *Statistics*. Kovno, Russia, Nov. 1, 82. B.S., Col. City of N. Y., 01, fellow, 01—04; Ph.D., Columbia, 04. Instr. math, Col. City of N. Y., 01—08; Commercial High Sch, Brooklyn, N. Y., 08—11; *statistician*, *Metropolitan Life Ins. Co*, 11— Lecturer actuarial science, N. Y. Univ, 09—; vital statistics, Yale. A.A. (v. pres, 15); fel. Statist. Ass; fel. Actuarial and Statist. Soc. Race and occupational mortality; birth rate; incidence of and mortality from disease.
- DuBois, Dr. Eugene F(loyd)**, Cornell University Medical College, New York, N. Y. *Pathological physiology*. West New Brighton, N. Y., June 4, 82. A.B., Harvard, 03; M.D., Columbia, 06. Intern, Presb. Hosp, N. Y. City, 07—08, asst. pathologist, 09; instr. applied pharmacol, *med. col*, Cornell, 10—13, lecturer physiol, 13—19, *assoc. prof. med*, 19— Med. director, Russell Sage Inst. Path, 12—; director, second med. div, Bellevue Hosp. Physiol. Soc; Soc. Clin. Invest; Soc. Exp. Biol; Harvey Soc. Typhoid fever; diabetes; calorimetry and respiratory metabolism.
- DuBois, Henry M(athusalem)**, La Grande, Oregon, *Paleontology*. Logansport, Ind, Aug. 22, 87. A.B., Indiana, 13, A.M., 14; Illinois, 14—17. Asst. geol., Illinois, 14—17; *consulting geologist and principal, high sch*, La Grande, 17— Asst. geologist, Ind. Univ. Geol. Surv, 12—13; Ill. Geol. Surv, 16, 17. A.A.; Paleont. Soc; Ecol. Soc; Ind. Acad; Ill. Acad. Ecology; brachiopods; geological history of eastern Oregon.
- Dudgeon, Prof. Winfield (Scott)**, Ewing Christian College, Allahabad, India. *Botany*. Near Hedrick, Iowa, April 10, 86. B.S., Iowa State, 07; Yale, 09—10; fellow, Chicago, 15—16, Ph.D., 17. Asst. bot., Iowa State, 05—08; prof. nat. science, Central Col. (Iowa), 08—09; asst. biol., Sheffield Sci. Sch, Yale, 09—10; *prof*, Central Col. (Iowa), 10—12; *Ewing Christian Col*, 12—17, *bot*, 17— A.A.; Bot. Soc; Indian Sci. Cong; Bengal Asiatic Soc. Morphology; ecology; diclinous angiosperms; ecology of Upper Gangetic Plain and the outer Himalayas.
- Dudley, Dr. P(limmon) H(enry)**, Grand Central Station, New York, N. Y. *Civil engineering, Metallurgy*. Freedom, Ohio, May 21, 43. Hon. Ph.D., Hiram, 97. City engineer, Akron, Ohio, 68—72; chief engineer, Valley R. R. of Ohio, 72—75; expert, East. Railroad Ass, 76—78; consulting engineer rails, tires and struct. steel, N. Y. Central Lines, 80—08. Reporter, Int. Railway Cong, Paris, 00; Washington, 05. Elliott Cresson gold medal, 77; gold and silver medals, Chicago R. R. Expos, 83. Min. Eng; assoc. fel. Am. Acad; Forestry Ass; fel. N. Y. Acad. (pres, sect. physics and astron); N. Y. Micros. Soc. (pres); Int. Ass. Test. Mat; London Soc. Arts. Stability of railroad tracks; the strains in rails and their distribution; invented 'dynamograph,' 'recording dynamometer' and 'track indicator'; stremmatograph; five-inch steel rail, high carbon rails and six-inch 100 pound rails; decay of wood due to fungi; metals for rails and tires for high speed trains.
- Duff, Prof. A(lexander) Wilmer**, 52 Fruit St. Worcester, Mass. **Physics*. St. John, N. B., May 23, 64. B.A., New Brunswick, 84, LL.D., 20; B.A., London, 87; Berlin, 88; M.A., Edinburgh, 88, B.S., 93, Sc.D., 01. *Prof. physics*, Madras, India, 89—90; New Brunswick, 90—93; Purdue, 93—99; Worcester, 99— Physical Soc; Am. Acad; fel. Ind. Acad. Viscosity; acoustics; tidal phenomena; cathode rays.
- Dufour, Prof. F(rank) O(liver)**, Newtonville, Mass. *Structural engineering*. Washington, D. C., Jan. 1, 73. C.E., Lehigh, 96. Instr. civil eng, Lehigh, 97—01; asst. prof. in charge dept, Cincinnati, 01—03; acting prof. bridge eng, Wisconsin, 03—04; asst. prof. civil eng, Vermont, 04—05; structural eng, Illinois, 05—12; principal asst. engineer, D. A. Keefe, 12—13; senior struct. engineer, cent. dist. div. valuation, Interstate Commerce Commission, 14—15; struct. engineer, *Stone and Webster*, 15—18, *chief struct. eng*, 18— Assoc. mem. Civil Eng; Soc. Test. Mat; Eng. Educ. Bridge engineering; structural drafting; testing of materials; the effect of moving loads on highway bridges as determined by extensometer tests; the extension of the Dewey decimal system in civil engineering.
- Dugan, Prof. Raymond S(mith)**, Observatory House, Princeton, N. J. *Astronomy*. Montague, Mass, May 30, 78. A.B., Amherst, 99, A.M., 02; Ph.D., Heidelberg, 05. Instr. math. and astron. and acting director, observatory, Syrian Protestant Col, Beirut, Syria, 99—02; asst. astrophys. observatory, Heidelberg, 02—04; instr. *astron*, Princeton, 05—08, asst. prof, 08—20, *prof*, 20— With Lick Observatory eclipse exped. to Spain, 05. A.A.; Astron. Soc. Photographic discovery of asteroids; photographic photometry; photometry of eclipsing variables.
- Duggar, Prof. B(enjamin) M(inge)**, Missouri Botanical Garden, St. Louis, Mo. **Plant physiology and pathology*. Gallion, Ala, Sept. 1, 72. Alabama, 87—89; B.S., Miss. Agr. Col, 91; M.S., Ala. Polytech, 92; A.B., Harvard, 94, A.M., 95; Ph.D., Cornell, 98; Germany, France and Italy, 99—00, 05—06. Asst. director, Exp. Sta, Uniontown, Ala, 92—93; asst. bot., Radcliffe, 94—95; asst. botanist, State Lab. Nat. Hist, Illinois, 95—96; instr. plant physiol, Cornell, and asst. crypt. botanist, Exp. Sta, 96—00, asst. prof. 00—01; physiologist, bur. plant indust, U. S. Dept. Agr, 01—02; *prof. bot*, Missouri, 02—07; plant physiol, Cornell, 07—12; *plant physiol. and in charge grad. lab*, Washington (St. Louis), and *physiologist*, Mo. Bot. Garden, 12— Int. Cong. Arts and Science, St. Louis, 04

- (speaker, plant physiol). A.A.; Soc. Nat.; Bot. Soc. (v. pres, 12, 14); Phytopath. Soc.; Chem. Soc.; Soc. Biol. Chem.; Soc. Exp. Biol.; Ass. Prof.; St. Louis Acad. (v. pres, 15-19). Physiological pathology.
- Duggar, Prof. J(ohn) F(rederick)**, Auburn, Ala. *Agriculture*. Near Demopolis, Ala, Aug. 24, 68. B.S., Miss. Agr. Col, 87, M.S., 88; George Washington, 93-94; Cornell, summer, 06. Asst. agr., Tex. Col, 87-89; asst. director, S. C. Exp. Sta., 90-92; ed, U. S. Dept. Agr. 93-95; *prof. agr., Ala. Polytech*, 96-, *director, Ala. Exp. Sta.*, 03-, agr. exten, 14-20. Ed, 'South. Live-stock Jour.', 89-90. Soc. Agron. (v. pres). Cotton; leguminous plants; corn; oats; feeding of animals; plant breeding; field crops; southern agriculture.
- Dugmore, Arthur (Venner Vaux) Radclyffe**, Royal Societies Club, St. James St, London, S. W., England, also Players Club, New York, N. Y. *Ornithology*. England, Dec. 25, 70. Elizabeth Col, Guernsey, and Turrell's Sch., Smyrna, 79-81. *Painter and naturalist*. Lieut. capt. and major, Inf, B.E.F., 14-19. Assoc. Ornith. Union; hon. life mem. N. Y. Zool. Soc.; Am. Mus. Nat. Hist.; N. Y. Linnean Soc.; Explorers' Club; fel. Royal Geog. Soc.; fel. Royal Photog. Soc. Breeding habits of eastern North American birds; habits of the beaver; bird life; conditions affecting plant life; the larger mammals of British East Africa.
- Duke, Prof. Frank W(illiamson)**, Virginia Mechanics' Institute, Richmond, Va. *Mathematics*. Richmond, 71. A.B., Richmond, 92; Chicago, 97-99. Prof. math, Richmond, 99-00; Hollins Inst., 00-06; supt, Va. Mechanics' Inst., 06-18; *chief accountant, R. F. and P. R. R.*, 18- A.A.; Math. Soc. Ry. Account Officers Ass. Accounting; mathematical texts.
- Dumble, E(dwin) T(heodore)**, 2003 Main St, Houston, Tex. *Geology*. Madison, Ind, March 28, 52. Washington and Lee, 66-68, 72-74. State geologist, Tex., 88-96; *consulting geologist, South. Pacific Co.*, 97- A.A.; Geol. Soc.; Min. Eng.; Tex. Acad. (pres, 93); Calif. Acad. Stratigraphic and economic geology; coal deposits of Pacific slope; oil deposits of Texas, Louisiana, California and Mexico.
- DuMez, Dr. A(ndrew) G(lover)**, U. S. Public Health Service, Washington, D. C. *Chemistry*. Horicon, Wis, April 26, 85. B.S., Wisconsin, 07, M.S., 10, hon. fellow, 16-17, Ph.D., 17. Instr. chem, Wisconsin, 07-10; asst. prof., Okla. Col., 11-12; director, sch. pharmacy, Univ. Philippines, 12-16; *assoc. pharmacologist, hygienic lab, U. S. Pub. Health Service*, 17- Chem. Soc.; Pharmaceut. Ass.; Pub. Health Ass.; Wis. Acad. Plant chemistry; therapeutic agents; standardization of arsenic compounds.
- Dunbar, Prof. Bertrand Ackley**, 727 11th Ave, Brookings, S. Dak. *Chemistry*. Brunswick, Ohio, Sept. 9, 71. A.B., Ohio Wesleyan, 91, A.M., 92; Chicago, summers, 08-10. Supt. pub. schools, Mich., Minn. and N. Dak., 92-10; instr. chem, S. Dak. Col., 10-11, asst. prof., 11-12, assoc. prof., org. chem, 12-18, *prof. chem. and sta. chemist*, 18- Chem. Soc. (pres, S. Dak. sect, 18); S. Dak. Acad. By-products of cereals and of South Dakota coals; wool constants.
- Dunbar, Dr. Carl O(wen)**, Yale University, New Haven, Conn. *Geology*. Hallowell, Kans, Jan. 1, 91. A.B., Kansas, 13; Ph.D., Yale, 17. Dana research fellow, Yale, 17-18; instr. geol., Minnesota, 18-20; *asst. prof. hist. geol., Yale*, and *asst. curator, Peabody Museum*, 20- Paleont. Soc.; Conn. Acad. Paleontology; stratigraphy of Tennessee and western Newfoundland.
- Dunbar, Dr. P(aul) B(rown)**, 556 Varnum St, Washington, D. C. *Chemistry*. Lebanon, Pa., May 29, 82. B.S., Pennsylvania Col, 04, M.S., 07; Ph.D., Hopkins, 07. *Chemist, bur. chem., U. S. Dept. Agr.*, 07- Chem. Soc.; Wash. Acad. Food chemistry; determination of preservatives and fruit acids.
- Duncan, Prof. David C**, State College, Pa. *Physics*. Churchville, N. Y., July 30, 89. A.B., Michigan, 11, A.M., 13. Instr. physics, Purdue, 11-16, asst. prof., 16-18; *prof., Pa. State*, 18- Optical, heat and temperature measurements.
- Duncan, Prof. John C(harles)**, Mt. Wilson Solar Observatory, Pasadena, Calif. *Astronomy*. Knightstown, Ind, Feb. 8, 82. A.B., Indiana, 05, A.M., 06; Lawrence fellow, Lowell Observatory, 05-06; fellow, Lick Observatory, California, 07-09, Ph.D., California, 09. Asst. astron., Indiana, 04-05, instr. astron. and mechanics, 06-07; *astron.*, Harvard, 09-16; Radcliffe, 11-16; *prof., Wellesley*, and *director Whittin Observatory*, 16-; *astronomer, Mt. Wilson Observatory, Carnegie Institution*, 20- Astron. Soc.; Soc. astron. de France; Soc. Astron. de Mex. Micrometric and photographic observations of comets; stellar spectroscopy; celestial photography and spectroscopy; determination of orbits.
- Duncan, Prof. Kenneth**, 156 Fifth Ave, New York, N. Y. *Economics*. Minneapolis, Minn., March 5, 90. A.B., Wabash, 10; Northwestern, 10-11; A.M., Wisconsin, 15. Master, Col. Sch., Kenilworth, Ill, 10-11; instr. econ, *Canton Christian Col, China*, 11-15, assoc. prof., 15-18, *prof.*, 18-, *dean, col. arts and sciences*, 17- Special examiner, Insurance Commission, Wis, 14. A.A.; Econ. Ass.; Sociol. Soc.; Statist. Ass.; fel. Royal Econ. Soc. Ancient currency of China.
- Duncan, Dr. Ralph W(infred)**, 5001 Irving St, Philadelphia, Pa. *Physics*. Oakland City, Ind, Sept. 19, 82. A.B., Indiana, 09; fellow, Pennsylvania, 10-12, Ph.D., 12. Instr. physics, high sch, Bloomington, Ind, 07-09; *Pennsylvania*, 09-10, 12- Assoc. physicist, Bur. Standards, 18. A.A.; Physical Soc. Optical constants of metals; cotton fabrics.
- Duncan, Dr. Robert C(arithers)**, Bureau of Standards, Washington, D. C. *Physics*. Loveland, Colo, July 14, 86. A.B., Indiana, 09; fellow, Pennsylvania, 10-12, Ph.D., 12. Instr. physics, Pa. State, 08-09; Pennsylvania, 09-10, 13-17; asst. physicist, Bur. Standards, 17-18, assoc. physicist, 18-19; *physicist*, 19- A.A.; Physical Soc.; Wash. Philos. Soc. Optical constants of sodium and potassium; ballistics.
- Duncanson, Prof. H(enry) B(ruce)**, 510 Tenth Ave, N. Seattle, Wash. *Biology*. Memphis, Mo, Feb. 4, 60. B.S., Nebraska, 90, A.M., 94. First asst. Exp. Sta., Nebraska, 90-92; *prof. biol., Nebr. State Nor. Sch.*, 92- A.A.; Micros. Soc.; Nebr. Ornith. Union (pres); Nebr. Acad. (v. pres, 02, pres, 04); life mem. Royal Soc. Arts. De-

- velopment of sense-organs in ants; parasites in frogs; Nebraska soils; washings of the Missouri River.
- Dungay, Prof. Neil S(tanley)**, 107 Union St, Northfield, Minn. *Zoology*. Near Faribault, Minn, Sept. 28, 82. A.B, Minnesota, 04; Ph.D, Chicago, 13. *Instr.* science, high sch, Marshall, Minn, 04-06; *instr.* asst. prof. and later *prof. zool.*, Carleton, 07- Asst. Minn. Geol. and Nat. Hist. Surv, 03-04. A.A. Experimental embryology; effects of injury upon sperm.
- Dunham, Dr. Edward K(elllogg)**, 35 E. 68th St, New York, N. Y. **Pathology*. Newburgh, N. Y, Sept. 1, 60. Ph.B, Columbia, 81; M.D, Harvard, 86. Bacteriologist, Mass. State Board of Health, 87-88; *instr. histol.*, *Univ. and Bellevue Hosp. Med. Col.*, 88-91, *prof. path.*, bacter. and hygiene, 91-99, *path.*, 99- Pathologist, Carney Hosp, Boston, 87-88; J. Hood-Wright, Trinity and Gen. Mem. Hospitals, N. Y. City. A.A; Ass. Path. and Bact; Am. Physicians; Soc. Bact; Soc. Exp. Biol; Soc. Biol. Chem; Chem. Soc; N. Y. Path. Soc. (trustee, 11-13); N. Y. Acad; N. Y. Acad. Med. Spirillum of cholera; Bacillus aerogenes capsulatus; theories of immunity; normal and morbid histology; relations of physical properties of nutrient gelatin and its uses for plate cultures; osmotic pressures of morbid fluids.
- Dunkel, Dr. Otto**, Washington University, St. Louis, Mo. *Mathematics*. Richmond, Va, May 25, 69. M.E, Virginia, 96, A.B, A.M, 98; A.M, Harvard, 99, Shattuck scholar, 00-02, Ph.D, 02; Göttingen, 04-05; Paris, 05-06. Asst. astron, Virginia, 96-97; *instr. math.*, Wesleyan, 02-04; Minnesota, 06-07; Missouri, 07-16; *asst. prof.*, Washington (St. Louis), 16-19, *assoc. prof.*, 19- A.A; Math. Soc; Circolo Mat. di Palermo. Applications of Green's theorem in one dimension; regular singular points of a system of homogeneous linear differential equations of the first order; algebraic equations.
- Dunlap, Prof. Frederick**, University of Missouri, Columbia, Mo. *Forestry*. Near Chillicothe, Ohio, June 17, 81. Ohio State, 99-01; F.E, Cornell, 04. Forest asst, U. S. Forest Service, 04, examiner, 13, physicist, forest products lab, 09-13; lecturer *forestry*, Wisconsin, 10-13; *prof.*, Missouri, 13- Assoc. ed, 'Forestry Quarterly,' 02- A.A; Bot. Soc; Soc. Foresters; Forestry Ass; Ass. Prof; Royal Soc. Arts. Seasoning and kiln-drying of wood; durability, specific heat and porosity of wood; heat of absorption of water in wood; growth of hardwoods.
- Dunlap, Dr. Frederick L(ey)**, 1457 Monadnock Block, Chicago, Ill. *Chemistry*. Chillicothe, Ohio, May 16, 70. Ohio State, 88-89; B.S, Michigan, 92; Sc.D, Harvard, 95; Yale, 96. *Instr. indust. chem.*, Worcester, 96-00; *inorg. chem.*, Michigan, 00-01, *anal. chem.* 01-07; *assoc. chemist*, bur. chem, U. S. Dept. Agr, and mem. Board of Food and Drug Inspection, 07-12; consulting chemist, Victor Chem. Works, 12-16; *general consulting practise*, 16- *Instr.* summer sch, Harvard, 93-95. A.A; Chem. Soc. Organic chemistry; oils, fats and waxes; products formed during the boiling or oxidation of linseed oil; pigments and their manufacture.
- Dunlap, Prof. Howard Leroy**, Rolla, Mo. *Chemistry*. Flushing, Ohio, Jan. 22, 86. B.S, Ohio (Athens), 12; fellow, Ohio State, 13-14, A.M, 14. Principal, high sch, St. Clairsville, Ohio, 12-13; *instr. chem.*, Iowa, 14-17; *asst. prof.*, Mo. *Sch. Mines*, 17-19, *assoc. prof.*, 19- Exp. chem. engineer, Goodyear Tire and Rubber Co, 19. Chem. Soc. Industrial chemistry; organic chemistry.
- Dunlap, Dr. Knight**, Johns Hopkins University, Baltimore, Md. **Psychology*. Diamond Spring, Calif, Nov. 21, 75. Ph.B, California, 99, M.L, 00, Le Conte fellow, 00-01; A.M, Harvard, 01, James Walker fellow, 01-02, Ph.D, 03. Asst. psychol, California, 02-04, *instr.*, 04-06; *Hopkins*, 06-10, *assoc.*, 10-11, *assoc. prof.*, 11-16, *prof. exp. psychol.*, 16- Ed, 'Psychobiol.' A.A; Psychol. Ass. (councilor, 16); S. Soc. Philos. and Psychol. (pres, 20). Effects of subliminal stimulations; time-perception; attention; reaction times; rhythm; effects of oxygen depletion and of narcotics; interrelations of optical and semicircular canal mechanisms.
- Dunn, Dr. Elizabeth H(opkins)**, Woods Hole, Mass. *Neurology*. Toulon, Ill, April 13, 67. A.B, Grinnell, 89, A.M, 92; M.D, Northwestern, 94. Clin. asst. nervous diseases, Woman's Med. Sch, Northwestern, 98-01, *instr. physiol.*, 01-02, *asst. prof. nervous diseases*, 01-02; clin. asst. nervous and mental diseases, Rush Med. Col, 02-06, *assoc. med.*, 06-08; research asst. neur, Chicago, 03-06, *asst. anat.*, 06-07, *assoc.*, 07-09, *instr.*, 09-12. A.A; Ass. Anat; Am. Med. Ass; Chicago Acad. Med. Number, size and distribution of medullated nerve fibers in leg of frog; weight changes during growth of white rat; diameter and medullation of nerve fibers; cerebral transplantation in the rat.
- Dunn, E(mmett) R(oid)**, 504 Duke St, Alexandria, Va. *Zoology*. Alexandria, Nov. 21, 94; A.B, Haverford, 15, A.M, 16. *Instr. zool.*, Smith, 16- Field naturalist, Am. Museum Nat. Hist; U. S. Nat. Museum. Ensign, U.S.N.R.F. Ecol. Soc; Soc. Ichthyol. and Herp; Wash. Biol. Soc; Dialect Soc. Herpetology.
- Dunn, Gano**, 20 Washington Square, New York, N. Y. **Electrical engineering*. New York, Oct. 18, 70. B.S, Col. City of N. Y, 89, M.S, 97; E.E, Columbia, 91, hon. M.S, 14. Operator, West. Union Tel. Co, 86-91; v. pres. and chief engineer, Crocker-Wheeler Co, 98-11; v. pres. in charge eng. and construction, J. G. White and Co, 11-13; *pres.*, J. G. White Eng. Corp, 13- Chairman, board of awards, John Fritz medal, 14; chairman, Eng. Foundation, 15-16; mem. nitrate commission, war dept, 16-18; mem. Int. Electro-tech. Commission, 09-10; Int. Elec. Cong, St. Louis, 04, U. S. delegate and v. pres, Turin, 11; second Pan-Am. Scientific Cong, Washington, D. C, 15; v. chairman, Nat. Research Council, 19-20. Nat. Acad; A.A; Elec. Eng. (v. pres, 01-03, 05-07, pres, 11-12); Radio Eng; Mech. Eng; Civil Eng; Illum. Eng. Soc; Franklin Inst; N. Y. Elec. Soc. (pres, 00-02); N. Y. Zool. Soc; Phila. Eng. Club; Royal Micros. Soc; British Inst. Elec. Eng. Dynamo and motor design; commutation of direct current machines; distribution of power in factories; power transmission.

- Dunn, Dr. Grace A.**, U. S. Department of Agriculture, Washington, D. C. *Botany*. Ph.B., Hamline, 09; Ph.D., Hopkins, 15. *Alice Freeman Palmer fellow*, 16-17; *asst. plant physiologist, bur. plant indust., U. S. Dept. Agr.*, 18-A.A.; Bot. Soc. Plant physiology; entrance of salts in roots of seedlings.
- Dunn, Harold Houghton**, Transportation Building, Urbana, Ill. *Railway engineering*. Tiskilwa, Ill., Oct. 30, 84. B.S., Illinois, 08, fellow, 10-11, M.S., 15. Research asst. *ry. eng. eng. exp. sta., Illinois*, 12-15, *research assoc.*, 17-Eng. Educ. Train resistance.
- Dunne, J(ohn) A(ugustine)**, Silver Lake, Mass. *Astronomy*. Brighton, Mass., July 21, 71. High sch. and private instruction. Asst., Harvard Col. Observatory, 88-09. Astron. Soc. Meridian circle observations and reduction of stars in zone -10° to -14° ; meridian circle observations of Nova Persei No. 2 and of the planet Eros.
- Dunnington, Prof. F(rancis) P(erry)**, University of Virginia, University, Va. **Chemistry*. Baltimore, Md., March 3, 51. B.S., Virginia, 71, C.E., M.E., 72. Adj. prof. anal. chem., Virginia, 73-84, prof., 84-08, indust. and anal. chem., 08-19, retired, 19. A.A. (sec'y, C, 85); Chem. Soc.; Electrochem. Soc.; British Ass.; London Chem. Soc. Universal occurrence of titanic acid in soils; inorganic chemistry; synthesis; analysis of unusual products and rare minerals; analysis of ashes of weeds; determination of chlorid, bromid and iodid; fusion of silicates with lithium carbonate.
- Dunstan, Prof. A(rthur) S(ain)t C(harles)**, Auburn, Ala. *Electrical engineering*. Fredericksburg, Va., March 25, 71. B.S., Ala. Polytech, 89, M.E., 90, C.E., 91; Hopkins; Chicago. Assoc. prof. *elec. eng.*, Kansas, 94-99; *prof.*, Ala. Polytech, 99- Consulting elec. engineer for various companies and cities. Elec. Eng. Design and construction.
- Dupler, Dr. A(lphaeus) W(illiam)**, Juniata College, Huntingdon, Pa. *Botany*. Thornville, Ohio, July 27, 83. A.B., Juniata, 11; M.S., Chicago, 14, Ph.D., 16. *Prof. biol.*, Juniata, 11-14; bot., Lawrence, 16-17; *biol.*, Bridgewater, 17-19, Juniata, 19- A.A.; Bot. Soc.; Ecol. Soc. Plant morphology; gymnosperms; *Taxus canadensis*.
- Du Porte, E(mnest) Melville**, Macdonald College, Que., Can. *Entomology*. Nevis, B. W. I., Oct. 24, 91. B.S.A., McGill, 13, M.S., 14. *Instr. zool. and entom.*, Macdonald. A.A.; Soc. Zool.; Entom. Soc.; Ecol. Soc.; Ont. Entom. Soc. Insect morphology and behavior; economic entomology; medical entomology; bionomics.
- Durand, Prof. Elias J(udah)**, University of Minnesota, Minneapolis, Minn. **Botany*. Canandaigua, N. Y., March 20, 70. A.B., Cornell, 93, Sc.D., 95. Asst. bot., Cornell, and asst. crypt. botanist, Exp. Sta., 95-96, *instr. bot.*, 96-10; asst. prof., Missouri, 10-12, assoc. prof., 12-18; *prof.*, Minnesota, 18- A.A.; Bot. Soc.; Phytopath. Soc. Development and classification of Myxomycetes; diseases of plants; Geoglossaceae of North America; embryology of Marchantia; mycological nomenclature; development, structure and taxonomy of the discomycetous fungi.
- Durand, Prof. W(illiam) F(rederick)**, Stanford University, Calif. *Marine engineering*. Bethany, Conn., March 5, 59. Grad., U. S. Naval Acad., 80; Ph.D., Lafayette, 88. E. C., U. S. N., 80-87; prof. mech. and supt. mech. dept., Mich. Agr. Col., 87-91; prof. marine eng., Cornell, 91-04, acting director, Sibley Col., 03-04; *prof. mech. eng.*, Stanford, 04- Special duty, Lafayette, 83-85; advisory ed., 'Marine Eng.', 01-03; mem. and chairman, Nat. Advisory Committee for Aeronaut., 16-18; mem. Nat. Research Council, 17-19; scientific attaché, Paris, 18. Gold medal, Naval Eng., 00. Nat. Acad.; A.A.; Mech. Eng.; Eng. Educ.; Naval Eng.; Naval Archit.; Franklin Inst.; Soc. Technique maritime. Hydrodynamics; thermodynamics; aerodynamics; resistance and propulsion of ships; performance of the screw propeller; air propellers.
- Durell, Prof. Fletcher**, Lawrenceville, N. J. *Mathematics*. Clarksburg, N. J., Dec. 17, 59. A.B., Princeton, 79, A.M., 82, Ph.D., 87. Master math., Pennington Sem., 79-81, 81-83; *prof. math. and astron.*, Dickinson, 83-95; *master math.*, Lawrenceville Sch., 95- A.A.; Math. Soc.; Circolo Mat. di Palermo.
- Durfee, Prof. W(illiam) P(itt)**, 639 Main St., Geneva, N. Y. *Mathematics*. Livonia, Mich., Feb. 5, 55. A.B., Michigan, 76; Ph.D., Hopkins, 83. *Instr. math.*, Univ. Mound Col., San Francisco, 76-77; Berkeley Gymnasium, Calif., 77-81; *prof.*, Hobart, 84-, *dean*, 88- A.A.; Math. Soc. Symmetric functions.
- Durkee, Prof. Frank W(illiams)**, Tufts College, Mass. *Chemistry*. North Tunbridge, Vt., Oct. 5, 61. A.B., Tufts, 88, A.M., 89. *Instr. chem.*, Tufts, 89-96, asst. prof., 96-97, *prof. inorg. chem.*, 97-13, *chem.*, 13- A.A.; Chem. Soc.; Soc. Chem. Indust.; Min. and Metal Eng.; Electrochem. Soc. Oxidation by electrolysis of sodium sulphid and hydrosulphid to the sulphate; action of water of the Hub coal mine upon cast iron; the production of zinc by electrolysis.
- Durley, R(ichard) J(ohn)**, Canadian Engineering Standards Association, Ottawa, Canada. *Mechanical engineering*. Buckinghamshire, England, Feb. 11, 68. B.Sc., Univ. Col., London, 87; Ma.E., McGill, 98. Asst. prof. mech. eng., McGill, 98-01, prof., 01-12; consulting engineer, 12-15; officer in charge gauges and standards, Imp. Ministry Munitions, 15-19; *sec'y*, Can. Eng. Standards Ass., 19- Mech. Eng.; Can. Inst. Eng.; British Inst. Civil Eng. Flow of air; fuel testing.
- Durrant, Prof. E(dwin) P(oe)**, 60 W. Park St., Westerville, Ohio. *Entomology*. Berlin Cross Roads, Ohio, July 21, 65. Otterbein; A.M., Ohio State, 08. *Instr. biol. and geol.*, Otterbein, 04-05, prof., 05-09; asst. prof. anat. and physiol., Ohio State, 09-17, *instr. physiol.*, *physiol. chem. and pharmacol.*, 17- A.A.; Entom. Soc.; Ohio Acad. The Mallophaga, systematic studies, isolation, specialization, life history.
- Durst, C(harles) E(lmer)**, Anna, Ill. *Horticulture*. Knox City, Mo., May 3, 84. B.S., Illinois, 09, M.S., 12. Asst. olericulture, Illinois, 09-10, instr., 10-11, assoc., 11-18, asst. Exp. Sta., 09-11, assoc., 11-18; county agent, Union Co., Ill., 18-20; Cook Co., Ill., 20-21; *director, fruit and veg. marketing dept.*, Ill. Agr. Ass., 21- A.A.; Soc.

- Hort. Sci. (asst. sec'y, 16); Vegetable Growers Ass. (sec'y, committee on nomenclature, 13-). Olericulture; plant breeding.
- Durward, Arthur**, Laverne, Calif. *Physics*. Aberdeen, Scotland, Dec. 23, 70. B.S., Colorado, 93; B.S.(Eng), Harvard, 95, A.M., 97. Instr. science, high sch, Hanford, Calif, 98-02; Pomona, 02-07; principal, Bonita Union High Sch, 07-20. A.A. Magnetism; effect of temperature on certain magnets.
- Dury, Charles**, 537 Ridgeway Ave, Cincinnati, Ohio. *Entomology, Ornithology*. Cincinnati, Nov. 14, 47. Pub. sch, Audubon Soc. (trustee, 05-); Ohio Acad. (pres, 07); Cincinnati Soc. Nat. Hist. (pres, 97, sec'y, 08); Cincinnati Cuvier Club (trustee, 06-). North American Coleoptera.
- Duschak, Dr. L(ionel) H(erman)**, 1301 Tamalpais Road, Berkeley, Calif. *Chemistry*. Buffalo, N. Y, Sept. 25, 82. A.B., Michigan, 04; A.M., Ph.D., Princeton, 08. Asst. physical chem, Michigan, 04-05; chem, Princeton, 05-07, instr, 07-09; research chemist, Corning Glass Works, 09-13; chem. engineer in charge *Exp. Sta., U. S. Bur. Mines*, 13- Asst. physical chem, Michigan, summer, 05, 06, instr. anal. chem, summer, 08. A.A.; Chem. Soc.; Min. and Metal. Eng.; Electrochem. Soc. Physical chemistry; chemical metallurgy; mixed precipitates and isomorphous mixtures; the silver coulometer; glass and fire clay.
- Dusham, Prof. E(dward) H(enry)**, State College, Pa. *Entomology*. Amesbury, Mass, Sept. 1, 87. A.B., Dartmouth, 10; M.S., Pa. State, 15. Asst. zool. and physiol, Iowa State, 10-12, instr. zool. and entom, 12-14, asst. prof, 15-16; asst. biol, Cornell, 16-17, instr. nat. hist, 17-18; entom. inspector, fed. hort. board, U. S. Dept. Agr, 18; *prof. entom., Pa. State*, 18- A.A.; Entom. Soc.; Ass. Econ. Entom.; Wash. Entom. Soc. Insect morphology; economic entomology.
- Dushman, Dr. Saul**, General Electric Co, Schenectady, N. Y. **Physical chemistry*. Rostov, Russia, July 12, 83. B.A., Toronto, 04, Ph.D., 12. Demonstrator electrochem, Toronto, 04-09, lecturer, 09-12; *with research lab, Gen. Elec. Co*, 12- A.A.; Physical Soc.; Chem. Soc.; Soc. Chem. Indust.; Elec. Eng.; Bunsen Gesell. Electrochemistry; determination of e/m; molecular gage; photoelectric cell; electronics; atomic structure; quantum theory.
- Dustheimer, Prof. Oscar L(ee)**, Baldwin-Wallace College, Berea, Ohio. *Mathematics*. Near Newark, Ohio, Oct. 3, 89. B.S., Ohio (Athens), 13; fellow, Clark, 13-14, A.M., 14. Teacher, Pataskala High Sch, Ohio, 10-11; *prof. math. and astron., Baldwin-Wallace*, 14- A.A.; Math. Soc. Determinants.
- Dutcher, Dr. John B(enjamin)**, Indiana University, Bloomington, Ind. *Physics*. Decatur, Ind, July 17, 75. A.B., Indiana, 06, A.M., 07, Ph.D., 15. Instr. physics, Indiana, 07-08; Pennsylvania, 08-09; asst. prof, Indiana, 09-15, *assoc. prof*, 15- Physical Soc.; fel. Ind. Acad. Possible change in weight due to certain chemical reactions; recalcence in Heusler alloys; explosion wave in gases.
- Dutcher, Prof. R(aymond) Adams**, University Farm, St. Paul, Minn. *Biochemistry*. Raymond, S. Dak, March 28, 86. B.S., S. Dak. Col, 07, M.S., 10; A.M., Missouri, 12. Instr. chem, S. Dak. Col, 07-10; asst, Missouri, 10-12; Illinois, 12-13; instr. and asst. prof. biochem, Oregon Col, 13-17; asst. prof, Minnesota, 17-18, *assoc. prof. biochem. and head, sect. animal nutrition*, 18- A.A.; Chem. Soc. Vitamins; deficiency diseases.
- Duval, Prof. Charles W(arren)**, Tulane University, New Orleans, La. *Pathology*. Annapolis, Md, Sept. 28, 76. St. John's (Md), 97, hon. A.M., 09; Rockefeller fellow, Pennsylvania, 02-03, M.D., 03. Path. house officer, Boston City Hosp, 03-04, asst. path, 04-06; lecturer path. and bacter, McGill, and director, path. lab, Montreal Gen. Hosp, 07-08; *prof. path. and bacter, Tulane*, 09- Director, path. lab, Charity Hosp, New Orleans, 13. A.A.; Soc. Exp. Path; Ass. Path. and Bact; Soc. Bact; Soc. Exp. Biol; Am. Med. Ass; Boston Sci. Soc. Bacteriology; acute bacillary dysentery; summer diarrheas in infants; tuberculosis; glanders; pneumonia; meningitis; leprosy; scarlet fever.
- Duvall, Charles R(aymond)**, Carnegie Institution, Washington, D. C. *Terrestrial magnetism*. Clarke Co, Va, Jan. 2, 69. B.S., West Virginia, 81; Hopkins, 92-96. Teacher math. and science, McGuire's Sch, Richmond, Va, 91-92; student asst. math, Hopkins, 94-95; computer, U. S. Coast and Geod. Surv, 99-13; *expert computer, dept. terrestrial magnetism, Carnegie Institution*, 13- Asst. observer, latitude variation sta, Int. Geod. Ass, Gaithersburg, Md, 13. A.A.; Wash. Philos. Soc. Geodesy; gravity; least squares; hidden periodicities.
- Duvall, Prof. T(rumbull) G(illette)**, 144 N. Franklin St, Delaware, Ohio. *Philosophy, Psychology*. Indianapolis, Ind, March 20, 61. A.B., De Pauw, 88; S.T.B., Boston, 89, Ph.D., 92. Instr. philos, De Pauw, 92-95, *prof*, 95; *Ohio Wesleyan*, 95-, dean of faculty, 00-05. Psychol. Ass; West. Philos. Ass. Psychology and logic of cognition; psychology of religion.
- Duvel, Dr. J(oseph) W(illiam) T(ell)**, 745 Grain Exchange, Winnipeg, Can. *Botany*. Wapakoneta, Ohio, Nov. 16, 73. B.S., Ohio State, 97; fellow, Michigan, 99-02, Sc.D., 02. Asst. botanist, Ohio Exp. Sta, 98-99; asst, seed lab, U. S. Dept. Agr, 02-07, in charge grain standardization, 08-18; grain expert, U. S. Grain Corp, 18-20; *grain merchant*, 20- A.A.; Wash. Bot. Soc. (v. pres, 16); Wash. Biol. Soc.; Int. Ass. Bot. Vitality of seeds; respiration in dry seeds; effect of gases on vitality; cold storage of cowpeas; storage and germination of wild rice; germination, harvesting and storing of seed-corn; moisture in grain; deterioration of grain in storage; handling grain in Australia.
- Dwight, Dr. Jonathan**, 43 W. 70th St, New York, N. Y. *Zoology*. New York, Dec. 8, 58. A.B., Harvard, 80; M.D., Columbia, 93. *Physician*, 93- A.A.; fel. Ornith. Union (treas); Nat. Ass. Audubon Soc. (treas); Am. Geog. Soc.; fel. N. Y. Acad; N. Y. Linnean Soc. (pres).
- Dyar, Dr. Harrison G(ray)**, U. S. National Museum, Washington, D. C. **Biology, Entomology*. New York, N. Y, Feb. 14, 66. B.S., Mass. Inst. Tech, 89; A.M., Columbia, 94, Ph.D., 95. Asst. bacter, Col. Physicians and Surg, Columbia, 95-97; *custodian of Lepidoptera, U. S. Nat. Mu-*

- seum*, 97- Boston Soc. Nat. Hist. Macrolepidoptera and mosquitoes.
- Dye, Prof. Harry Wilmer**, Bailey Hall, Ithaca, N. Y. *Plant pathology*. New Matamoras, Ohio, May 17, 92. B.S. Wisconsin, 15; M.S.A. Cornell, 16, fellow, 17-20, Ph.D., 19. Instr. *plant path*, Cornell, 19-20, *asst. prof.*, 20- A.A.; Phytopath. Soc. Vegetable diseases.
- Dyer, Dr. D(on) C.**, General Chemical Co, 25 Broad St, New York, N. Y. *Chemistry*. Ohio, 80. Ph.D., Heidelberg, 05. Research chemist, bur. animal indust, U. S. Dept. Agr, 12-16; in charge, chem. dept, Del. Exp. Sta, 16-18; *research chemist*, *Gen. Chem. Co*, 18- Chem. Soc. Inorganic chemistry; fats and oils; foods.
- Dykstra, Dr. R(alph) R(alph)**, Kansas State Agricultural College, Manhattan, Kans. *Veterinary medicine*. Groningen, Holland, Sept. 24, 79. D.V.M. Iowa State, 05. Prof. anat. and obstet, Iowa State, 05-11; *prof. surg. and dean*, *div. vet. med*, *Kansas State*, 11-
- D'zmura, Dr. Andrew P(eter)**, Diamond Bank Building, Pittsburgh, Pa. *Medicine*. Braddock, Pa., Oct. 8, 90. St. Vincent; Duquesne; M.D. Pittsburgh, 12, Mellon research fellow internal med, 14-15. Demonstrator med, Pittsburgh, 13-17; capt, M.C., 17-19; *instr. med*, Pittsburgh, 19- A.A.; Am. Med. Ass; Soc. Biol. Research Pittsburgh. Electrocardiography.
- E**
- Eagles, Prof. Theophilus R(andolph)**, 8016 Second Ave, S, Birmingham, Ala. *Mathematics*. Wilson, N. C., Nov. 10, 85. A.B., North Carolina, 08, A.M., 12. Prof. *math*, Catawba, 08-09; Bethany (W. Va.), 09-10; instr, North Carolina, 10-13; *prof*, *Howard Col*, 13- Math. Soc; Math. Ass.
- Eakle, Dr. Arthur S(tarr)**, 1518 Euclid Ave, Berkeley, Calif. *Mineralogy*, *Petrography*. Washington, D. C., July 27, 62. B.S., Cornell, 92; Ph.D., Munich, 96. Instr. *miner*, Cornell, 92-94; Harvard, 98-01; *California*, 01-03, *asst. prof.*, 03-12, *assoc. prof.*, 12-19, *prof.*, 19- A.A.; Geol. Soc; Miner. Soc; Wash. Acad. Minerals of California.
- Eames, Dr. Arthur J(ohnson)**, N. Y. State College of Agriculture, Ithaca, N. Y. *Botany*. Framingham, Mass, Oct. 10, 81. A.B., Harvard, 08, A.M., 10, Sheldon traveling fellow, 10-11, Ph.D., 12. Asst. *bot*, Harvard, 06-10, 11-12; instr, Cornell, 13, N. Y. State Col. Agr, 13-14, *asst. prof.*, 14-20, *prof.*, 20- A.A.; Bot. Soc. Morphology; anatomy of vascular plants.
- Earhart, Dr. Rob(ert) F(rancis)**, Ohio State University, Columbus, Ohio. **Experimental physics*. Toledo, Iowa, Feb. 2, 73. B.S., Northwestern, 93; Hopkins, 97-98; Chicago, 98-99, fellow, 99-00, Ph.D., 00. Electrician, Peoples Power Co, Moline, Ill, 93-97; instr. *physics*, Mich. Mil. Acad, 00-01; Rose, 01-03; *asst. prof.*, *Ohio State*, 03-09, *assoc. prof.*, 09-12, *prof.*, 12- A.A.; Physical Soc. Sparking distances; properties of natural gas.
- Earl, Dr. Geo(rge) G(oodell)**, Sewage and Water Board, New Orleans, La. *Civil engineering*. Freehold, N. J., Oct. 9, 63. C.E., Lafayette, 84, Sc.D., 18. Practising engineer, 84-; *gen. supt.* and chief engineer, New Orleans Sewage and Water Board, 00- Civil Eng; Water Works Ass. (v. pres, 10-14, pres, 15); Pub. Health Ass; Munic. Improv. Ass; New Eng. Water Works Ass. Hydraulic and sanitary engineering; municipal improvement works; fluid flows.
- Earle, Prof. F(ranklin) S(ummer)**, Herradura, Cuba. **Botany*, *Horticulture*. Grundy Co, Ill, Sept. 4, 56. Illinois, 72-80; hon. A.M., Ala. Polytech, 02. Asst. mycol, Illinois, 86; supt, branch of Miss. Exp. Sta, 92-95; *asst. pathologist*, U. S. Dept. Agr, 95; *assoc. prof. hort*, Ala. Polytech, 96, *prof. biol. and hort*, 96-01, horticulturist, Exp. Sta, 96, biologist and horticulturist, 96-01; *asst. curator*, N. Y. Bot. Garden, 01-04; director, Estacion Cent. Agron. de Cuba, 04-06; agr. inspector, Cuban-Am. Sugar Co, 08; specialist sugar cane culture, U. S. Dept. Agr, 18-19, *expert*, *Insular Exp. Sta*, 19- A.A.; Bot. Soc. (pres, 06); Torrey Bot. Club. Systematic mycology; horticulture of southern United States; Agaricaceae; tropical agriculture.
- Earle, Prof. M(arshall) D(elph)**, Greenville, S. C. *Mathematics*. Greenville, S. C., Aug. 7, 71. A.M., Furman, 92; Cornell, 93; Cambridge, 96; Wisconsin, summers, 98-99. Instr. *math*, *Furman*, 89-93, *asst. prof.*, 93-97, *prof. physics*, 97-00, *math*, 00- Prof. *math*, S. C. State Summer Sch, 00-06. A.A.; Math. Soc; Math. Ass.
- Earle, Dr. Richard B(lair)**, Channing St, Cambridge, Mass. *Chemistry*. Worcester, Mass, May 29, 76. B.S., Worcester, 97; M.S., Harvard, 99, Sc.D., 02. Private asst, Worcester, 97-98; research asst. org. chem, Chicago, 02-03; asst, Mass. Inst. Tech, 03-04, instr, 04-06; Hood Rubber Co, 06-19; chemist, Agawan Chem. Wks, 19; partner, *Cadmus Chem. Co*, 19- Chem. Soc; Chem. Gesell. Organic chemistry.
- Easley, Prof. C(harles) W(ilson)**, Syracuse University, Syracuse, N. Y. *Chemistry*. Louisville, Ky, Dec. 11, 76. A.B., Dickinson, 97, A.M., 99; Ph.D., Clark, 08. Instr. *chem*, Clark, 02-08, *asst. prof.*, 08-09; *assoc. prof.*, Maine, 09-16, *prof.*, 16-19; *Syracuse*, 19- Nichols medal, Chem. Soc, 09, 10. A.A.; Chem. Soc. Vapor pressures of binary mixtures; apparatus; atomic weight of mercury; electro-deposition of mercury; electrochemical processes.
- East, Prof. E(dward) M(urray)**, Bussey Institution, Forest Hills, Boston, Mass. **Biology*. DuQuoin, Ill, Oct. 4, 79. B.S., Illinois, 00, M.S., 04, Ph.D., 07. Asst. chemist, Ill. Exp. Sta, 00-03, first asst. plant breeding, 03-05; agronomist, Conn. Exp. Sta, 05-09; *asst. prof. exp. plant morphol*, *Harvard*, 09-14, *prof.*, 14- Collaborator, bur. plant indust, U. S. Dept. Agr, 08-18; chairman, bot. raw products committee, Nat. Research Council, 17-19; acting chief, statist. div, Food Ad, 18. A.A.; Soc. Nat. (treas, 10, v. pres, 13, pres, 19); Bot. Soc; Philos. Soc; Am. Acad; New Eng. Bot. Club. Genetics; physiological chemistry; plant physiology.
- Eastham, John W(illiam)**, Court House, Vancouver, B. C., Can. *Plant pathology*. Liverpool, England, Dec. 4, 79. B.S., Edinburgh, 99. Lecturer biol. Cheshire Agr. Col, 02-06; bot, Ont. Agr. Col, 06-10; chief asst, div. bot, Can. Dept. Agr, 10-14; *provincial plant pathologist*, B. C., 14- Phytopath. Soc. Fel. Royal Micros.

- Soc. Fungous diseases of plants; black scab in potatoes.
- Eastham, Melville**, 11 Windsor St, Cambridge, Mass. *Electrical engineering*. Oregon City, Oregon, June 26, 85. *Pres. and engineer*, Gen. Radio Co. Physical. Soc; Elec. Eng; Radio Eng. Electrical frequency measurements; electrical measuring instruments; dielectric losses.
- Eastlack, Dr. Herbert E(u)gene**, 705 Nottingham Road, Wilmington, Del. *Chemistry*. Crawfordsville, Ind, May 17, 90. A.B, Wabash, 12; Ph.D, Columbia, 16. Instr. chem, Illinois, 16-18; assoc. prof, Nebraska, 18; *research chemist*, E. I. duPont de Nemours and Co, 18- Chem. Soc. Colloid and inorganic chemistry.
- Eastman, Dr. Ermon D(ewight)**, University of California, Berkeley, Calif. *Physical chemistry*. Calif, 91. Ph.D, California, 17. Asst. chem, California, 12-17, instr, 17-20, asst. prof, 20- Chem. Soc. Specific heats at high and low temperatures; conductivity of solutions.
- Easton, Stanly A(lexander)**, Kellogg, Idaho. *Mining engineering*. Santa Cruz, Calif, April 7, 73. B.S, California, 94. *Manager*, Bunker Hill and Sullivan Mining and Concentrating Co, 03-; *pres. and manager*, Sierra Nev. Mining Co, 10-; *Caledonia Mining Co*, 13- Min. and Metal. Soc. (director, 17-19); Min. and Metal. Eng. (director, 19-22); London Inst. Min. and Metal.
- Eastwood, Miss Alice**, Golden Gate Park, San Francisco, Calif. **Botany*. Toronto, Can, Jan. 19, 59. High sch. Teacher, East Side High Sch, Denver, 80-90; *curator, bot. dept*, Calif. Acad. Sciences, 92- A.A; Bot. Soc; Ecol. Soc; Calif. Acad. Systematic botany; phanerogams.
- Eaton, Prof. E(lon) H(oward)**, Hobart College, Geneva, N. Y. *Biology, Ornithology*. Springfield, N. Y, Oct. 8, 66. A.B, Rochester, 90, A.M, 93; Columbia, 99-00. Instr. science, Canandaigua, N. Y, 90-95; master science, Bradstreet Sch, Rochester, N. Y, 96-07; *prof. biol*, Hobart, 08- A.A; mem. Ornith. Union; Ecol. Soc; Forestry Ass; Bird-lore Council; Rochester Acad. Birds of western New York; birds of New York state, distribution, migration, numbers and habits; bird-migration, its manner, origin and significance; ecological survey of the Geneva quadrangle, N. Y.
- Eaton, Dr. George F(rancis)**, 70 Sachem St, New Haven, Conn. *Comparative osteology, Paleontology*. New Haven, May 30, 72. A.B, Yale, 94, Ph.D, 98. Instr. osteol, Yale, 99-16, curator, osteol. collection, univ. museum, 02-20, assoc. curator vert. paleont, 04-10; assoc. paleont, 19-20. A.A; Soc. Nat; Paleont. Soc; Anthropol. Ass; Soc. Vert. Paleont; Conn. Acad.
- Eaton, Prof. H(arry) N(elson)**, Syracuse University, Syracuse, N. Y. *Geology*. Eaton, N. Y, Jan. 11, 80. A.B, Colgate, 04; Harvard, 04-07, summers, 03, 05, 09, A.M, 06; Ph.D, Pittsburgh, 12. Asst. *geol*, Harvard, 05-06, Radcliffe, 06-07; instr, North Carolina, 07-10; Pittsburgh, 10-12; asst. prof. and assoc. prof, Pa. State, 12-18; *assoc. prof*, Syracuse, 19- Asst. geologist, N. Dak. Geol. Surv. summer, 20. A.A. Stratigraphy; structural geology in Pennsylvania; Ordovician stratigraphy of central Pennsylvania; lower Devonian faunas of New York and Pennsylvania.
- Ebaugh, Dr. W(illiam) Clarence**, Granville, Ohio. *Chemistry*. Philadelphia, Pa, Jan. 3, 77. B.S, Pennsylvania, 98, Ph.D, 01. Asst. and chief chemist, iron and steel lab, near Reading, Pa, 98-99; director pro tem, dept. physics and chem, Kenyon, 01-02; chemist, Am. Smelting and Ref. Co, and public analyst, Salt Lake City, 02-03; director, dept. chem, Utah, 03-15; *prof. chem*, Denison, 17- Assoc. ed, 'Jour. Indust. and Eng. Chem,' 08-11; consulting chemist, 02- A.A; Chem. Soc; Eng. Educ; West. Ass. Tech. Chem. and Metal; Utah Acad. (pres, 09). Industrial chemistry; atomic weight of arsenic; steel analysis; pollution of atmosphere in lower Salt Lake Valley by smelter fumes; smelter smoke.
- Eberson, Dr. Frederick**, Washington University School of Medicine, St. Louis, Mo. *Medicine*. New York, N. Y, Feb. 10, 92. B.S, Col. City of N. Y, 12; A.M, Columbia, 14, Ph.D, 17; fellow, Iowa State, M.S, 15. Intr. bacter, Iowa State, 14; asst. path. and bacter, Rockefeller Inst, 17-18; research asst. sanit. science and pub. health, Mass. Inst. Tech, 18; *assoc. dermat. and in charge, syphilis research lab, Washington (St. Louis)*, 19- Research bacteriologist in charge, dept. research bacter. and path, N. Manchurian Plague Prevention Service, China, 16; instr, Rockefeller Inst. Army Med. Sch; army lab, Yale. A.A; Soc. Bact; Columbia Biochem. Ass; Nat. Med. Ass. China. Biology; immunology; typhoid-paratyphoid group; hog cholera; plague; poliomyelitis; meningitis; diphtheroids; Hodgkin's disease; tuberculosis; streptococcus; measles; pneumonia; syphilis.
- Eccles, Prof. David C(harles)**, 191 Dean St, Brooklyn, N. Y. *Chemistry*. Brooklyn, Dec. 10, 76. B.S, Columbia, 00, A.M, 01; M.D, Long Isl. Col. Hosp, 10. Instr. chem, Wash. State, 01-02; sch. of pharmacy, Northwestern, 02-05, asst. prof, 05-06. A.A; Chem. Soc. New derivatives of antipyrin.
- Eccles, Dr. R(ober) G(ibson)**, 681 Tenth St, Brooklyn, N. Y. *Chemistry, Botany*. Kilmaurs, Ayrshire, Scotland, Jan. 1, 48. M.D, Long Isl. Col. Hosp, 81; Ph.G, Brooklyn Col. Pharmacy, 90; hon. Phar.D, Scio, 03. Prof. org. chem, Brooklyn Col. Pharmacy, 90-92; chemist, U. S. Dept. Indian Affairs, 93-95. Ed, 'Popular Science News,' 95; assoc. ed, 'Merck's Report,' 95-; ed, 'Am. Medico-Surg. Bul,' 97-98; 'Merck's Archives,' 99-01; mem. committee of revision, U. S. Pharmacopœia, 90-00. A.A; Ass. Anat; Chem. Soc; Am. Med. Ass; Pharmaceut. Ass. (chairman, dept. educ); Torrey Bot. Club; Phytopath. Soc; N. Y. State Pharmaceut. Ass. (pres); N. Y. Acad; Brooklyn Inst. (pres, chem. sect). Pepsin; antiseptics; chemistry of Calycanthus glaucus; drugs and digestion; melting points and solubilities of alkaloids; disease as a factor in natural selection and as a cause of variation.
- Echols, Prof. W(illiam) H(olding)**, University, Va. **Mathematics*. San Antonio, Tex, Dec. 2, 59. B.S, C.E, Virginia, 82. Civil and mining engineer, 82-87; prof. applied math. and direc-

- tor, Mo. Sch. Mines, 87-91; *prof. math, Virginia, 91-* Late ed.-in-chief, 'Annals of Math.' Math. Soc. Theory of functions; the construction of functions by infinite series of functions; mathematical analysis.
- Eckart, C(harles) F(ranklin)**, Olaa Sugar Co, Olaa, Hawaii. *Agriculture*. Marysville, Calif, June 18, 75. M.S., California, 05. Tech. chemist, 95; chemist, Hawaiian Sugar Planters' Ass, 96-00; director agr. and chem, 01-09, gen. director, Exp. Sta, 09-13; *manager, Olaa Sugar Co, Ltd, 13-* Agriculture; agricultural chemistry; sugar technology.
- Eckel, Edwin C(larence)**, 1503 Decatur St, N. W, Washington, D. C. *Engineering, Geology*. New York, N. Y., March 6, 75. Col. City of N. Y., 89-91; B.S., N. Y. Univ, 95, C.E., 96. Asst. geol., N. Y. State Museum, 00-02; U. S. Geol. Surv., 02-06; geologist, Am. Cement Co, Goshen Iron Co, and pres, Dominion Cement Co, 12; expert iron ores, U. S. Steel Corp, 11-13; consulting engineer and geologist, 17- Capt, corps engineers, 17-19, major, 19. A.A.; Geol. Soc; assoc. Civil Eng. Cements; economic geology; iron ores and fuels.
- Ecker, Dr. E(nrique) E(duardo)**, Western Reserve University, Cleveland, Ohio. *Pathology*. Willemstad, Curaçao, D. W. I., Jan. 26, 87. Wageningen, Holland, 04-08; Ph.D., Chicago, 17. Diagnostician, Cleveland Board of Health, 18-19; demonstrator, hygiene and bacter, *Western Reserve*, 18-19, *instr. immunol*, 19- Rickett's prize in bacter. and path., 17. Ass. Path. and Bact; Soc. Bact; Pub. Health Ass. (v. pres, Cleveland sect, 19). Bacteriology; immunity.
- Eckhardt, Dr. E(ngelhardt) A(ugust)**, Bureau of Standards, Washington, D. C. *Physics*. Cedarburg, Wis, 88. B.S., Pennsylvania, 08, Ph.D., 12. Harrison research fellow, Pennsylvania, at Göttingen, 12-13, instr. physics, Pennsylvania, 08-12, asst. prof, 13-17; assoc. physicist, *Bur. Standards*, 17-19, *physicist*, 19- A.A.; Physical Soc; Wash. Philos. Soc. Magneto-optics and acoustics.
- Eckles, Prof. C(larence) H(enry)**, University of Minnesota, Minneapolis, Minn. *Dairy husbandry*. Marshalltown, Iowa, April 14, 75. B.S.A., Iowa State, 95, M.S., 97, Sc.D., 16; Wisconsin, 96; Göttingen and Berne, 04-05. Asst. dairy bacter, Iowa State, 96-01; asst. prof. dairy husbandry, Missouri, 01-06, prof, 06-19; *chief, dairy div, Minnesota*, 19- Instr. dairy husbandry, Mass. Col, 98-99. Ass. Dairy Sci. (pres); fel. Iowa Acad. Factors influencing composition of milk; nutrition, growth and development of dairy cattle; silage.
- Eckman, James Roy**, 325 Maryland Ave, N. E, Washington, D. C. *Chemistry*. Leechburg, Pa, Sept. 7, 87. A.B., West Virginia, 10; A.M., Harvard, 17; George Washington, 19-20. Asst. chem, West Virginia, 08-10; private chemist, 11-12; anal. and research chemist, Merrimac Chem. Co, 12-15; chief chemist, Essex Aniline Works, 17-18; research chemist, War Dept, 18-19; *assoc. chemist, Bur. Standards*, 19- Chem. Soc; Soc. Chem. Indust; Ass. Harvard Chemists; Soc. chim. de France. Metallurgy; gases in metals; dyestuffs; synthetic drugs.
- Eddy, Prof. C(larence) L(eroy)**, 1793 E. 86th St, Cleveland, Ohio. *Railroad engineering*. Atlanta, Ill, Oct. 20, 77. B.S., Illinois, 00, C.E., 09. Practising railroad engineer, 00-07; *assoc. prof. ry. eng, Case*, 07- A.A.; Eng. Educ; R. R. Eng. Rolling resistance of cars.
- Eddy, Harrison P(rescott)**, 14 Beacon St, Boston, Mass. *Civil engineering*. Millbury, Mass, April 29, 70. B.S., Worcester, 91. Supt, sewer dept, Worcester, Mass., 92-07; *consulting engineer, Metcalf and Eddy*, 07- Civil Eng; Chem. Soc; Soc. Chem. Indust; Consult. Eng; Soc. Munic. Improv; Pub. Health Ass; New Eng. Water Works Ass; Boston Soc. Civil Eng. (pres, 14). Sewerage; sewage disposal; trades waste disposal.
- Eddy, Dr. Henry T(urner)**, 916 Sixth St, S. E, Minneapolis, Minn. *Mathematics, Mechanics, Engineering*. Stoughton, Mass, June 9, 44. A.B., Yale, 67, Sc.D., 12, Ph.B., 68, A.M., 70; C.E., Cornell, 70, Ph.D., 72; Berlin, 79; Paris, 80; LL.D., Center (Ky), 92. Instr. field work, Sheffield Sci. Sch, Yale, 67-68; Latin and math, Tennessee, 68-69; asst. prof. math. and civil eng, Cornell, 69-73; adj. prof. math, Princeton, 73-74; prof. math, astron. and civil eng, Cincinnati, 74-90, dean, acad. faculty, 74-77, 84-89, acting pres. and pres. elect, 90; pres, Rose, 91-94; prof. eng. and mech, *Minnesota*, 94-07, head prof. *math. and mech*, 07-12, *emer. prof*, 12-, dean, *grad. sch*, 06-12, *dean emer*, 12- A.A. (sec'y, A., 82, v. pres, 84); Math. Soc; Physical Soc; Eng. Educ. (pres, 96); Philos. Soc. Physics.
- Eddy, Prof. Walter H(ollis)**, Teachers College, Columbia University, New York, N. Y. *Biological chemistry*. Brattleboro, Vt, Aug. 26, 77. B.S., Amherst, 98; A.M., Columbia, 08, Ph.D., 09. Science teacher, high sch, Amherst, Mass, 98-99, acting principal, 99-00; science teacher, Passaic, N. J., 00-03; chairman, dept. biol, High Sch. of Commerce, N. Y. City, 03-17; major, Sanit. C, A.E.F., 17-19; asst. prof. *physiol. chem, Teachers Col. Columbia*, and *research chemist*, N. Y. Hosp, 19-20, *assoc. prof*, 20- Asst. biol. chem, Columbia, 08-09, assoc, 09-14. A.A.; Chem. Soc; Soc. Biol. Chem; Soc. Exp. Biol; Harvey Soc; Biochem. Ass. Protein chemistry; protein salts; histone; vitamins in infant feeding.
- Edelman, Philip E**, 39 Cortlandt St, New York, N. Y. *Electrical engineering*. Duluth, Minn, July 16, 94. B.S., Minnesota, 16, E.E. and research corporation fellow, 17. Engineer, War and Navy Dept. Laboratories, 17-18. Radio Eng. Radio communication; electrochemistry; automatic chemical control.
- Edes, Dr. Robert T(haxter)**, 251 Rimmon Ave, Springfield, Mass. *Pathology*. Eastport, Maine, Sept. 23, 38. A.B., Harvard, 58, M.D., 61. Asst. surgeon and past asst. surgeon, U.S.N., 61-65; asst. prof. and later prof. mat. med, Harvard Med. Sch, 70-84, Jackson prof. clin. med, 84-86. Visiting physician, Boston City Hosp, 72-86; Garfield Mem. Hosp, Wash, 89-91; res. physician, Adams Nervine Asylum, 91-96; lecturer, Med. Schools, Dartmouth, Georgetown and George Washington; Shattuck lecturer, Mass. Med. Soc. Prize, Mass. Med. Soc, 68; O'Reilly prize, 69. Emer. mem. Am. Physicians; Neur.

- Ass. Medical pathology; psychiatry; physiology.
- Edgar, Prof. Graham**, University, Va. *Chemistry*. Fayetteville, Ark, Sept. 19, 87. B.S, Kentucky, 07; Ph.D, Yale, 09. Instr. *chem*, Virginia, 09-10, adj. prof, 10-12, assoc. prof, 12-17; *prof*, Throop, 17-18; *Virginia*, 19- Exec. sec'y, research information service, Nat. Research Council, 18-19; consulting chemist, nitrate div, ordnance dept, 19. A.A.; Chem. Soc. Physical and analytical chemistry; analysis of vanadium; reaction velocity in heterogeneous systems; diffusion of iodine.
- Edgar, Prof. J(ames) Clifton**, 28 W. 56th St, New York, N. Y. *Obstetrics*. New York, June 14, 59. Ph.B, Lafayette, 82, A.B, A.M, 85; M.D, N. Y. Univ, 85. *Prof. obstet. and clin. midwifery*, Univ. and Bellevue Hosp. Med. Col, 85-98; *med. col*, Cornell, 98- Attending obstetrician, Bellevue Hosp; obstet. surgeon, Manhattan Maternity and Dispensary; consulting obstetrician, N. Y. Maternity and Jewish Hospitals. Gynec. Soc. (v. pres, 04); Am. Med. Ass; N. Y. Obstet. Soc. (pres, 08); N. Y. Acad. Med. Toxemia of pregnancy; hepatic insufficiency; instrumental dilatation of the pregnant and parturient cervix; obstetric teaching; urine of pregnancy; ophthalmia of the newly-born.
- Edgerton, Dr. C(laude) W(ilbur)**, Louisiana Experiment Station, Baton Rouge, La. *Mycology*, *Plant pathology*. Woodbine, Iowa, March 9, 80. B.S, Nebraska, 03; Ph.D, Cornell, 08. Asst. bot, Cornell, 05-07, instr, 07-08; *plant pathologist*, La. Exp. Sta, 08- Assoc. ed, 'Phytopath,' 16-18. A.A.; Phytopath. Soc; Bot. Soc. Anthracnose diseases of plants; diseases of cotton, rice, sugar-cane, alfalfa and truck crops.
- Edison, Dr. Tho(mas) A(lva)**, Orange, N. J. **Physics*. Milan, Ohio, Feb. 11, 47. Self educated; hon. Ph.D, Union, 78; hon. Sc.D, Princeton, 15; LL.D, Univ. State N. Y. Telegraph operator up to 69; *elec. engineer and inventor*, 69- Commander Légion d'honneur; Adelskiold gold medal, Royal Acad, Stockholm. A.A.; Elec. Eng; Mech. Eng; Min. Eng; Philos. Soc; Royal Swedish Acad. Science as applied to invention; quadruplex and sextuplex telegraphic transmission; microtastimeter; phonograph; aeroplane; incandescent lamp and light system; moving pictures; alkaline storage battery; mimeograph; poured concrete houses; transmitter of the telephone.
- Edmonds, Dr. Harry M(arcus) W(eston)**, Department of Terrestrial Magnetism, Washington, D. C. *Physics*. Oshkosh, Wis, June 25, 62. A.B, California, 82; M.D, Hahnemann Med. Col, 93; Göttingen, Bonn, Leipzig. Observer and magnetic observer in charge, Sitka Magnetic Observatory, U. S. Coast and Geod. Surv, 89-09; *magnetician*, dept. *terrestrial magnetism*, Carnegie Institution, 09- Commander, yacht 'Carnegie,' Carnegie Institution, 17-18; in charge, Huancayo Magnetic Observatory, Peru, 19-21. Magnetism.
- Edmondson, Prof. C(harles) H(oward)**, University of Hawaii, Honolulu, Hawaii. *Zoology*. Milton, Iowa, Oct. 14, 76. Ph.B, Iowa, 03, M.S, 04, Ph.D, 06. *Prof. biol*, Iowa Wesleyan, 06-07; nat. hist, Washburn, 07-08, zool. and physiol, 08-13; asst. prof. and later *prof. zool*, Oregon, 13-20; *Univ. of Hawaii*, 20- A.A.; Soc. Zool; West. Soc. Nat; Micros. Soc; Calif. Acad. Protozoa of Iowa; high mountain lakes of Colorado, Japan and of Devil's Lake; reformation of the crystalline style in *Mya arenaria*; shellfish of northwest coast.
- Edmondson, Prof. C(larence) E(dmund)**, Bloomington, Ind. *Physiology*, *Hygiene*. Ellettsville, Ind, April 9, 83. A.B, Indiana, 06, A.M, 12, Ph.D, 14. Instr. *physiol*, Indiana, 12-16, asst. prof, 16-19, *assoc. prof. physiol. and director*, dept. *hygiene*, 19- A.A.; Ind. Acad. Physiology of the thyroid and thymus glands.
- Edmondson, Prof. T(homas) W(illiam)**, 141 Franklin Ave, Mt. Vernon, N. Y. *Mathematics*. Skipton, England, June 26, 69. A.B, London, 88; A.B, Cambridge, 91; fellow, Clark, 94-96, Ph.D, 96. Asst. prof. physics, N. Y. Univ, 96-03, assoc. prof, 03-05, *prof. math*, 05- Acting dean, grad. sch, 16- Asst. tutor math. and physics, Univ. Correspondence Col, Cambridge, England, 89-93. Math. Soc; Math. Ass. Spark discharge in dielectrics; theory of potential; spherical harmonic analysis; theory of curves.
- Edmonston, W(illiam) D(ouglas)**, Tucson, Ariz. *Entomology*. Edinburgh, Scotland, 70. Grad, Royal Inst. Edinburgh, 87. Forest agent, U. S. Dept. Interior, 01-05; U. S. Forest Service, 05-10; *entom. asst. in charge South. Rocky Mt. Sta, bur. entom*, U. S. Dept. Agr, 10- Bronze medal, Int. Forestry Exhibit, Edinburgh, 84. A.A.; Entom. Soc; cor. mem. Wash. Entom. Soc. Forest insects; relation of lightning and insects to the death of trees.
- Edmunds, Dr. Cha(rlie)s K(eyser)**, Canton, China. *Physics*, *Electrical engineering*. Baltimore, Md, Sept. 21, 76. Baltimore City Col, 90-93; A.B, Hopkins, 97, fellow, 02-03, Ph.D, 03. Acting prof. physics, Utah, 98-99; magnetic observer, U. S. Coast and Geod. Surv, 00; instr. physics, high sch, Washington, D. C, 00-01; *prof. physics and elec. eng*, Canton Christian Col, China, 03-, pres, 08-; observer in charge, Magnetic Surv. of China Coast, Carnegie Institution, 06-17. A.A.; Physical Soc; assoc. Elec. Eng; Am. Ass. of China. Optical properties of selenium; the magnetic field of the earth in China; geographical studies in China.
- Edmunds, Prof. C(harles) W(allis)**, University of Michigan, Ann Arbor, Mich. *Pharmacology*, *Therapeutics*. Bridport, England, Feb. 22, 73. Indiana, 94-95; M.D, Michigan, 01, A.B, 04. *Prof. mat. med. and therapist*, Michigan, 07-, asst. dean and sec'y, med. sch. Mem. committee of revision, U. S. Pharmacopœia, 10- Physiol. Soc; Am. Med. Ass; Soc. Pharmacol; assoc. mem. Am. Physicians; Soc. Exp. Biol.
- Edquist, Prof. J(oshua) A(nderson)**, St. Peter, Minn. *Biology*. Knoxville, Ill, April 16, 62. A.B, Augustana, 86, A.M, 95; M.Di, Iowa State Teachers' Col, 89; Minnesota, 94; Wisconsin, 02; Woods Hole, 04. Asst. science, *Gustavus Adolphus*, 89-94, prof. nat. science, 95-15, biol, 15-
- Edsall, Dr. David L(inn)**, Harvard Medical School, Boston, Mass. **Medicine*. Hamburg, N. J, July 6, 69. A.B, Princeton, 90, hon. Sc.D,

- 13; M.D, Pennsylvania, 93, Woodward fellow, 05; Mercy Hosp. and Rosalia Foundling Asylum, Pittsburgh, 93-94; London, Vienna and Graz, 94-95, 01. Assoc. William Pepper lab, Pennsylvania, 95-05, instr. med, 99-03, assoc. 03-05, asst. prof, 05-07, prof. therapeut. and pharmacol, 07-10, dean, med. faculty, 10-11; prof. prev. med, Washington (St. Louis), 11-12; *Jackson prof. clin. med, Harvard, 12-*, dean, *faculty med, 18-* A.A.; Am. Physicians; Soc. Exp. Biol.; Soc. Exp. Path.; Soc. Clin. Invest. (pres, 09); *Pediat. Soc.* (pres, 09); *Philos. Soc.*; Am. Acad. Physiology and pathology of digestion and metabolism; clinical medicine; industrial disease and hygiene.
- Edson, Dr. Carroll E(verett)**, 518 Majestic Building, Denver, Colo. *Medicine*. Roxbury, Mass, Oct. 14, 66. A.B, Harvard, 88, A.M, M.D, 92. Physician, out-patient dept, Boston City Hosp, 95-96; prof. therapeut, Denver, 97-07; med, Colorado, 07-11. Acting assoc, surgeon, U.S.A, 98; assoc. ed, 'Boston Med. and Surg. Jour'; mem. Library Commission, Denver. A.A.; Am. Med. Ass.; Climat. Ass. (v. pres, 09, 12, pres, 20); Ass. Tuber. (director, 06); Colo. Sci. Soc. Clinical medicine; climatology.
- Edson, Dr. H(oward) A(ustin)**, 3822 Fourth St, N. W, Washington, D. C. *Plant pathology*. Randolph, Vt, Aug. 14, 75. B.S, Vermont, 06, M.S, 10; Ph.D, Wisconsin, 13. Instr. bacter, Vermont, 06-08, asst. prof, 08-10, asst. botanist, Exp. Sta, 06-08, bacteriologist, 08-10; physiologist and later *pathologist, bur. plant indust, U. S. Dept. Agr, 10-* A.A.; Bot. Soc.; Phytopath. Soc.; Soc. Bact.; Chem. Soc.; Wash. Bot. Soc.; Vt. Bot. Soc. Bacteriology of maple products; sugar beet diseases; potato diseases.
- Edwards, Dr. Arthur R(ubin)**, 104 S. Michigan Ave, Chicago, Ill. *Medicine*. Chicago, June 26, 67. A.B, Northwestern, 88, A.M, M.D, 91. Intern, Cook Co. Hosp, 91-92; prof. therapeut, med. sch, Northwestern, 96-98, principles and practise of med. and clin. med, 98-17, dean of faculty, 07-16. Attending physician, Cook Co. Hosp, 93-05; St. Luke's Hosp, 96-05; Wesley Hosp, 98-15; Michael Reese Hosp, 00-; Mercy Hosp, 01-17. Am. Physicians; Am. Med. Ass. Internal medicine.
- Edwards, Prof. A(ustin) S(outhwick)**, University of Georgia, Athens, Ga. *Psychology*. Oswego, N. Y, March 2, 85. B.S, Columbia, 08; A.M, Minnesota, 10; Ph.D, Cornell, 12. Instr. *psychol, Minnesota, 12-16*; assoc. prof, *Georgia, 16-19, prof, 19-* Psychol. examiner, Sanit. C, 18, educ. service, 19. A.A.; Psychol. Ass. Sensory suggestion; learning and distribution of time.
- Edwards, Dr. Charles L(incoln)**, 1032 W. 39th Place, Los Angeles, Calif. *Zoology*. Oquawka, Ill, Dec. 8, 63. B.S, Lombard, 84; Indiana, 86, A.M, 87; Hopkins, 86-89; Ph.D, Leipzig, 90; fellow, Clark, 90-92. Asst. prof. biol, Texas, 92-93, adj. prof, 93-94; prof, Cincinnati, 94-00; Trinity (Conn), 00-10; embryol. and histol, Southern California, 11-13; *director nature study, pub. schools, Los Angeles, 12-* At Kristineberg Zool. Sta, 09; Wurzburg, 10; Naples, 10; Bahamas, 88, 91, 93; Fla. Keys, 96; Tex, 92. A.A.; Soc. Nat.; Soc. Zool.; Ass. Anat;
- Folk-lore Soc. (pres, 99); Calif. Acad; cor. mem. Soc. de Geog. y Est. Mex; hon. mem. Soc. Mex. Hist. Nat.; Soc. Cient. Ant. Alz. Embryology, growth and variation of holothurians and reptiles; influence of warmth on protoplasm; idiochromosomes in *Ascaris*; copepods and abalones.
- Edwards, Prof. C(harles) W(illiam)**, Trinity College, Durham, N. C. *Physics*. Arkadelphia, Ark, 73. A.B, Trinity (N. C), 94; A.M, Tulane, 96; M.S, N. Y. Univ, 98; Columbia, 98-99. Instr. math, Tulane, 94-96; *prof. physics, Trinity (N. C), 00-* Assoc. mem. Physical Soc.; assoc. Elec. Eng; N. C. Acad. (pres). Electrical engineering; armature reactions; radioactivity and application of electrical waves to wireless telegraphy.
- Edwards, Dr. D(ayton) J(ames)**, Cornell Medical College, New York, N. Y. *Physiology*. Otisfield, Maine, Sept. 7, 82. B.S, Maine, 06; Ph.D, Columbia, 13. Asst. and instr. biol, Maine, 06-08; asst. zool, Columbia, 08-09; tutor and later *instr. physiol, Col. City of N. Y, 09-17*; *med. col, Cornell, 18-* A.A.; Soc. Nat.; Soc. Exp. Biol. Physiology of circulation.
- Edwards, Evan J(ames)**, Nela Park, Cleveland, Ohio. *Electrical engineering*. Williamsburg, Iowa, March 3, 82. B.S.(E.E), Iowa, 07. Asst. instr, Mass. Inst. Tech, 07-08, instr, 08-10; *elec. engineer, Nat. Lamp Works, 10-* Elec. Eng; Eng. Educ; Illum. Eng. Soc. Incandescent lamps.
- Edwards, Prof. Geo(rge) C(unningham)**, 2546 Dana St, Berkeley, Calif. *Mathematics*. Spencer Acad, Okla, 52. Ph.B, California, 73. Instr, asst. prof, assoc prof. and later *prof. math, California, 73-* In charge, mil. dept, California, 73-77, 79-82. A.A.; Math. Soc.; Pacific Astron. Soc. (pres, 04); Calif. Acad. Elementary mathematics; ratio of the values of silver and gold.
- Edwards, Dr. Hiram W(heeler)**, 1845 San Juan Ave, Berkeley, Calif. *Pedagogy, Physics*. Spring Valley, Minn, Sept. 9, 85. B.S, California, 08, Ph.D, 11. Prof. physics, Baylor, 11-12; director science, State Nor. Sch, Fresno, Calif, 12-18; *supervisor training of science teachers, California, 18-* Inspector, instr. and efficiency expert, U. S. Sch. Mil. Aeronautics, 18. Physical Soc. Electricity; conductors carrying high frequency currents.
- Edwards, Junius D(avid)**, Aluminum Co. of America, New Kensington, Pa. *Chemistry*. Minneapolis, March 17, 90. B.S, Minnesota, 12, Chem.E, 13. Assoc. chemist, Bur. Standards, 13-19; *physical chemist, research bur, Aluminum Co. of Am, 19-* Chem. Soc. Gas chemistry; physical metallurgy of aluminum.
- Edwards, Dr. V(ictor) C(lyde)**, 14 Terrace Place, Arlington, N. J. *Chemistry*. Ore Hill, N. C, Aug. 31, 84. A.B, North Carolina, 09, Ph.D, 15; Chicago, 11-13. Instr. chem. and physics, Wofford, 09-11, asst. prof, 15-17; *research chemist, E. I. duPont de Nemours and Co, 17-* Chem. Soc. Tautomerism; naphthalene derivatives; dye intermediates; explosives.
- Eells, Walter C(rosby)**, Whitman College, Walla Walla, Wash. *Mathematics*. Union, Wash,

- March 6, 86. A.B, Whitman, 08; A.M, Chicago, 11. Instr, high sch, Rockford, Wash, 08-09; Ritzville, 09-10; prof. *math*, Whitworth, 11-14; instr, U. S. Naval Acad, 14-16; *prof*, Whitman, 16- Math. Soc. Number systems of American Indians; statistical study of eminent mathematicians.
- Egan, J(ames) E(verett)**, 332 Grove Ave, Wyoming, Cincinnati, Ohio. *Chemistry*. Neoga, Ill, Feb. 25, 86. A.B, DePauw, 08; A.M, Illinois, 10, fellow, 11-12, Ph.D, 12. Acting prof, chem, DePauw, 12-13; asst. prof, Miami, 13-18; *chem. supervisor soap and soap processes, Procter and Gamble Co*, 18- Chem. Soc. Rare earths.
- Egbert, Prof. Seneca**, 4814 Springfield Ave, Philadelphia, Pa. *Hygiene, Sanitation*. Petroleum Center, Pa, Feb. 17, 63. A.B, Princeton, 84, A.M, 87; M.D, Pennsylvania, 88. Demonstrator hygiene, Pennsylvania, 88-90, lecturer, 90-92; prof. hygiene and sanit, Medico-Chirurg. Col, Phila, 93-16, dean, dept. med, 98-16; *prof. hygiene, Pennsylvania*, 16- Lecturer hygiene, P. E. Church Training Sch, 91; Drexel Inst, 92-93; prof. anat, physiol. and hygiene, Temple, 96-99; lecturer, Ludwig Inst, Phila. Acad. Nat. Sci, 00-06. Am. Med. Ass; Pub. Health Ass; Sch. Hygiene Ass.
- Eggers, Prof. H(arold) E(verett)**, 42nd Street and Dewey Ave, Omaha, Neb. *Pathology*. Royalton, Wis, March 1, 82. B.S, Wisconsin, 03, A.M, 05; fellow, Chicago, 06, M.D, Rush Med. Col, 09. Res. physician, Cook Co. Hosp, 09-10; *prof. path. and bacter*, Harvard Med. Sch. of China, 11-16; *col. med, Nebraska*, 16- Research asst, McCormick Inst. for Infectious Diseases, 07-09, 11. Bacteriology; opsonins of normal serum; spirochaetal infection of ulcers.
- Eggleston, Dr. Cary**, 412 West End Ave, New York, N. Y. *Pharmacology*. Brooklyn, N. Y, Aug. 18, 84. Jena, 03; M.D, Cornell, 07. Intern, N. Y. Hosp, 08-10; Sloane Hosp. for Women, 10; instr. *pharmacol, med. col, Cornell*, 11-18, *asst. prof*, 19- Asst. physician, out-patient dept, N. Y. Hosp, 10-12, attending physician, contagious diseases, 11; asst. physician, tuber. clinic, Bellevue Hosp, 10-12; chief of clinic, children's dept, DeMilt Dispensary, 11-12, assoc. ed. 'N. Y. Med. Jour,' 12- A.A; Soc. Pharmacol; Soc. Exp. Biol; Am. Med. Ass; Harvey Soc. General pharmacology; the digitalis bodies.
- Eggleston, H(arla) R(ay)**, Marietta College, Marietta, Ohio. *Zoology*. Walton, N. Y, Feb. 25, 90. B.S, Hamilton, 12, Root fellow, 12-13; Harvard, 12-13, A.M, 13; Bermuda Biol. Sta, summer, 15; Chicago, summer, 16. *Prof. biol*, Buena Vista, 13-15; *Marietta*, 15- City bacteriologist, Marietta, 19- A.A; Soc. Bact; Pub. Health Ass; Micros. Soc; Ohio Acad. Animal ecology; bacteriology.
- Eggleston, W(illard) W(ebster)**, 612 Randolph St, N. W, Washington, D. C. *Botany*. Pittsfield, Vt, March 23, 63. B.S, Dartmouth, 91; research scholar, N. Y. Bot. Garden, 07-09. Practising civil engineer, 91-04; aid, N. Y. Bot. Garden, 04-07; bot. asst, U. S. Nat. Museum, 08-09; *asst. botanist, Forest Service and bur. plant indust, U. S. Dept. Agr*, 10- A.A; Bot. Soc; Fern Soc; Torrey Bot. Club; Wash. Biol. Soc; Wash. Bot. Soc; New Eng. Bot. Club; Vt. Bot. Club (v. pres, 12-14). Systematic botany; Pomaceae of North America; Crataegi of the eastern United States; plants that poison stock.
- Eggstein, Dr. Andy Anderson**, 49 W. 72d St, New York, N. Y. *Pathology*. Joelton, Tenn, Jan. 6, 90. B.S, Dickson; M.D, Vanderbilt. Asst. histol, path. and bacter, Vanderbilt, 12-13, instr. path. and bacter, 13-14, path, 14-16, asst. prof, 16-18, assoc. path, Columbia, 18-20; *pathologist, Manhattan Eye, Ear, Nose and Throat Hosp*. Chief pathologist, St. Thomas Hosp, Nashville, Tenn, 16-18; pathologist, Presb. Hosp, N. Y. City, 18, 19. A.A; Soc. Exp. Path; Am. Med. Ass; Ass. Path. and Bact. Serum ferments and protein; split products in relation to pathology; epidemiology of pellagra.
- Egloff, Dr. Gustav**, 1014 First National Bank Building, Chicago, Ill. *Physical chemistry*. New York, N. Y, Nov. 10, 86. A.B, Cornell, 12; A.M, Columbia, 13, Barnard research fellow, 14-15, Ph.D, 16. With U. S. Bur. Mines, 15-16; *hydrocarbon engineer and chief chemist, exp. hydrocarbon plant, Aetna Chem. Co*, 16- A.A; Chem. Soc; N. Y. Chemists Club. Petroleum; coal tar oils; cracking of hydrocarbons; effect of catalysis upon gasoline formation; physical constants of oils; petroleum formation.
- Ehlers, Dr. J(ohn) H(enry)**, 633 Church St, Ann Arbor, Mich. *Botany*. Piqua, Ohio, Nov. 4, 78. A.B, Michigan, 99, Ph.D, 14. Principal and supt. schools, 00-08; instr. bot, Tex. Col, 14-15; *Michigan*, 15-20, *asst. prof*, 20- Instr. bot, biol. sta, Michigan, and curator, phanerogamic herbarium, 16- A.A; Bot. Soc; Mich. Acad. Temperature of pine leaves in winter.
- Ehrenfeld, Pres. Charles H(atch)**, 57 S. Beaver St, York, Pa. *Chemistry*. Shippensburg, Pa, March 12, 64. A.B, Wittenberg, 86, A.M, 89; Ph.D, Pennsylvania, 94, hon. Sc.D, 16. Asst. chem, Wittenberg, 86-87; *prof. chem. and physics, York Collegiate Inst*, 87-, *pres*, 16- Chief chemist, York Mfg. Co, 03-16. A.A; Chem. Soc; Soc. Chem. Indust; Soc. Test. Mat. Native minerals of York County, Pa; specific heat of brines with reference to refrigeration.
- Ehrenfeld, Dr. Frederick**, University of Pennsylvania, Philadelphia, Pa. *Geology, Mineralogy*. Washington Co, Pa, Jan. 8, 72. A.B, Wittenberg, 93; Ph.D, Pennsylvania, 98. Instr. chem. and physics, York Collegiate Inst, Pa, 93-94; instr. *geol. and miner, Pennsylvania*, 97-06, *asst. prof*, 06-, in charge of dept, 17- Mem. Pa. Geol. Surv. Commission, 17-19. A.A; Seismol. Soc; Phila. Acad.
- Ehrenfried, Dr. Albert**, 21 Bay State Road, Boston, Mass. *Surgery*. Lewiston, Maine, Feb. 9, 80. A.B, Harvard, 02, M.D, 05. Surgeon, various hospitals; asst. anat, Harvard Med. Sch, 09-13, surg, 12-16. Fel. Col. Surg; Am. Med. Ass. Skin-grafting; club-foot; intratracheal insufflation anesthesia; bloodvessel surgery; hereditary deforming chondrodysplasia; surgical after-treatment.
- Ehrhorn, Edw(ard) M(acfarlane)**, Board of Agriculture and Forestry, Honolulu, Hawaii. *Entomology*. San Francisco, Calif, Jan. 24, 62. Hamburg, 71-78; Grenchen, 78-79; Brighton

- (Eng), 79-80; Stanford, 91. Asst. entomologist and deputy quarantine officer, State Board of Hort, Calif, 90-91; county entomologist and hort. commissioner, Santa Clara Co, 92-04; first deputy state commissioner hort. and hort. quarantine officer, Calif, 04-09; *supt. entom. Board of Agr. and Forestry of Hawaii, 09-*, chief plant inspector, 16- A.A.; Entom. Soc.; Ass. Econ. Entom.; Hawaiian Entom. Soc. Coccidae.
- Ehrlich, Dr. Jacob**, 71 Bremond St, Belleville, N. J. *Chemistry*. New York, N. Y, Jan. 6, 92. A.M., Columbia, 16, Goldschmidt fellow, 16-17, Ph.D, 17. Chemist, bur. chem, U. S. Dept. Agr, 14-15; *chief chemist, Verona Chem. Co, 17-* Chem. Soc. Organic chemistry; dyes; intermediates; pharmaceutical products.
- Ehrmann, George Alex(ander)**, 2314 Sarah St, Pittsburgh, Pa. *Entomology*. Pittsburgh, Feb. 2, 62. Pub. sch. Mem, Naysmith's Tramps, Tex. and Liberia, W. Africa; Biederman's Explorations to Ariz. A.A.; Entom. Soc. Lepidoptera; variation in Lepidoptera; deformities in Coleoptera; Papilioniae in relation to their geographical distribution and variations of the species.
- Eichelberger, Prof. W(illiam) S(nyder)**, U. S. Naval Observatory, Washington, D. C. *Astronomy*. Baltimore, Md, Sept. 18, 65. Baltimore City Col, 78-83; A.B, Hopkins, 86, fellow, 87-88, Ph.D, 91. Instr. math. and asst. astron, Wesleyan, 90-96; asst. 'Nautical Almanac' Office, 89-90, 96-98; computer, U. S. Naval Observatory, 98-00, *prof. math, 00-*, in charge, astron. observations, 07-08; *director, 'Nautical Almanac' Office, 10-* Mem. U. S. eclipse exped. to Pinehurst, N. C, 00; in charge, eclipse exped. to Sumatra, 01; Spain, 05. For. correspondent, Bur. des Longitudes. A.A. (v. pres, 06); Astron. Soc. (councilor, 03-16); Wash. Acad; Wash. Philos. Soc. (pres, 15); Astron. Gesell. The orbit of Hyperion; perturbations of Minerva by Jupiter; star catalogues; satellite orbits; observations of sun, moon, planets, and fundamental stars, 1903-1911.
- Eiesland, Prof. John A(rnold)**, University of West Virginia, Morgantown, W. Va. *Mathematics*. Kristianssand, Norway, Jan. 27, 67. Ph.B, South Dakota, 91; Ph.D, Hopkins, 98. *Instr. math, Luther Acad, 91-92; prof, Thiel, 95-03; instr, U. S. Naval Acad, 03-07; prof, West Virginia, 07-* A.A.; Math. Soc.; Circolo Mat. di Palermo. Differential equations; kinematics; surface theory; geometry of n-dimensional space; flat-sphere geometry; a Plücker geometry in odd-dimensional space.
- Eigenmann, Dr. Carl H.**, Bloomington, Ind. *Zoology*. Flehingen, Germany, March 9, 63. A.B, Indiana, 86, A.M, 87; Harvard, 87-88; Ph.D, Indiana, 89. *Prof. zool, Indiana, 91-*, dean, grad. sch, 08-, *director Ind. Biol. Sta, 95-* Curator fishes, Carnegie Museum; acting curator fishes, Calif. Acad. Sciences; collector for British Museum in Calif, Idaho, Mont, Oregon and western Can; asst, U. S. Fish Commission, Woods Hole; director of exped. to British Guiana, 08; Colombia, 12; Peru and Bolivia, 18; Chile, 19. A.A. (sec'y, F, 00); Soc. Nat; Soc. Zool. (pres, cent. branch, 04); Micros. Soc. (pres, 01); Philos. Soc.; Wash. Acad; fel. Ind. Acad. (pres, 99); Soc. Geog. de Lima; Santiago Agron. Soc.; Inst. de la Salle, Bogota. Variation, distribution and embryology of fishes; degeneration in cave vertebrates; the cave problem in North America; fresh-water fishes of tropical America; heredity.
- Eikenberry, Prof. W(illiam) L(ewis)**, University of Kansas, Lawrence, Kans. *Botany*. Waterloo, Iowa, July 12, 71. B.S, Michigan, 94; Chicago, 01-03, 13-14. Prof. science, Mt. Morris, 94-01; head, dept. bot, McKinley High Sch, St. Louis, 03-09; instr. biol. and gen. science, Univ. High Sch, Chicago, 09-16; asst. prof. *educ, Kansas, 16-19, assoc. prof, 19-* A.A.; Bot. Soc.; Ecol. Soc.; Cent. Ass. Sci. and Math. Teachers (sec'y, 13). Plant physics; transpiration; teaching of biology.
- Einarsson, Sturla**, University of California, Berkeley, Calif. *Astronomy*. Iceland, Dec. 15, 79. A.B, Minnesota, 05; Ph.D, California, 13. Asst. *practical astron, California, 05-10, instr, 10-17, asst. prof, 18-20, assoc. prof, 20-* Expert, recruiting service, U. S. Shipping Board, 17-18. A.A.; Astron. Soc.; Seismol. Soc.; Pacific Astron. Soc. Comet, planet and satellite orbits.
- Einhorn, Dr. Max**, 20 E. 63d St, New York, N. Y. *Medicine*. Grodno, Russia, Jan. 10, 62. A.B, Gymnasium, Riga, Russia, 79; Kiev, Russia, 80; M.D, Berlin, 84. *Prof. med, N. Y. Post-Grad. Med. Sch, 96-* Visiting physician, German Hosp, N. Y.; consulting physician, White Plains and Hackensack Hospitals, and N. Y. German Dispensary. Gastro-Enterol. Ass. (pres, 00-02); Am. Med. Ass.; assoc. mem. Am. Physicians; Physicians Mut. Aid Ass; N. Y. Acad. Med; cor. mem. Munich Med. Gesell; hon. mem. Jap. Soc. Digest. Diseases. Fermentation; gastroduaphany; radium; gastric and intestinal digestion; duodenal ulcers; achylia gastrica; isochymia; pancreatic activity.
- Eisen, Dr. Gustav (August)**, 707 Fifth Ave, New York, N. Y. *Biology, Archeology*. Stockholm, Sweden, Aug. 2, 47. Ph.D, Upsala, 72. Docent zool, Upsala, 72; exploration exped. to Calif, 73-80; Guatemala and Mex, 80-02; Lower Calif, 93-99; Algiers, Tunis, Spain and Italy, 04-15; curator, Calif. Acad. Sciences, 93-00. Ed, 'California,' 89; mem. jury awards, Calif. Mid-Winter Fair, 95. Calif. Acad; San Francisco Micros. Soc. (pres, 05); cor. mem. Prague Wissenschaft. Gesell; cor. mem. Swedish Soc. Anthropol. and Geog. Oligochaeta; cytology; caprifrication of the fig; the plasmocytes of human and batrachian blood; aquaria and biological stations; Christian archeology; antique glass, beads, bronzes and pottery; the Antioch chalice.
- Eisenhart, Prof. Luther Pfahler**, Princeton, N. J. *Mathematics*. York, Pa, Jan. 13, 76. A.B, Gettysburg, 96; Ph.D, Hopkins, 00. Tutor math, Gettysburg, 96-97; instr, Princeton, 00-05, preceptor, 05-09, *prof, 09-* A.A. (v. pres, 17); Math. Soc. (ed, 'Trans'); Math. Ass. (ed, 'Annals'); Philos. Soc. Conjugate systems of lines on surfaces; general congruences; particular systems of lines on surfaces; surfaces of constant curvature and surfaces whose lines of curvature have the same representation on the sphere as the former; deformation of curved surfaces; transformations of applicable conju-

- gate sets; deformable transformations of Ribaucour; transformations of certain types of surfaces; conjugate systems.
- Eisenschiml, Otto**, 3518 Shields Ave, Chicago, Ill. *Chemistry*. Vienna, Austria, June 16, 80. Polytech, Vienna. Chemist, Carnegie Steel Co, 01-04; chief chemist, Am. Linseed Co, 04-12; *owner and manager, Scientific Oil Corp*, 12- Chief ed, 'Chicago Chem. Bul', 14-17. Chem. Soc. (chairman, Chicago sect, 14). Oils.
- Ekblaw, W(alter) Elmer**, University of Illinois, Urbana, Ill. *Geology, Botany*. Rantoul, Ill. A.B, Illinois, 10, A.M, 12, fellow, 17-19. Instr, Illinois, 10-13; *research assoc, Am. Museum Nat. Hist*, 17- Geologist and botanist, Crocker Land arctic expd, 13-17. A.A; mem. Ornith. Union; Wilson Ornith. Club; Ecol. Soc; Am. Geog. Soc. Physiography; ornithology; geology and botany of the far arctic.
- Ekeley, Prof. John B(ernard)**, 703 11th St, Boulder, Colo. *Chemistry*. Orebro, Sweden, Jan. 1, 69. A.B, Colgate, 91, A.M, 93, hon. Sc.D, 11; Ph.D, Freiburg, Baden, 02. Instr. chem, Colgate, 91-93; science master, St. Paul's Sch, Garden City, N. Y, 93-00; *prof. chem. and head of dept, Colorado*, 02- State chemist, Colo, 11-; collaborating chemist, bur. chem, U. S. Dept. Agr, 11- A.A; Chem. Soc; Electrochem. Soc; Colo. Sci. Soc. (v. pres, 19). Thioquinanthrenes; dihydroquinoxalins; benzmetoxazines; tungsten; pure tungstic acid; extraction of potash from leucite; toxicology.
- Ekroth, Clarence V(ictor)**, 296 Rugby Road, Brooklyn, N. Y. *Chemistry*. New York, N. Y, April 6, 87. Indust. C.E, Pratt Inst, 07; B.S, Brooklyn Polytech, 09. State chemist, N. Y, 10-16; asst. chief chemist, N. Y. City, 09-17; asst. prof. tech. chem, Pratt Inst, 14-17; *head, dept. chem, New Lots High Sch, N. Y. City*, 17- Director, Mrs. Oliver Harriman Food Research Lab, 17-19; special lecturer food chem, Col. City of N. Y, 18; chem. expert, U. S. Dept. Justice, 20; consulting chem. engineer, 12- A.A; Chem. Soc; Agr. Chem; Pub. Health Ass. Industrial engineering; concentration and dehydration of organic materials; composition and legal standards of milk.
- Elder, E(lwood) Waite**, 1300 Pontiac St, Denver, Colo. *Physics*. Warsaw, Ohio, Sept. 20, 67. A.B, Princeton, 91, fellow, 91-92, A.M, 94; Hopkins, 93-94; Colorado, 99-01. Instr. physics and math, Williams, 92-93; *physics*, State Prep. Sch, Boulder, Colo, 95-00; *East Denver High Sch*, 00- A.A; Physical Soc.
- Elder, Dr. Jay Clinton**, 456 S. 12th St, San Jose, California. *Biology*. Hubbell, Nebr, Nov. 22, 86. A.B, Nebraska, 07, A.M, 08, fellow, 08-09; California, 09-10, Ph.D, 12. Asst. exp. physiol, California, 09-10; *head, dept. biol. high sch, San Jose*, 10- Private investigator, Herzstein Research Lab, 09-19. Physico-chemical reactions in developing eggs of marine animals; intestinal parasites of marine fish.
- Eldred, Frank B(andall)**, Eli Lilly and Co, Indianapolis, Ind. *Chemistry*. Ligonier, Ind, Oct. 21, 74. Ph.C, Purdue, 97; Phar.D, Medico-Chirurg. Col, Phila, 13. Asst. chem, Purdue, 98; commercial chemist, 99-01; chemist, *Eli Lilly and Co*, 01-09, chief chemist and director, scientific div, 09-20, *chem. consultant*, 20- A.A; Chem. Soc. (sec'y, div. pharmaceut. chem, 11-13, chairman, 14, pres, Ind. sect, 11); Pharmaceut. Ass. (chairman, scientific sect, 12); Chem. Eng; Sciencetech. Club (pres, 20). Manufacture of pharmaceutical products and medicinal chemicals.
- Eliot, Pres. Charles W(illiam)**, 17 Fresh Pond Parkway, Cambridge, Mass. *Education, Chemistry, Mathematics*. Boston, Mass, March 20, 34. A.B, Harvard, 53, A.M, 56, LL.D, 09, hon. M.D, 09; LL.D, Williams and Princeton, 69; Yale, 70; Hopkins, 02; Tulane, Missouri and Dartmouth, 09; Brown, 14. Tutor math, Harvard, 54-58, asst. prof, 58-61, chem, 58-63; prof. anal. chem, Mass. Inst. Tech, 65-69; overseer, *Harvard*, 68-69, pres, 69-09, *emer. pres*, 09- Trustee, Carnegie Foundation, New York, 06-09; mem. Gen. Educ. Board, 08-17; Rockefeller Foundation, 14-17; Int. Health Board, 13-17. Officier Légion d'honneur; Order of the Crown, Italy; Order of the Rising Sun, first class, Japan; Order of the Prussian Crown; Order of the Crown, Belgium. Nat. Educ. Ass. (pres, 03); A.A; Am. Acad; Philos. Soc; Wash. Acad; fel. Royal Soc. Lit; cor. mem. Inst. de France. Educational reform.
- Elkin, Dr. W(illiam) L(ewis)**, 206 Livingston St, New Haven, Conn. *Astronomy*. New Orleans, La, April 29, 55. C.E, Royal Polytech, Stuttgart, 76; Ph.D, Strasbourg, 80; hon. Ph.D, Christiania, 11; hon. A.M, Yale, 93. Astronomer, Yale Observatory, 84-96, director, 96-10, *emer. prof, Yale*, 10- Volunteer, Royal Observatory, Cape of Good Hope, 81-83. Lalande prize, Paris Acad, 08. Nat. Acad; A.A; Astron. Soc; Conn. Acad; assoc. Royal Astron. Soc; Astron. Gesell. Stellar parallaxes; star clusters; photography of meteors.
- Elkins, Dr. Marion Graham**, 10 Moody St, Amesbury, Mass. *Botany*. Amesbury, Jan. 28, 86. B.S, R. I. Col, 06; Ph.D, Yale, 12. Instr. bot, Randolph-Macon Woman's Col, 13-15; prof, Oxford, 17-18; field asst, bur. plant indust, U. S. Dept. Agr, 20. Plant pathology.
- Ellard, C(harles) H(enry)**, Stuyvesant High School, New York, N. Y. *Chemistry*. Great Neck, L. I, N. Y, Aug. 14, 75. A.B, Columbia, 97, A.M, 00. Instr. chem, physics and math, Curtis Sch, N. Y. City, 97-00; Chapin Sch, 00-02; tutor qual. anal, Columbia, 02-09; *instr. chem, Stuyvesant High Sch*, 09- A.A; Chem. Soc. Electrolytic separation of tin and of beryllium; the effect of glycerophosphates on development in minor species.
- Ellenberger, Prof. H(oward) B(owman)**, Morrill Hall, Burlington, Vt. *Dairy husbandry*. B.S.A, Iowa State, 05; M.S.A, Cornell, 15, Ph.D, 17. Farm supt, 06-13; instr. dairy indust, Cornell, 14-17; *prof. animal and dairy husbandry, Vermont*, 17- Dairy Sci. Ass. Dairy manufacturing; ice cream; cheese.
- Ellerman, Ferdinand**, Mt. Wilson Observatory, Mt. Wilson, Calif. *Astrophysics*. Centralia, Ill, May 13, 69. High sch. In business, 86-92; asst, Kenwood Observatory, 92-95; Yerkes Observatory, 95-01, instr. astrophys, 01-04; *asst. astronomer, Mt. Wilson Observatory, Carnegie Institution*, 05- A.A; Astron. Soc; Pacific

- Astron. Soc; Royal Astron. Soc. Can. Solar spectroscopy; stellar spectra; spectra of sunspots; chromosphere.
- Ellery, Prof. Edward**, Union College, Schenectady, N. Y. *Chemistry*. Albany, N. Y., July 24, 68. A.B., Colgate, 90, A.M., 93, Sc.D., 14; Ph.D., Heidelberg, 96; Berlin, 09. Instr. chem., Colgate, 90-91; science, Vt. Acad., 91-94, principal, 97-04; *prof. chem., Union*, 04-, *dean of faculty*, 19- Tour of Am. universities, 14-15. Chem. Soc. (councilor, sect. east. N. Y., mem. committee on relation of industries and universities). Inorganic chemistry; organic derivatives; sulphuric acid; silicon compounds; mineral waters; sanitation.
- Ellett, Prof. W(alter) B(eal)**, Blacksburg, Va. *Chemistry*. Montgomery Co., Va., Nov. 11, 75. B.S., Va. Polytech, 94, M.S., 96; Ph.D., Göttingen, 04. Instr. chem., Va. Polytech, 96-00, 04-06, *prof. agr. chem.*, 06-, asst. chemist, Exp. Sta., 96-01, 04-06, chemist, 06-15. A.A.; Chem. Soc.; Agr. Chem.; Soc. Agron. Green manuring; protein and energy requirements of cattle; sulphur oxidation in soils; phosphoric acid in soils.
- Elley, Dr. Harold W(alter)**, 217 Harvard Ave., Swarthmore, Pa. *Chemistry*. Madison, Nebr., May 16, 91. B.S., Nebraska, 12, A.M., 13; Ph.D., Cornell, 16. Asst. chem., Nebraska, 10-13; Cornell, 13-16; *research chemist, E. I. duPont de Nemours and Co.*, 16- Chem. Soc. Organic chemistry; intermediates; dyes; pharmaceuticals.
- Ellingson, Prof. E(mil) O(scar)**, 419 St. Olaf Ave., Northfield, Minn. *Chemistry*. Nicollet, Minn., Oct. 14, 77. B.S., St. Olaf, 06; A.M., Wisconsin, 10, Ph.D., 12. Instr. chem., St. Olaf, 06-09; Wisconsin, 09-19; *prof., St. Olaf*, 19- Chem. Soc. (treas., Wis. sect., 17, 18). Abietic acid; heat of neutralization; action of ferric chlorid on wood; adsorption of bromin by dry lime.
- Elliot, Dr. John Wheelock**, 124 Beacon St., Boston, Mass. *Surgery*. Keene, N. H., 52. A.B., Harvard, 74, M.D., 78; Vienna, Paris, Berlin, Dresden and London. Surgeon, Mass. Gen. Hosp., 94-07; lecturer surg., Harvard, 00-04. Surg. Ass.
- Elliott, Dr. Charlotte**, U. S. Department of Agriculture, Washington, D. C. *Plant pathology*. Berlin, Wis., Aug. 2, 83. A.B., Stanford, 07, A.M., 13; Ass. Col. Alumnae fellow, Wisconsin, 17-18, Ph.D., 18. Teacher bot. and zool., State Nor. Sch., S. Dak., 08-12; instr. bot., S. Dak. Col., 14-16; *scientific asst., lab. plant path., bur. plant indust., U. S. Dept. Agr.*, 18- Phytopath. Soc. Bacteriology; germination of seeds; bacterial blight of oats.
- Elliott, Prof. D(aniel) S(tanley)**, Tulane University, New Orleans, La. *Physics*. Baltimore, Md., Aug. 3, 85. A.B., Hopkins, 11, A.M., 13, fellow, 13-14, Ph.D., 14. Instr. physics, Ga. Tech., 14-15, asst. prof., 15-16, assoc. prof., 16-17, acting prof., 18-19; *prof., Tulane*, 20- V. pres., acad. board and head, departments radio and airplanes, U. S. Sch. Mil. Aeronautics, 17-18. Physical Soc; Eng. Educ. Photo-electric effect.
- Elliott, Prof. Edward C(harles)**, University of Montana, State Capitol, Helena, Mont. *Education*. Chicago, Ill., Dec. 21, 74. B.S., Nebraska, 95, fellow, 95-97, A.M., 97; fellow, Columbia, 04-05, Ph.D., 05. Instr. science, high sch., Leadville, Colo., 97-98, supt. city schools, 98-03; assoc. prof. educ., Wisconsin, 05-07, prof., 07-16, director, course for training of teachers, 09-16, *chancellor, Montana*, 16- Lecturer educ. administration, Columbia, summer, 07; Chicago, summer, 11; special investigations, U. S. Bur. Educ., 06-10; sch. inquiry, N. Y. City, 11-12; Vt., 13; educ. director northwest states, S.A.T.C., 18. A.A.; Soc. Sci. Educ. Statistical analysis of expenditures for public education; educational legislation.
- Elliott, Dr. J(abez) H(enry)**, 11 Spadina Road, Toronto, Can. *Medicine, Zoology*. Hampton, Ont., Jan. 3, 73. M.B., Toronto, 97, George Brown mem. scholar, 97-98; mem. Col. Physicians and Surg., Ont., 98. Physician in charge, Muskoka Cottage Sanatorium, 98-07; *assoc. med. and clin. med., Toronto*, 09- Mem. trop. expd. to Nigeria, Liverpool Sch. Trop. Med., 00; senior asst. physician, St. Michael's Hosp., Toronto, 09. Climat. Ass.; Can. Med. Ass.; Can. Bot. Club; Can. Hist. Soc.; Can. Ass. Tuber.; Acad. Med. Toronto; Ont. Med. Ass. (v. pres., 04); British Med. Ass. Helminthology; Hema-mebsae; protein reaction; malaria; tuberculosis; Muskoka flora; filariasis in birds.
- Elliott, Prof. John A(sbury)**, University of Arkansas, Fayetteville, Ark. *Botany*. Ness City, Kans., Dec. 1, 87. A.B., Fairmount, 13; fellow, Kansas, 13-14, A.M., 14; fellow, Illinois, 14-16, Ph.D., 16. Assoc. plant pathologist, Del. Exp. Sta., 16-17; *prof. plant path., Arkansas, and pathologist, Exp. Sta.*, 17- A.A.; Phytopath. Soc.; Bot. Soc. Plant pathology and physiology; mycology.
- Elliott, Prof. Richard M(aurice)**, University of Minnesota, Minneapolis, Minn. *Psychology*. Lowell, Mass., Nov. 3, 87. A.B., Dartmouth, 10; A.M., Harvard, 11, Ph.D., 13; Berlin, 13-14. Instr. psychol., Harvard, 14-15; Yale, 15-18; *assoc. prof. and chairman of dept., Minnesota*, 19- Capt. Sanit. C., 18-19. A.A.; Psychol. Ass.
- Ellis, Dr. A(lexander) Caswell**, University Station, Austin, Tex. *Education*. Franklin Co., N. C., May 4, 71. A.B., North Carolina, 94; summer sch., Harvard, 94; Ph.D., Clark, 97; Berlin, 05. Adj. prof. pedag., Texas, 97-03, assoc. prof. science and art of educ., 03-08, *prof. philos. of educ.*, 08-, director, extension, 11-13, 14-16. Lecturer, summer sch., North Carolina, 95, 96; summer sch., N. Y. Univ., 08; board of visitors, U. S. Naval Acad., 02, 03. A.A.; Ass. Col. Teachers Educ.; Ass. Prof.; Soc. Sci. Educ.; fel. Tex. Acad.; S. Soc. Philos. and Psychol. Child psychology; philosophy of education; religious education; dolls; methods of testing fatigue; literary tastes of children; relation of educational systems to social ideals; stubbornness; individual instruction; retardation periods; formal discipline; money value of education; rating of university professors; farming.
- Ellis, Carleton**, 92 Greenwood Ave., Montclair, N. J. *Chemistry*. Keene, N. H., Sept. 20, 76. B.S., Mass. Inst. Tech., 00. Instr. chem., Mass. Inst. Tech., 00-02; *research work in applied chem.*, 02- Gold medals awarded for inventions, Jamestown Expos., 07; Longstreth medal, Franklin Inst.,

16. A.A.; Chem. Soc; Electrochem. Soc; Chem. Eng; Micros. Soc; Soc. Chem. Indust; N. J. Chem. Soc. (pres); Inventors Guild; Franklin Inst; N. Y. Chemists Club; London Chem. Soc; Soc. de Chim. indust. Catalytic chemistry; hydrogenation of oils and other unsaturated bodies; petroleum oils; manufacture of alcohol and ketones from cracked petroleum; esterification processes; synthetic resins; catalyzers and catalysis; ultraviolet light; motor fuels.
- Ellis, Prof. Charles A(iton)**, 207 Engineering Hall, Urbana, Ill. *Civil engineering*. Parkman, Maine, June 23, 76. A.B, Wesleyan, 00. Engineer, Am. Bridge Co, 02-08; asst. prof. civil eng, Michigan, 08-12; designing engineer, Dominion Bridge Co, 12-14; asst. prof. civil eng, Illinois, 14-15, *prof. struct. eng*, 15- Eng. Educ; assoc. mem. Civil Eng. Statically indeterminate structures; reinforced concrete arches.
- Ellis, Dr. F(rederick) W(arren)**, Monson, Mass. *Physiology, Ophthalmology*. Wales, Mass, April 10, 57. M.D, Harvard, 81, 83-86. A.A.; Physiol. Soc; Optical Soc. Physiology of vasomotor nerves; plethysmographic experiments with piston-recorder; photography of minute movements; double refraction in muscle; development of the osseous fishes; inventor of physiological and physical apparatus; visual sensations; circulation of the blood in the orbit; action of drugs on motor nerves.
- Ellis, Dr. James H(awes)**, California Institute of Technology, Pasadena, Calif. *Physical chemistry*. Covington, Ky, July 8, 90. B.S, Mass. Inst. Tech, 12, Savage fellow, 14, Ph.D, 16. Asst. physics, Mass. Inst. Tech, 12-14, *research assoc, lab. physical chem*, 14-16; *Calif. Inst. Tech*, 16- Physical Soc. Photochemistry; measurement of electrode potentials.
- Ellis, Prof. M(ax) M(apes)**, University of Missouri, Columbia, Mo. *Zoology*. Lawrence, Ind, Dec. 3, 87. Vincennes, 05; Illinois, 06; A.B, Indiana, 07, fellow, 07-08, A.M, 08, Ph.D, 11. Asst. chem, Idaho Nor. Sch, 04; entom, Illinois, 06; prof. nat. science, Vincennes, 08-09; teaching fellow zool, Indiana, 09; instr. biol, Colorado, *asst. prof*, 14-19; *physiol, Missouri*, 19- Asst. state entomologist, Ind, summer, 09; director, Gimble exped. to British Guiana, 10. A.A.; Ecol. Soc; Ind. Acad. Regeneration; ichthyology.
- Ellison, Prof. Gayfree**, Oklahoma University, Norman, Okla. *Bacteriology*. Wallace Co, Kans, Oct. 29, 75. B.S, Bethany (Kans), 93; M.D, Rush Med. Col, 03. Director, Pub. Health Laboratories, Okla, 11-15; *prof. bacter. and hygiene, Oklahoma*, 12- A.A.; Am. Med. Ass; Okla. Acad. Rabies and cancer in Oklahoma.
- Ellison, Joseph W(ilton)**, Department of Public Utilities, Cleveland, Ohio. *Sanitary engineering*. Ayer, Mass, Oct. 4, 67. Mass. Inst. Tech, 90-93. Asst. chemist, Mass. Board of Health, 93-96; Louisville Water Co, 96; chemist, Dept. Health, Brooklyn, N. Y, 97; asst. chemist, Commission Water Works, Cincinnati, 98, chemist in charge, Exp. Sta, 99-07, supt, Filtration Plant, 07-18; *engineer water purification, div. water, dept. pub. utilities, Cleveland, Ohio*, 18-; *consulting sanitary engineer*. Consulting expert on water purification to various municipalities and corporations. Chem. Soc. (pres, Cincinnati sect, 10, councillor and chairman, sect. water, sewage and sanit, 20); Pub. Health Ass. (mem. committee on water anal, 02-05); Water Works Ass; Civil Eng. Water purification; chemistry, microscopy and physical characteristics of natural waters; colloids in relation to water purification.
- Ellsworth, Dr. Eliot, Jr**, 34 E. 67th St, New York, N. Y. *Surgery*. June 6, 64. A.B, Yale, 84; M.D, Columbia, 87. *Surgeon, Presb. Hosp, N. Y. City*. Consulting surgeon, various hospitals. Surg. Ass.
- Ellsworth, Dr. H(ardy) V(incent)**, Geological Survey, Ottawa, Can. *Mineralogy*. Ridgeway, Ont, Sept. 1, 89. B.A, Toronto, 13, fellow, 13-16, M.A, 14, Ph.D, 16. Demonstrator electrochem, Toronto, 16-17; *mineralogist, Can. Geol. Surv*, 18- Chem. Soc; Can. Inst. Min. and Metal. Geology.
- Elmore, Prof. G(larence) J(erome)**, R. F. D. 5, Grand Island, Nebr. *Botany, Geology*. St. Charles, Ill, Feb. 25, 70. A.B, Nebraska, 95, A.M, 96, Ph.D, 15. *Prof. biol. and geol*, Grand Island, 08-18; biol, Westminster (Mo), 18-19; *biol. and geol, Grand Island*, 19- A.A.; Bot. Soc; Nebr. Acad. (pres, 11). Diatoms.
- Elrod, Prof. Morton J(ohn)**, University of Montana, Missoula, Mont. *Zoology*. Monongahela, Pa, April 27, 63. A.B, Simpson, 87, A.M, 90, M.S, 02; Ph.D, Ill. Wesleyan, 05. Principal, high sch, Corydon, Iowa, 88-89; asst. science, Ill. Wesleyan, 89-90, adj. prof, 90-92, *prof. biol*, 93-97; *Montana*, 97-, *director, biol. sta*, 98- Lit. ed. 'Iowa Schools,' 89-95; 'Intermountain Educator,' 13-; chairman, Mont. State Board of Game and Fish, 99-00. A.A.; Soc. Zool; Ecol. Soc; Soc. Mammal; Am. Geog. Soc; Micros. Soc; Mont. Acad. (pres, 01-04); Am. Bison. Soc. Limnobiology of Flathead Lake; studies in Odonata; conchology of Montana; butterflies of Montana; mountain lakes.
- Elsberg, Dr. C(harles) A**, 64 E. 58th St, New York, N. Y. *Surgery*. New York, Aug. 24, 71. A.B, Col. City of N. Y, 90; M.D, Columbia, 93. Asst. pathologist, *Mt. Sinai Hosp, N. Y*, 95-98, adj. surgeon, 99-05, *attending surgeon*, 05- Surgeon, N. Y. Neur. Inst; consulting neurosurgeon, Montefiore Home and Hosp, N. Y. City; neur. surgeon, Gen. Hosp. No. 1, U.S.A. A.A.; Soc. Exp. Biol; Am. Med. Ass; Neur. Ass; Col. Surg; N. Y. Acad. Med. Surgery of the heart; pneumothorax; skin reactions in cancer; etiology of hemorrhage in jaundice; anesthesia by intratracheal insufflation; surgery of the brain and spinal cord; finer anatomy and physiology of the peripheral nerves.
- Elser, Prof. William J(ames)**, Cornell Medical College, New York, N. Y. *Pathology*. Milwaukee, Wis, Nov. 28, 72. M.D, Bellevue Med. Col, 95; Berlin, 97-98; Vienna, 98-01; Graz, 01. Asst. pathologist, *N. Y. Hosp*, 03-05, *director, path. laboratories*, 05-; instr. *bacter. med. col, Cornell*, 01-06, asst. prof, 06-09, *prof*, 09- Asst. director, div. laboratories and infectious diseases, A. E. F, 17-18. Ass. Path. and Bact; Soc. Exp. Biol; Ass. Immunol; Soc. Serol. and Hematol; Harvey Soc. Meningitis; super immunization.

- Elsey, Prof. H(oward) M(cKee)**, 1724 Mississippi St, Lawrence, Kans. *Physical chemistry*. Seattle, Wash, Jan. 25, 91. A.B, Stanford, 14, A.M, 15; Ph.D, 19. Teaching fellow, Stanford, 17-18; *asst. prof. chem, Kansas*, 18- A.A; Chem. Soc; Kans. Acad. The alkyl amines as electrolytic solvents; the hypothetical gas coronium.
- Elting, Dr. Arthur Wells**, 119 Washington Ave, Albany, N. Y. *Surgery*. South Cairo, N. Y, Oct. 6, 72. A.B, Yale, 94; M.D, Hopkins, 98. Surgeon, Albany Hosp; chief surgeon, Childs Hosp; *prof. surg, Albany Med. Col*, 11- Am. Med. Soc; Surg. Ass.
- Elvove, Dr. Elias**, U. S. Public Health Service, Washington, D. C. *Chemistry*. Russia, March 31, 83. B.S, Kentucky, 03, fellow, 03-04, M.S, 04; Phar.D, George Washington, 10, Ph.D, 20. Research chemist, Int. Metal Savings Co, 04-07; *chemist, U. S. Pub. Health Service*, 07- Chem. Soc. Biological, pharmaceutical and sanitary chemistry.
- Ely, Prof. C(harles) R(ussell)**, Gallaudet College, Washington, D. C. *Entomology, Chemistry*. Columbus, Ohio, Feb. 20, 70. A.B, Yale, 91, A.M, 97; A.M, Gallaudet, 92; Ph.D, George Washington, 00. Instr. *nat. science, Gallaudet*, 92-96, *asst. prof*, 96-99, *prof*, 99-12, 13- Principal, Md. Sch. for Deaf, 12-13. A.A; Entom. Soc; Chem. Soc; Wash. Entom. Soc; Am. Instruction of the Deaf. Deliquescence; new species; Microlepidoptera; Gracilariidae.
- Ely, Prof. Leonard W(heeler)**, Lane Hospital, San Francisco, Calif. *Medicine*. Brooklyn, N. Y, Nov. 28, 68. A.B, Columbia, 89, M.D, 95. *Assoc. prof. surg, Stanford*, 13- Am. Med. Ass; Orthop. Soc. Joint tuberculosis; anatomy; physiology and pathology of bones and joints.
- Embody, Dr. G(eorge) C(harles)**, Cornell University, Ithaca, N. Y. *Zoology*. Auburn, N. Y, Nov. 23, 76. B.S, Colgate, 00, M.S, 01; Hopkins, 06-07; Cornell, 08-10, Ph.D, 10. Teacher science, Del. Literary Inst, 01-02; high sch, Bradford, Pa, 02-03; *prof. nat. science, Bethel*, 03-06; *biol, Randolph-Macon*, 07-08; *instr. vert. zool, Cornell*, 09-10; *prof. biol, Butler*, 10-11; *instr. aquiculture, Cornell*, 11-12, *asst. prof*, 12-20, *prof*, 20- Field biologist, N. Y. State Conservation Commission, 18-19; consulting biologist, N. J. Fish and Game Commission, 19. Prize, Fisheries Soc, 18. A.A; Fisheries Soc; Ecol. Soc. Limnology of streams; ecology of fishes; pond fertilization; trout foods; selective breeding of fishes.
- Emch, Dr. Arnold**, University of Illinois, Urbana, Ill. **Mathematics*. Gossliwil, Switzerland, March 24, 71. Cantonal Col, Solothurn, 86-90; Polytech, Zürich, 90-93; Ph.D, Kansas, 95. *Asst. prof. graphics, Kansas*, 95-97; *prof. math, Technicum, Biel, Switzerland*, 97-99; *graphic math, Kansas State*, 99-00; *asst. prof. pure and applied math, Colorado*, 00-03, *prof. graphics and math*, 03-05; *math, Cantonal Col, Solothurn*, 05-10; *Obere Realschule, Basel*, 10-11; *asst. prof, Illinois*, 11-19, *assoc. prof*, 19- A.A; Math. Soc; Ass. Prof; Swiss Alpine Club; Zürich Gesell. chemaliger Polytech; Schweiz Naturforsch. Gesell; Verein Schweiz. Math; Circolo Mat. di Palermo. Problems of closure; transformations realized by linkages; stresses corresponding to transformations in a plane; linkages for many valued functions; applications of elliptic functions; projective geometry; algebraic curves and surfaces.
- Emerson, Prof. B(enjamin) K(endall)**, 529 W. 11th St, New York, N. Y. **Geology*. Nashua, N. H, Dec. 20, 43. A.B, Amherst, 65; Ph.D, Göttingen, 69. *Prof. geol, Amherst*, 70-17, *emer. prof*, 17-; *prof, Smith*, 79-12. *Asst. geologist, U. S. Geol. Surv*, 83-06, *geologist*, 06-20. Int. Geol. Cong, St. Petersburg, 97 (v. pres). A.A. (v. pres, 96); Geol. Soc. (pres, 99); Philos. Soc; fel. Am. Acad; Wash. Acad; Geol. Gesell. Crystalline rocks of central and western Massachusetts; Connecticut Valley surface and Triassic geology; geology of old Hampshire County; geology of Massachusetts and Rhode Island.
- Emerson, Dean Charles F(ranklin)**, Dartmouth College, Hanover, N. H. *Physics, Astronomy*. Chelmsford, Mass, Sept. 28, 43. A.B, Dartmouth, 68, A.M, 71. Instr. N. H. Col, 68-74; tutor math, *Dartmouth*, 68-72, *assoc. prof. nat. philos. and math*, 72-78, *instr. astron*, 77-92, *Appleton prof. nat. philos*, 78-99, *dean of faculty*, 93-13, *emer. dean*, 13- A.A.
- Emerson, Prof. Charles P(hillips)**, 3177 N. Pennsylvania St, Indianapolis, Ind. *Medicine*. Methuen, Mass, Sept. 4, 72. A.B, Amherst, 94; M.D, Hopkins, 99. *Assoc. med, Hopkins*, 04-08; *med. res, Hopkins Hosp*, 04-08; *asst. prof. med, Cornell*, 08-09; *supt, Clifton Springs Sanitarium*, 08-11; *prof. med. and dean, med. faculty, Indiana*, 11- Am. Physicians; Am. Med. Ass. Internal medicine; clinical diagnosis.
- Emerson, Harrington**, 125 Riverside Drive, New York, N. Y. *Engineering*. Trenton, N. J, Aug. 2, 53. Royal Bavarian Polytech; Athens, Greece; A.M, Lafayette, 79. Head, dept. modern lang, Nebraska, 76-82; in business, 83-96; counselor to executives of corporations, 96-07; engineer, Am. Locomotive Co, 07; *pres, Emerson Co. and director, Emerson Engineers*, 07-Mech. Eng; Illum. Eng. Soc; Electrochem. Soc; Inst. Metals; Franklin Inst; Elec. Ry. Ass; Foundrymen's Ass; Econ. Ass; Labor Legis. Ass; Wood Preservers Ass; Soc. des Ing. civils de France. Irrigation; transportation; efficiency.
- Emerson, Dr. Haven**, 120 E. 62d St, New York, N. Y. *Medicine*. New York, Oct. 19, 74. A.B, Harvard, 96; A.M, M.D, Columbia, 99. Intern, Bellevue Hosp, 99-01; demonstrator physiol, Columbia, 02-10, *asst. med*, 06-10; visiting physician, Seton Hosp, 05-09; *asst. visiting physician, Bellevue Hosp*, 09-14; *sanit. supt. and deputy commissioner, Dept. Health, N. Y. City*, 14-15; commissioner of health and pres, Board of Health, 15-17; major, lieut. col. and col, M. C, 18-19; *prof. hygiene and prev. med. med. col, Cornell*, 19-20; *med. adviser and asst. director, bur. war risk ins, Treas. Dept*, 20- Lecturer pub. health and prev. diseases, Teachers College, Columbia, 16-17, 19- Chevalier Légion d'honneur; silver medal, Epidemics, France, 19; Harsen prize, Col. Physicians and Surg, Columbia, 01. Am. Physicians; Soc. Exp. Biol; Soc. Internal Med; Soc. Clin. Invest; Harvey Soc; N. Y. Acad. Med. Public health; social medicine; poliomyelitis.

- Emerson, Prof. Herbert W(illiam)**, Ann Arbor, Mich. *Physiological chemistry*. Milton, Ont, Oct. 6, 79. Ph.C, Michigan, 01, B.S, 02, M.D, 15. Instr. pharmacy, Kansas, 03-06, *asst. prof. hygiene and director, Pasteur Inst, Michigan*, 19- A.A.; Chem. Soc; Am. Med. Ass; Pub. Health Ass; Mich. Acad. (v. pres, 16). Peroxids; separation of by-products from buttermilk; immunity and blood relationship; gelsemium and its alkaloids; color reaction of protein split products; botulism from ripe olives.
- Emerson, Dr. Paul**, Iowa State College, Ames, Iowa. *Agronomy*. Wilmington, Del, July 6, 87. B.S, Delaware, 14, M.S, 15; Ph.D, Iowa State, 17. Soil bacteriologist, Md. Exp. Sta, 17-18; acting bacteriologist, Idaho and Exp. Sta, 18-19; *asst. prof. soils, and asst. chief soil chem. and bacter*, Iowa State, 19- A.A; Soc. Agron; Chem. Soc. Soil bacteriology.
- Emerson, Prof. R(ollins) A(dams)**, Cornell University, Ithaca, N. Y. **Genetics*. Pillar Point, N. Y, May 5, 73. B.S, Nebraska, 97, LL.D, 17; Sc.D, Harvard, 13. Horticulturist, office of exp. stations, U. S. Dept. Agr, 97-98; *asst. prof. hort*, Nebraska, 99-04, *prof*, 05-14; *plant breeding, Cornell*, 14- A.A.; Soc. Nat. (v. pres, 15); Bot. Soc. Heredity in Zea mays and Phaseolus vulgaris.
- Emerson, Prof. W(illiam) H(enry)**, Georgia School of Technology, Atlanta, Ga. *Chemistry*. Tunnel Hill, Ga, June 14, 60. Grad, U. S. Naval Acad, 80; fellow, Hopkins, 85-86, Ph.D, 86. Ensign, U. S. Navy, 82-84; *prof. chem*, S. C. Mil. Acad, 86-88; *Ga. Tech*, 88-, *dean*, 09- Chem. Soc. (past pres, Ga. sect); Chem. Gesell. Mineral and organic chemistry; oxidation of organic compounds; corundum; marbles; coal; stearic and palmitic acids.
- Emerton, James H**, 30 Ipswich St, Boston, Mass. **Zoology*. Salem, Mass, 47. Illustrator of zool. publications; constructed zool. and anat. models for various museums. A.A; Ecol. Soc; Soc. Nat; Entom. Soc; New Eng. Fed. Nat. Hist. Soc. (sec'y, 07-09). Structure and habits of spiders; common spiders of the United States; New England spiders.
- Emery, A(lbert) H(amilton)**, 788 Main St, Stamford, Conn. *Engineering*. Mexico, N. Y, June 21, 34. C.E, Rensselaer, 58. Railway surveying, 54-55; draftsman for Gen. Delafield, N. Y. State and Harbor Defenses, 61-62; *designer and builder, First Nat. Chem. Works of N. J*, 65- Designer and builder of testing machines, 72-86; consulting engineer, West End St. R. R, Boston, 92. Grand medal of honor and gold medal, Mass. Charitable Mech. Ass. A.A; Mech. Eng; Soc. Test. Mat. Ordnance; projectiles; gun carriages; hydraulic presses; scales; gages and testing machines; car-dynamometers; leakage and friction of unpacked pistons; large testing machines; hydraulic radial expansion gun construction.
- Emery, Dr. W(illiam) O(rrin)**, 2232 Cathedral Ave, N. W, Washington, D. C. *Chemistry*. Vernon, Vt, March 29, 63. B.S, Worcester, 85; Ph.D, Erlangen, 88. Instr. chem, Bonn, 87-92, privatdocent, 91-95; *prof. chem*, Wabash, 95-01; *chief, synthetic products lab, bur. chem*, U. S. Dept. Agr, 08- A.A; Chem. Soc; Wash. Acad. Synthetic organic chemistry; methods for detection and determination of synthetic drugs in medicine.
- Emery, Dr. Wilson B(arton)**, Ohio Oil Co, Casper, Wyo. *Geology*. Philadelphia, Pa, March 21, 90. A.B, Yale, 11, Ph.D, 14. Geol. aid, U. S. Geol. Surv, 14, *asst. geologist*, 14-17, *assoc. geologist*, 17-19; *geologist, Ohio Oil Co*, 19- Geol. Soc; Min. Eng. Geology of oil and gas.
- Emig, W(illiam) H(arrison)**, University of Pittsburgh, Pittsburgh, Pa. *Biology*. Coulterville, Ill, Dec. 21, 88. A.B, Washington (St. Louis), 11, Lackland research fellow, 11-14, Ph.D, 15. Lackland teaching fellow, Washington (St. Louis), 13; *instr. biol*, Oklahoma, 14-16; *asst. prof. bot, Pittsburgh*, 16- A.A; Bot. Soc. Pathogenic yeastlike organisms; bryophytes and travertine deposits of the southwestern United States.
- Emmel, Dr. V(ictor) E(manuel)**, University of California, Berkeley, Calif. **Anatomy, Histology, Embryology*. Valley Falls, Kans, June 17, 78. B.S, Pacific (Oregon), 03, M.S, 04; Ph.D, Brown, 07; Strasbourg, 11. Instr. biol, Pacific (Oregon), 03-04; *asst. embryol. and neur*, Brown, 04-07; Austin teaching fellow anat, Harvard Med. Sch, 07-08; *instr. histol. and embryol*, Washington (St. Louis), 08-10, *assoc. prof. gross and topog. anat*, 14-16; *asst. prof. and assoc. prof. gross anat*, Illinois, 16-19; *anat, California*, 19- Biologist, R. I. Commission of Inland Fisheries, 04-07. A.A; Ass. Anat; St. Louis Biol. Soc. (pres, 14); Anat. Gesell. Origin of non-nucleated erythrocytes; morphological relations of chorda tympani; histogenesis and regulation in regeneration; hematological activities in embryonic coelomic cavities and dorsal aorta; sickle-shaped erythrocytes; coagulation in foetal blood; plastids; blood of lungless Amphibia; blood in mammals; B N A as an outline of regional and systematic anatomy.
- Emmet, W(illiam) L(e) R(oy)**, 48 Washington Ave, Schenectady, N. Y. *Electrical engineering*. Pelham, N. Y, July 10, 59. Grad, U. S. Naval Acad, 81; hon. Sc.D, Union, 10. *Engineer, lighting dept, Gen. Elec. Co*, 95- Gold medal for vertical shaft steam turbine, La. Purchase Expos, 04; gold medal for elec. ship propulsion, Panama-Pacific Expos; Edison medal, 19. Elec. Eng; Mech. Eng; Naval Archit; Naval Eng; Philos. Soc. Steam turbines; propulsion of ships by electricity.
- Emmett, Dr. A(rthur) D(onaldson)**, Parke, Davis and Co, Detroit, Mich. *Biological chemistry*. Lee, Ill, Dec. 19, 79. B.S, Illinois, 01, A.M, 05; Columbia, 06-07, Ph.D, 15. *Asst. chemist*, Ill. State Water Surv, 01-02; Armour and Co, 02-03; research chemist, Illinois, 03-06, *assoc. chief animal nutrition*, 08-15; *instr. biol. chem*, Columbia, 15-16; *nutrition chemist, med. research dept, Parke, Davis and Co*, 16- A.A; Chem. Soc; Soc. Biol. Chem. Chemistry of flesh; animal nutrition; fatigue; vitamins and proteins in growth.
- Emmons, C(lyde) W(ilbur)**, Indianola, Iowa. *Mathematics*. Byron Center, Mich, June 6, 81.

- A.B, Albion, 03; A.M, Illinois, 09, 09-10. Instr. math, Albion, 03-05; asst. Illinois, 05-10; *prof.*, Simpson, 10- Math. Soc.
- Emmons, Prof. William (Harvey)**, University of Minnesota, Minneapolis, Minn. **Geology*. Mexico, Mo, Feb. 1, 76. A.B, Central (Mo), 97; fellow, Chicago, 01-02, Ph.D, 04. Research asst. geol, Chicago, 03-04; aid, U. S. Geol. Surv, 04-06; lecturer ore deposits, Chicago, 07, petrol, 08, asst. prof. petrol. and econ. geol, 08-09, assoc. prof. econ. geol, 09-11; *prof. geol. and head of dept.*, Minnesota, 11-; *director*, State Geol. Surv, 11- Assoc. ed, 'Jour. Geol'; asst. geologist, U. S. Geol. Surv, 06-09, geologist, 09-15. A.A; Geol. Soc; Min. Eng; Wash. Geol. Soc; Wash. Acad. Ore deposits of various mining districts in Nevada, Montana, Colorado, Maine and New Hampshire; genetic classification of minerals; outcrops of ore bodies; superficial alteration and secondary enrichment of gold deposits of the United States; regionally metamorphosed ore deposits and the segregated veins; principles of economic geology; petroleum geology; enrichment of ore deposits.
- Enders, Prof. Howard E(dwin)**, 107 Fowler Ave, West Lafayette, Ind. *Zoology*. Enders, Pa, June 18, 77. B.S, Lebanon Valley, 97, M.S, 00; B.S, Michigan, 98; Harvard, summer, 02; Ph.D, Hopkins, 06. Science teacher, Hulst High Sch, Iron Mountain, Mich, 98-00; *prof. biol. sciences*, Lebanon Valley, 00-03; *instr. asst. prof.*, and *assoc. prof. zool.*, Purdue, 06-15, *prof.*, 15- Prof. zool, Indiana, summers, 11-15; Hopkins, 16-; lecturer physiol, St. Elizabeth Hosp, La Fayette, 15-; field asst, Mich. Geol. Surv, 99; investigator, U. S. Fisheries Lab, Beaufort, N. C, summers, 03-08. A.A; Soc. Zool; Ass. Prof; fel. Ind. Acad. (sec'y, 15-). Morphology of Annelata; food of fledgling birds; commensalism; parasitology.
- Endsley, Louis E(ugene)**, University of Pittsburgh, Pittsburgh, Pa. *Railway engineering*. Wayne Co, Ind, Sept. 9, 79. B.S, Purdue, 01, M.E, 03. Instr, locomotive lab, Purdue, 02-06, *assoc. prof. railway mech. eng.*, 06-12, *prof.*, 12-14; *Pittsburgh, 14-* Trustee, Franklin, 09-14; in charge, Master Car Builders Lab, Purdue, 06-14. A.A; Mech. Eng; Eng. Educ; Master Car Builders (chairman, draft gear committee); Master Mech. Ass. (mem. locomotive testing committee); West. Ry. Club; Pittsburgh Ry. Club. Friction of freight car trucks; locomotive efficiency.
- Engberg, Prof. C(arl) C(hristian)**, Station A, Lincoln, Nebr. *Mathematics*. Hyttön, Sweden, Nov. 13, 72. B.S, Nebraska, 95, A.M, 97, Ph.D, 99. Instr. math, Nebraska, 00-03, *adj. prof.*, 03-04, *asst. prof.*, 04-07, *prof. applied math.*, 07-, *exec. dean*, 13- Statistics; biometry; the Cartesian oval; evolutes; a new transformation.
- Engelder, Dr. Carl J(ohn)**, University of Pittsburgh, Pittsburgh, Pa. *Chemistry*. Punxsutawney, Pa, Jan. 11, 90. A.B, Cornell, 13, B.Chem, 14, Ph.D, 17. Asst. instr. chem, Cornell, 13-17; instr. fuel technol, Illinois, 17; research chemist, nitrate div, ordnance dept, U.S.A, 18; *asst. prof. anal. chem.*, Pittsburgh, 21- Chem. Soc. Gas analysis; catalysis; petroleum.
- Engelhardt, Dr. F(rancis) E(rnest)**, 504 City Hall, Syracuse, N. Y. *Chemistry*. Gieboldehausen, Germany, June 23, 35. Göttingen, 54-57; hon. Ph.D, St. Francis Xavier, 64. Asst. chem, Amherst, 57-58; chemist, Philadelphia, 58-60; asst. chem, Columbia, 60-61; *prof.*, St. Francis Xavier, 61-67; mat. med, N. Y. Col. Pharmacy, 67-68; *practising chemist*, Syracuse, 69- Chemist for state salines, 70-90; city chemist and milk inspector, Syracuse, 76-; expert, beer, wine and liquors, N. Y. State Board of Health. A.A; Chem. Soc. (v. pres. Syracuse sect); cor. mem. N. Y. Acad. Salt; petroleum; liquors; beers; salt manufacture in United States and Canada.
- Engelhardt, Geo(rge) P(aul)**, Brooklyn Museum, Eastern Parkway, Brooklyn, N. Y. *Zoology*. Hannover, Germany, Nov. 23, 71. Gymnasium, Baden Baden, 86. Asst. curator, Children's Museum, Brooklyn, 02-13; *curator invertebrates*, Brooklyn Museum, 13- In charge zool. expeditions to southwest. Utah, 04, 17; Guatemala, 08; Newfoundland and Labrador, 12; Bahamas, 14; Pacific Coast of the U. S, 16. A.A; Soc. Ichthyol. and Herp; N. Y. Entom. Soc; Brooklyn Inst. (sec'y, dept. zool, 12-19); Brooklyn Entom. Soc. Marine invertebrates; metamorphosis of the amphibians of Long Island; Aegeriidae of North America.
- Enger, Prof. Melvin L(orenus)**, University of Illinois, Urbana, Ill. *Hydraulics*. Decorah, Iowa, May 5, 81. B.S, Illinois, 06, C.E, 11, M.S, 16. Instrument man, C. M. and St. P. Ry, 06-07; instr. theoret. and applied mech, Illinois, 07-09, *assoc.*, 09-11, *asst. prof.*, 11-17, *assoc. prof.*, 17-18, *prof. mech. and hydraul.*, 18- Water Works Ass; Eng. Educ. Resistance to flow through locomotive water columns; penstock design; air inlet valves for hydraulic pipe lines; transmission of pressure in granular materials.
- Engerrand, Prof. George**, University of Texas, Austin, Tex. *Archeology*. Geology. France. B.S, 95; grad. geol, State Univ, France, 97, bot, 98; A.M, Mississippi, 20. Prof. geol, Geog. Inst. of Brussels, 98-05; geologist, Belgian Geol. Surv, 01-07; *prof. prehist. archeol.*, Ecole des Hautes Etudes, Brussels, 01-03; chief geologist, Mex. Govt, 07-15; *prof. prehist. archeol.*, Mexico, 09-14; instr. geol, Mississippi, 19-20; *adj. prof. anthrop.*, Texas, 20- Director, Int. Sch. Am. Archeol. and Ethnol, 12-13. Geology and archeology of Mexico.
- Engle, Dr. Edgar W(allace)**, Lake Bluff, Ill. *Chemistry*. B.S, Drury, 12; M.S, Illinois, 14, Ph.D, 16. Inst. chem, Illinois, 16-17; *research chemist*, *Fansteel Products Co*, 17- Chem. Soc; Min. and Metal. Eng. Metallurgy; rare earths; rare metals.
- Engle, Prof. W(ilber) D(wight)**, 2233 S. Columbine St, Denver, Colo. *Chemistry*. Portland, Mich, Aug. 31, 70. A.B, Albion, 93, A.M, 94; Ph.D, Columbia, 98; hon. Sc.D, Denver. Asst. prof. chem, Albion, 94-95; *prof.*, Denver, 95-, *v. chancellor*, 17- Prof. chem, Denver and Gross Col. Med, 98-08. Chem. Soc; Electrochem. Soc; Colo. Sci. Soc; Denver Teknik Club; Chem. Gesell. Organic chemistry.
- Englis, Dr. D(uane) T(aylor)**, 211 Gregory St, Champaign, Ill. *Chemistry*. Eureka, Ill, April

- 29, 91. A.B., Eureka, 12; Ph.D., Illinois, 16. Instr. plant chem, *Illinois*, 16-17, *assoc.*, 18, *chem.*, 18- A.A.; Chem. Soc.; Ill. Acad. Plant chemistry; carbohydrates in plants.
- English, Geo(rge) L(etchworth)**, 50 Brighton St, Rochester, N. Y. *Mineralogy*. Philadelphia, Pa, June 14, 64. Grad, Friends' Cent. Sch, Phila, 81. Practising mineralogist, 87-03; expert, Nat. Light and Thorium Co, 03-13; *mineralogist*, *Ward's Nat. Science Estab.*, 13- Lecturer miner, Board of Educ, N. Y. City, 02-03; Brooklyn Inst. A.A.; N. Y. Acad; N. Y. Miner. Club; Brooklyn Inst; Phila. Acad; Rochester Acad. Penfieldite; graftedonite; pyroxmangite; skemmatite.
- English, Harry**, 2907 P St, N. W, Washington, D. C. *Mathematics*. Baltimore, Md, Dec. 3, 66. A.B., Hopkins, 86, 86-87; LL.B., George Washington, 90, LL.M., 91. *Head, dept. math, high schools*, *Washington, D. C.*, 87- Sec'y, Washington Board of Examiners of Teachers; mem. Int. Commission on Teaching of Mathematics. Math. Soc; Math. Ass; Ass. Teachers Math. Middle States and Md. Methods of teaching mathematics.
- English, Dr. Horace B(idwell)**, 10 Upland Road, Wellesley, Mass. *Psychology*. Eagle, Nebr, Oct. 1, 92. Nebraska, 09-11; B.A., Oxford, 14; Ph.D., Yale, 16. Asst. psychol, Yale, 14-16; instr. *philos. and psychol*, *Wellesley*, 16-17, 19-20, *asst. prof.*, 20- Lieut. and capt, Sanit. C. Psychol. Ass. Mental tests; thought processes.
- Engman, Dr. M(artin) F.**, Wall Building, St. Louis, Mo. *Medicine*. New Orleans, La, Aug. 20, 69. M.D., Col. City of N. Y. *Prof. clin. med.*, *Washington (St. Louis)*; chief of staff, *Barnard Free Skin and Cancer Hosp.* Am. Med. Ass; Dermat. Ass. (pres, 19). Skin diseases; syphilis; cancer.
- Enlows, Mrs. Ella M(organ Austin)**, 122 Willow Ave, Takoma Park, D. C. *Bacteriology*. St. George, W. Va, Aug. 21, 84. A.B., George Washington, 15, M.S., 16. Scientific asst, U. S. Dept. Agr, 10-17, asst pathologist, 17-18; *bacteriologist*, *hygienic lab*, *U. S. Pub. Health Service*, 18- Asst. chem, George Washington, 14-16. A.A.; Soc. Baet; Wash. Biol. Soc. Anti-streptococcus serum; plant pathology.
- Ennis, Prof. William D(uane)**, U. S. Naval Academy, Annapolis, Md. *Mechanical engineering*. Bergen Co, N. J, Jan. 6, 77. M.E., Stevens, 97; Pittsburgh, 98-00. Engineer, Am. Linseed Co, 02-04; Am. Locomotive Co, 05-07; prof. mech. eng, Brooklyn Polytech, 07-17; major, ordnance dept, 17-18; ordnance engineer, Watervliet Arsenal, and acting prof. *mech. eng.*, Columbia, 18-19; *prof.*, *U. S. Naval Acad.*, 19- Tech. adviser, claims board, War Dept, 19-20. A.A.; Mech. Eng; Eng. Educ. Factory administration; power engineering; power station operation; expressed oils; applied thermo-dynamics.
- Eno, Henry Lane**, Princeton, N. J. *Psychology*. New York, N. Y, July 8, 71. A.B., Yale, 94; LL.B., Columbia, 98. *Research assoc.*, *psychol.*, *Princeton*, 15- Ornithologist, Lafayette Nat. Park, 19- Psychol. Ass; Ornith. Union. Ornithology.
- Ensign, M(artin) R(ussell)**, Fayetteville, Ark. *Agriculture*. Brigham City, Utah, Nov. 24, 90. B.S., Utah Col, 12; Washington (St. Louis); M.S.A., Cornell, 17. Field asst, Utah Exp. Sta, 12; instr. agr. and biol, Boxelder High Sch, Utah, 14-16; asst. pathologist, cotton, forage and truck crop disease investigations, U. S. Dept. Agr, 18-19; *farmer*, 19-; *assoc. prof. agr. educ.*, *Arkansas*, 20- Field specialist, N. Y. State Food Commission, 17. Bot. Soc; Phytopath. Soc. Plant physiology and pathology.
- Eppley, Dr. Marion**, 12 Sheffield Ave, Newport, R. I. *Chemistry*. West Orange, N. J, June 19, 83. B.S., Princeton, 06, A.M., 12, Ph.D., 19. Partner, Robert Goodbody and Co, Bankers, 09-14; research worker, Princeton, 14-17. Mem. staff, 'Scientific American,' 07; lecturer chem, Princeton, 17; lieut. commander, N.R.F., 17-20, commander, 20- A.A.; Chem. Soc; Min. Eng; N. Y. Acad; N. Y. Miner. Club. Physical chemistry; standards of electromotive force; cadmium standard cells; Ostwald dilution law; theory of solutions.
- Epsteen, Dr. S(aul)**, First National Bank, La Jara, Colo. *Mathematics*. San Francisco, Calif, Aug. 10, 78. B.S., California, 00; Ph.D., Zürich, 01; Göttingen, 02. Assoc. math, Chicago, 02-05; instr, Colorado, 05-06, asst. prof, 06-10, head, dept. eng. math, 06-13; prof, 10-13; *insurance commissioner*, *Colo.*, 13- Ed, 'Am. Math. Monthly,' 03-05; assoc. ed, 'Sch. Sci. and Math,' 05- Math. Soc; Colo. Math. Soc. (pres, 09-). Differential equations; linear associative algebra; life insurance; rational integration of linear differential equations.
- Epstein, Dr. Albert A.**, 70 E. 83d St, New York, N. Y. *Biological chemistry*. Russia, July 4, 80. B.S., N. Y. Univ, 02, M.D., 05. *Assoc. attending physician and assoc. physiol. chemist*, *Mt. Sinai Hosp.*, N. Y. City, 11- A.A.; Soc. Biol. Chem; Soc. Exp. Biol; Soc. Clin. Invest; Chem. Soc; Am. Med. Ass. Metabolism.
- Erdmann, Prof. Charles A(ndrew)**, University of Minnesota, Minneapolis, Minn. *Anatomy*. Milwaukee, Wis, Aug. 3, 66. Ph.G, 87; M.D., 93. Instr. *anat.*, *Minnesota*, 93-95, asst. prof, 95-00, *prof.*, 00- A.A.; Asst. Anat. Articulations; peritoneum; pituitary body; lymphatic system.
- Erickson, E(mil) Theodore**, U. S. Geological Survey, Washington, D. C. *Chemistry*. Murray, Utah, Jan. 20, 87. A.B., Utah, 16, A.M., 17. Anal. chemist and electroanalyst, U. S. Smelting and Ref. Co, summers, 06-11, 12-16; *assoc. chemist*, *div. physical and chem. research*, *U. S. Geol. Surv.*, 18- Chem. Soc. Geochemistry; Utah hydrocarbons and oil shales; tests to detect oil and bitumen; origin of petroleum.
- Ericson, E(ric) J(ohn)**, 4954 Blackstone Ave, Chicago, Ill. *Chemistry*. Gustafsfors Bruk, Sweden, Feb. 3, 71. Grad, Filipstad's Sch. Mines, Sweden, 89. With various indust. companies, 90-05; chief chemist, Edgar Zinc Co, 05-16; chem. engineer, Pan-Am. Manganese Corp, 17-18; *chief chemist*, *Chicago div.*, *J. H. Williams Co.*, 19- Electrochem. Soc; Min. and Metal. Eng; Swedish Eng. Soc. Chicago. Determination of sulphur in steel; lead in ores; lead and cadmium in spelter; titanium in alloys;

fluorspar analysis; powdered coal application in zinc smelting.

Erikson, Prof. Henry A(nton), 424 Harvard St, S. E, Minneapolis, Minn. *Experimental physics*. Mt. Morris, Wis. B.E.E, Minnesota, 96, Ph.D, 07. Instr. science, high sch, Rochester, Minn, 96-97; *physics*, Minnesota, 97-05, asst. prof, 05-14, assoc. prof, 14-15, *prof. and chairman of dept*, 15- A.A.; Physical Soc. Physical measurements; ionization of gases at high pressure; rate of recombination of ions at different temperatures.

Erlanger, Dr. Joseph, Medical School, Washington University, St. Louis, Mo. **Physiology*. San Francisco, Calif, Jan. 5, 74. B.S, California, 95; M.D, Hopkins, 99, fellow, 00. Res. med. officer, Hopkins Hosp, 99-00, asst. *physiol*, Hopkins, 00-01, instr, 01-03, assoc, 03-04, assoc. prof, 04-06; *prof*, med. sch, Wisconsin, 06-10; *Washington (St. Louis)*, 10- A.A. (v. chairman, N, 20); Am. Physicians; Physiol. Soc. (mem. council, treas, 16-); Soc. Exp. Biol; hon. mem. Harvey Soc. Metabolism in dogs with shortened small intestines; clinical methods of determining blood pressure; influence of pulse pressure on renal secretion; mechanism of the circulation; heart-block in man and in mammals; vagus action on the ventricles; regeneration of heart tissue; venous pulse; mammalian heart strips.

Ernest, Dr. Tho(ma)s R, 20 W. Maple St, Chicago, Ill. *Chemistry*. Chicago, 79. A.B, Illinois, 07, A.M, 08, Ph.D, 10. *Chief chemist*, Nat. Oxygen Co, 18- Electrolytic production of hydrogen and oxygen; hydrogenation of oils.

Ernst, Dr. Harold C(larence), 8 Greenough Ave, Boston, Mass. **Bacteriology*. Cincinnati, Ohio, July 31, 56. A.B, Harvard, 76, M.D, 80, A.M, 84. Demonstrator *bacter*, Harvard Med. Sch, 85-89, instr, 89-91, asst. prof, 91-95, *prof*, 95-Ed, 'Jour. Med. Research.' Major, M. C. Chairman and visiting bacteriologist, visiting staff, Children's Hosp. Soc. Nat; Ass. Path. and Bact. (past sec'y, pres, 08); Soc. Bact; Am. Physicians; Am. Acad; Boston Soc. Med. Sci. (pres); etc. Tuberculosis; rabies; sup-puration; diphtheria; tuberculin and tuberculosis; ultraviolet photomicrography.

Erve, Prof. J(ohn) van de, Medical College, Charleston, S. C. *Physiology*. Willemstad, Netherlands, Sept. 30, 70. A.B, Hope, 95; A.M, Princeton, 97, B.D, M.S, Chicago, 10, M.D, Rush Med. Col, 11. Presb. minister, 97-11; *prof. physiol. and pharmacol*, Alabama, 11-13; *prof. and director*, dept. physiol. and pharmacol, and assoc. dean, sch. med, Marquette, 13-19; *prof. physiol*, Med. Col. of S. C, 19- Am. Med. Ass. Diastases in the blood; hunger movements of the stomach.

Erwin, Prof. A(rthur) T(homas), Iowa State College, Ames, Iowa. *Horticulture*. Fulton, Mo, Nov. 8, 74. Washington (St. Louis), 92-96; Missouri, 96-98; B.S, Arkansas, 00; M.S.A, Iowa State, 02. Asst. *hort*, Ark. Exp. Sta, 98-99; instr, Iowa State, 00-03, *assoc. prof*, 03-, chief, truck crop sect, Exp. Sta, 15- A.A.; Soc. Hort. Sci; fel. Iowa Acad. Vegetable crops.

Escott, Edward B(rind), 1019 S. East Ave, Oak Park, Ill. *Mathematics*. Grand Rapids, Mich,

May 24, 68. B.S, Michigan, 95; fellow, Chicago, 95-96, M.S, 96; Harvard, 96-97. Teacher, high sch, Sheboygan, Wis, 97-98; Grand Rapids, 98-00; instr. math, Michigan, 00-14; actuary, Kansas City Life Ins. Co, 14-19; *accountant*, 18- Am. Inst. Actuaries; Math. Soc. Theory of substitutions; theory of numbers; finite differences.

Eshner, Prof. Augustus A, 1019 Spruce St, Philadelphia, Pa. *Medicine*. Memphis, Tenn, Nov. 17, 62. A.B, Cent. High Sch, Phila, 79, A.M, 84; M.D, Jefferson Med. Col, 88. Prof. clin. med, Phila. Polyclinic, 95-18. Physician, Phila. Gen. Hosp; 96-14; asst. physician, Phila. Orthop. Hosp. and Infirmary for Nervous Diseases, 00-17; physician, Hosp. for Diseases of Lungs, 01-03; consulting physician, Mercy Hosp, Phila, 06- Lieut, cardiovascular tuber. board, M.R.C, 17. Am. Med. Ass; Phila. Col. Physicians. Clinical and physiological medicine.

Espino, Dr. Raf(ael) B, College of Agriculture, Los Baños, Laguna, P. I. *Botany*. Bataan, P. I, Oct. 24, 90. B. Agr, Univ. Philippines, 15; fellow, Hopkins, Ph.D, 19. Asst. bot, Univ. Philippines, 15-17, instr. *agron*, 19, asst. *prof*, 19- A.A; Bot. Soc. Agronomy; plant physiology; crop physiology; salt requirements of plants; influence of climate on development.

Essary, Prof. S(amuel) H(enry), University of Tennessee, Knoxville, Tenn. *Mycology*. Bluff, Tenn, Sept. 11, 70. B.S, Tennessee, 97, M.S, 07. Instr. science, La Grange, 99-02; Brenau, 02-04; bot, Tennessee, 04-08, asst. *prof*, 08-12, assoc. botanist, *Exp. Sta*, 12-19, *botanist*, 19- A.A; Phytopath. Soc. Anthracnose resistant red clover; wilt resistant tomatoes; *Lespedeza striata*; fusarium causing wilt of tomatoes.

Esselen, Dr. G(ustavus) J(ohn), Jr, 86 Walker Road, Swampscott, Mass. *Chemistry*. Roxbury, Mass, June 30, 88. A.B, Harvard, 09, A.M, 11, Ph.D, 12. Research chemist, Gen. Elec. Co, 12-14; asst. manager and later manager, Chem. Products Co, 14-18; *head, research dept*, A. D. Little, Inc, 18- Chem. Soc. Cellulose; higher fatty acids and their salts.

Essenberg, Mrs. C(hristine) E(lizabeth Adamson), Scripps Institution for Biological Research, La Jolla, Calif. *Zoology*. Livonia, Russia, April 6, 81. B.S, B.Ped, Valparaiso, 11; M.S, California, 14, Ph.D, 17. Teacher languages, Petrograd, Russia, 05-08; teacher, pub. sch, Payette, Idaho, 12-13; *zoologist and librarian*, Scripps Inst, California, 16- A.A; Micros. Soc; West. Soc. Nat. Aquatic Hemiptera; marine annelids; Desmopterus; Appendicularia.

Essex, Prof. Harry, Syracuse University, Syracuse, N. Y. *Chemistry*. Meadville, Pa, Nov. 2, 84. A.B, Cornell, 07; Ph.D, Göttingen, 14. Instr. chem, Kentucky, 07-10; head of dept, high sch, Salt Lake City, 10-11; research assoc, Mellon Inst, 14-18, *prof. chem*, Pittsburgh, 15-18; research chemist, E. I. duPont de Nemours and Co, 18-20; *prof. physical chem*, Syracuse, 20- Chem. Soc. Benzols; phenols; naphthalenes; chlorpentanes.

Essick, Dr. Charles Rhein, 520 Franklin St, Reading, Pa. *Anatomy*. Reading, Feb. 17, 83. A.B, Yale, 05; M.D, Hopkins, 09. Asst. anat, Hop-

- kins, 09-10, instr. 10-12, assoc. 12-14; *manager, lens grinding plant, Pa. Optical Co, 15-* Capt. M. C, 18-19. A.A.; Ass. Anat.; Chem. Soc. The nervous system.
- Essig, Prof. E(dward) O(liver)**, University of California, Berkeley, Calif. *Entomology*. Arcadia, Ind, Sept. 29, 84. B.S. Pomona, 09, M.S., 12. Hort. commissioner, Ventura Co, Calif, 10-11; sec'y, State Hort. Commission, Calif, 11-14; *asst. prof. entom, California, 14-* A.A.; Entom. Soc.; Ass. Econ. Entom.; Calif. Acad. Economic entomology; taxonomic and economic Aphididae and Coccidae.
- Esslinger, Dr. E(dwain) W(alter)**, 1413 Lee St, Charleston, W. Va. *Chemistry*. Danville, Ill, Sept. 19, 82. Ph.G, Purdue, 03; B.Ch.E, Michigan, 07; A.M, Hopkins, 12; Ph.D, Cincinnati, 19. Instr. chem, Cincinnati, 12-18; engineer in charge, bur. city tests, Cincinnati, 18-19; *chemist in charge, Rollin Chem. Corp, 19-* Chem. Soc. Urazols; bromination of benzene; barium.
- Estabrook, Dr. Arthur H(oward)**, Cold Spring Harbor, N. Y. *Biology*. Leicester, Mass, May 9, 85. A.B, Clark, 05, A.M, 06, fellow, 06-07; Ph.D, Hopkins, 10; N. Y. Sch. Philanthropy, 14. Asst. zool, Clark, 06-07; *in eugenics record office, Carnegie Institution, 10-* Investigator, Ind. Committee on Mental Defectives, 17-18; lieutenant, Sanit. C, 18. A.A.; Soc. Nat.; Eugenics Research Ass. (director, 10-); hon. mem. Soc. Bird Restoration; Ind. Acad. Zoology; botany; heredity; eugenics.
- Estabrook, E(dward) L(ewis)**, Midwest Refining Co, Casper, Wyo. *Geology*. Brandon, S. Dak, May 10, 85. E.M, Pittsburgh, 11. Instr. geol, Lehigh, 11-13; geol. and surveying, State Mining Sch, Platteville, Wis, 13-14; *geologist, Standard Oil Co. of N. Y, 14-16*; Wis. Zinc Co, 16-17; Johnson and Huntley, 17-18; *Midwest Ref. Co, 18-* Min. and Metal. Eng.
- Estabrook, Leon M(oyer)**, 1026 17th St, N. W, Washington, D. C. *Statistics*. Rockford, Ill, March 24, 69. A.B, Georgetown, 93, LL.B, 96; Berlitz Sch. of Languages; Corcoran Sci. Sch, George Washington. Stenographer and clerk, War Dept, 93; mem. congressional commission to investigate business methods, 93-95; clerk, War Dept, 95-03; stenographer, bur. plant industry, U. S. Dept. Agr, 04-05, officer in charge of records, 05-09, chief, office seed distribution, 09-13, chief clerk, U. S. Dept. Agr, 13, *statistician and chief, bur. statist. and crop estimates, 13-* Chairman, committee on finance and business methods, U. S. Dept. Agr; delegate at large, World Cotton Convention, New Orleans, 19. Statist. Ass; Econ. Ass. Statistics of agriculture; crop and live stock estimation.
- Estabrooke, Prof. W(illiam) L(udlow)**, College of the City of New York, New York, N. Y. *Chemistry*. New York, April 15, 76. A.B, New Brunswick, 00, A.M, 03, Ph.D, 05; Harvard, 01. Teacher, pub. schools, N. B. Can, 94-95; *asst. chem, Harvard, 00-01*; teacher, Kingston Acad, 01-04; high sch, Yonkers, N. Y, 04-08; *prof, Col. City of N. Y, 08-* Lecturer chem, N. Y. City Board of Educ, 07-; *prof. lab. organization, Columbia, 17.* A.A.; Chem. Soc.; N. Y. Chemists Club; N. Y. Chem. Teachers Club
- (pres, 15). Food gelatin; soya bean casein; gas masks; iron, steel, and cement.
- Esten, Prof. W(illiam) M(errill)**, Storrs, Conn. *Bacteriology*. Glendale, R. I, Aug. 27, 62. B.S, Wesleyan, 94, M.S, 96. Asst. biol, Wesleyan, 94-06; dairy bacteriologist, Storrs Exp. Sta, 01-16; *prof. bacter, Conn. Col, 06-* Instr. histol, summer sch, Brooklyn Inst, 95; *prof. biol, Chautauqua, 97-98.* Special agent, exp. sta. div, U. S. Dept. Agr, Columbian Expos, 93; investigator, Rockefeller Inst. Soc. Bact; Middletown Sci. Ass. (sec'y, 01-06). Soil bacteria; application of fixation of nitrogen by bacteria; use of insoluble phosphates with bacteria in place of soluble.
- Esterly, Prof. C(alvin) O(lin)**, Occidental College, Los Angeles, Calif. *Zoology*. Fort Stockton, Tex, Aug. 1, 79. A.B, California, 02, A.M, 04; Le Conte fellow of California, Harvard, 04-05, Ph.D, 07. Asst. zool, California, 02-04, 05-06; Harvard, 06-07; *prof. biol, Occidental, 07-*; *biologist, Scripps Inst, California, 10-* A.A.; Soc. Zool; Ecol. Soc; Cooper Ornith. Club; Micros. Soc. (v. pres, 19); West. Soc. Nat. Taxonomy, histology of sense organs and reactions of Copepoda; distribution and movements of marine invertebrates.
- Estes, Dr. W(illiam) L(awrence), Jr**, Bethlehem, Pa. *Medicine*. South Bethlehem, Pa, March 1, 85. A.B, Lehigh, 05; M.D, Hopkins, 09. Intern, Hopkins Hosp, 09-10; *asst, Mayo Clinic, Rochester, Minn, 10-12*; chief of staff, *St. Luke's Hosp, 12-18, senior adj. surgeon, 20-*; *med. adviser, Lehigh, 13-* A.A.; Col. Surg; Am. Med. Ass; Am. Acad. Med. (asst. sec'y, 13-15).
- Esty, Dr. James Russell**, 623 Varnum St, Washington, D. C. *Bacteriology*. Slatersville, R. I, March 22, 93. B.S, R. I, Col, 14; M.S, Brown, 15, Ph.D, 18. Instr. bacter, Brown, 14-16; bacteriologist, milk dept, Providence, R. I, 16-17, chemist, 17-19; *bacteriologist, Nat. Cannery Ass, 19-* Bacteriology of canned foods; thermophilic organisms; biology of *Clostridium welchii*.
- Esty, Prof. T(homas) C(ushing)**, Amherst College, Amherst, Mass. *Mathematics*. Amherst, Dec. 8, 70. A.B, Amherst, 93, A.M, 97. Instr. math. and drawing, Case, 94-95; *math, Amherst, 95-98, 99-01*; *prof, Rochester, 01-04*; *Amherst, 1904-, acting dean, 20-* A.A.; Math. Soc.
- Esty, Prof. William**, 55 W. Market St, Bethlehem, Pa. *Electrical engineering*. Amherst, Mass, July 9, 68. A.B, Amherst, 89, A.M, 93; B.S, Mass. Inst. Tech, 93. Elec. engineer, Thomson-Houston Elec. Co, 92-93; *instr. elec. eng, Illinois, 93-95, asst. prof, 95-98, assoc. prof, 98-01*; *asst. prof, Lehigh, 01-03, prof, 03-* A.A.; Elec. Eng; Eng. Educ. Dynamo electric machinery; resistance of insulating materials; electromagnets; regulation of alternators.
- Etchererry, Prof. Bernard Alfred**, 2598 Buena Vista Way, Berkeley, Calif. *Civil engineering*. San Diego, Calif, June 30, 81. B.S, California, 02. Assoc. prof. civil eng, Nevada, 03-05; *prof. irrig. eng, California, 05-* Consulting engineer, Calif. and B. C. Civil Eng. Irrigation engineering practise and drainage.

- Etheridge, Prof. W(illiam) C(arlyle)**, University of Missouri, Columbia, Mo. *Agronomy*. Roanoke Isl, N. C, June 30, 85. B.Agr. N. C. Col, 06; M.S., Cornell, 12, Ph.D., 15. Asst. and later assoc. agronomist, N. C. Exp. Sta, 06-11; asst. farm crops, Cornell, 11-15; *prof. agron*, Florida, 15-16; *field crops*, Missouri, 15- Field crops.
- Ettlinger, Prof. H(yman) J(oseph)**, 2910 Harris Park Ave, Austin, Tex. *Mathematics*. St. Louis, Mo, Aug. 30, 89. A.B., Washington (St. Louis), 10; A.M., Harvard, 11, Ph.D., 20; Chicago, summer, 17. *Adj. prof. math*, Texas, 13- Math. Soc. Applied mathematics; boundary values.
- Eustis, Dr. F(rederic) A.**, 131 State St, Boston, Mass. *Metallurgy*. Milton, Mass, Oct. 7, 77. Mass. Inst. Tech; A.B., Harvard, 01, A.M., 02, M.S., 03, Sc.D., 15. *Practising metallurgist*, 03- With U. S. Shipping Board, 17-18. Min. and Metal. Eng. Wet metallurgy of iron ores; washing of smelter smoke.
- Evans, Dr. Alexander W(illiam)**, Osborn Botanical Laboratory, New Haven, Conn. **Botany*. Buffalo, N. Y, May 17, 68. Ph.B., Yale, 90, M.D., 92, Ph.D., 99. Instr. bot, Yale, 95-01, asst. prof, 01-06, *Eaton prof*, Sheffield Sci. Sch, 06- A.A.; Soc. Nat; Bot. Soc. (v. pres, 11); Am. Acad; Conn. Acad. (sec'y, 97-03); Torrey Bot. Club (assoc. ed, 07-14, ed, 14-). Hepaticae.
- Evans, Dr. Arthur T(hompson)**, South Dakota State College, Brookings, S. Dak. *Botany*. Wellington, Ill, May 22, 88. A.B., Illinois, 12; M.S., Colorado, 15; fellow, Chicago, 17-18, Ph.D., 18. Principal, high sch, Wakefield, Mich, 12-14; instr. bot, Colorado, 14-17; asst. pathologist, bur. plant indust, U. S. Dept. Agr, 18-19; prof. biol, Huron, 19-20; *assoc. prof. agron*, S. Dak. Col. and *assoc. Exp. Sta*, 20- A.A.; Ecol. Soc; Phytopath. Soc. Morphology; cytology; ecology; pathology; agronomy.
- Evans, Prof. C(laude) M(axey)**, Agricultural and Mechanical College of Texas, College Station, Tex. *Agriculture*. Aledo, Tex, April 27, 84. B.S., Tex. Col, 08; M.S., Iowa State, 09. Asst. animal husbandry, Tex. Col, 07-08; Iowa State, 08-09; director agr, Lenox, 09-10; supt, agr. exten, Tex. Col, 10-14; ed, 'South. Farm and Dairy Magazine,' 14-15; *in charge live stock and dairy exten*, Texas Col, 15-
- Evans, Prof. Griffith C(onrad)**, Rice Institute, Houston, Tex. **Mathematics*. Boston, Mass, May 11, 87. A.B., Harvard, 07, A.M., 08, Ph.D., 10. Sheldon fellow, Harvard, at Rome, 10-12; instr. math, Harvard, 09-10; asst. prof. *pure math*, Rice Inst, 12-16, *prof*, 16- Math. Soc; Circolo Mat. di Palermo. Differential, integral and integro-differential equations; Kirchhoff's law.
- Evans, Dr. H(enry) B(rown)**, University of Pennsylvania, Philadelphia, Pa. *Mathematics*. Dayton, Ohio, July 2, 71. M.E., Lehigh, 93; Ph.D., Pennsylvania, 01. Instr. math. and astron, Lehigh, 94-95; Pennsylvania, 95-01; asst, 'Nautical Almanac,' 01-04; asst. prof. *math*, Pennsylvania, 04-11, *prof*, 11-, dean, Towne Sci. Sch, 18-19. A.A.; Math. Soc; Astron. Soc; Eng. Educ.
- Evans, Prof. Herbert M(cLean)**, University of California, Berkeley, Calif. **Anatomy*. Modesto, Calif, Sept. 23, 82. B.S., California, 04; M.D., Hopkins, 08. Asst. instr, assoc, and assoc. prof. *anat*, Hopkins, 08-15; *prof*, California, 15- Research assoc, Carnegie Institution, 13-15. Ass. Anat; Soc. Nat; Am. Med. Ass; Soc. Exp. Biol. Histology; embryology; blood supply of lymphatic vessels in man, and of parathyroid glandules; resection of small intestine; lymphatic vessels in malignant growths; development of vertebrate vascular system; vital dyes of benzidin group; macrophages of mammals; follicular atresia; physiological anatomy of reproduction.
- Evans, Prof. Herbert S(ilas)**, University of Colorado, Boulder, Colo. *Electrical engineering*. Stella, Nebr, July 20, 75. B.S.(E.E.), Nebraska, 98, E.E., 01. Electrician, C. B. and Q. R. R. Co, 98-01; instr. and adj. prof. *elec. eng*, Nebraska, 01-05; *prof*, Colorado, 05-, *dean*, col. eng, 19- With Gen. Elec. Co, 05. Elec. Eng; Electrochem. Soc; Eng. Educ. (v. pres). Electrical transmission at high altitudes; electrical measuring instruments; dielectron strength of insulating materials.
- Evans, Dr. J(ohn) E(llis)**, Camp Grant, Ill. *Psychology*. Brazil, Ind, Jan. 1, 82. A.B., Indiana, 10, A.M., 11; Ph.D., Columbia, 16. Teacher, elementary schools, 99-09; asst. educ, Indiana, 09-14; psychol, Columbia, 13-14; instr, Ohio State, 14-20; *development expert, sect. testing and grading, war dept*, 19- A.A.; Psychol. Ass. General, experimental, educational and animal psychology.
- Evans, Dr. J(oseph) S(pragg)**, 762 Langdon St, Madison, Wis. *Medicine*. West Chester, Pa, March 6, 75. A.B., Haverford, 95; M.D., Pennsylvania, 99. Instr. *clin. med.* and assoc, Pepper Lab, Pennsylvania, 02-09; *prof*, Wisconsin, 09- Assoc. Am. Physicians; Phila. Col. Physicians. Bacteriology; clinical medicine.
- Evans, Morgan W.**, U. S. Department of Agriculture, N. Ridgeville, Ohio. *Agronomy*. B.S.A., Cornell, 06; M.S., George Washington, 20. *With forage crop investigations*, U. S. Dept. Agr. 07-, *asst. agronomist*. A.A.; Soc. Agron; Ohio Acad. Timothy.
- Evans, Prof. Nevil Norton**, McGill University, Montreal, Can. *Chemistry*. Montreal, Sept. 28, 65. B.S., McGill, 86, M.S., 92; Royal Sch. of Mines, Freiberg, 89-90; Leipzig, 90-91. Demonstrator *chem*, McGill, 86-89, lecturer, 91-01, asst. prof, 01-07, *assoc. prof*, 07- Lecturer chem, Nor. Sch, Montreal. A.A.; Chem. Soc; Can. Inst. Chem. Rock and mineral analysis.
- Evans, Prof. Newton (Gurdon)**, Loma Linda, Calif. *Pathology*. Hamilton, Mo, June 1, 74. B.S., Union (Nebr), 95; M.D., Cornell, 00. Instr. and later *prof. path.* and histol, Am. Med. Missionary Col, 00-05; *path*, Tennessee, 08-11; *Col. Med. Evangelists*, 14- Pathologist, Michael Reese Hosp, Chicago, summer, 08; grant for research, Am. Med. Ass, 03. A.A.; Ass. Path. and Baet; Am. Med. Ass. Blastomycetic dermatitis; coccidioidal granuloma and blastomycosis of the central nervous system; brain tumors.

- Evans, Prof. Percy N(orton)**, 302 Waldron St., West Lafayette, Ind. *Chemistry*. Montreal, Can., Sept. 6, 69. B.S., McGill, 90; 1851 Exhibition scholar, Leipzig, 91-93, Ph.D. 93; hon. fellow, Clark, 94. Asst. chem., McGill, 90-91; Wesleyan, 94-95; instr., *Purdue*, 95-96, assoc. prof., 96-00, *prof. and director, chem. dept.*, 00-A.A.; Chem. Soc.; fel. Ind. Acad. (pres., 10). Adsorption of dissolved substances; salts in solution; organic acid phosphids; creosote oil; reaction between ethyl alcohol and sulphuric acid; boiling and condensing points of alcohol-water mixtures.
- Evans, Dr. Robert J(ames)**, Logan, Utah. *Agriculture*. Lehi, Utah, July 2, 81. B.S.A., Utah Col., 09; Ph.D., Cornell, 12. In charge dry farm investigation, *Utah Col.*, 12-13, state leader, county agr. agents, 13-20; *director, extension*, 20- A.A. Plant breeding.
- Evans, Samuel Ernest**, Bennettsville, S. C. *Agronomy*. New Zion, S. C., Feb. 27, 87. B.S., Clemson, 10; M.S., Wisconsin, 14. Principal, agr. dept., Agr. High Sch., Eros, La., 10-12; agronomist, La. Indust. Inst., 13-14; *field agent*, U. S. Dept. Agr., 14- Instr., Clemson, summer, 15. A.A. Influence of carbon bisulphid upon the germinality of grain; cotton wilt and root-knot; corn breeding.
- Evans, Dr. Walter H(arrison)**, U. S. Department of Agriculture, Washington, D. C. *Botany*. Delphi, Ind., Jan. 3, 63. A.B., Wabash, 87, A.M., 89, Ph.D., 96. Instr. bot., Wabash, 88-90; botanist, Eli Lilly and Co., Indianapolis, 90-91; *bot. ed., 'Exp. Sta. Record,' U. S. Dept. Agr.*, 92-, *chief, Insular Exp. Stations*, 03- Special agent, Columbian Expos., 92-93; special commissioner to Alaska, U. S. Dept. Agr., 97. Gold medal, Paris, 00; grand prize, La. Purchase Expos., 04. Delegate, Int. Cong. Forestry, etc., Paris, 00. A.A.; Wash. Bot. Soc.; Wash. Biol. Soc. Cornaceae; effect of copper sulphate upon the germination of seed.
- Evans, Prof. W(ard) V(inton)**, Northwestern University, Evanston, Ill. *Physical chemistry*. Rawlinsville, Pa., June 8, 83. Ph.B., Franklin and Marshall, 07; Ph.D., Columbia, 16. Asst. chem., Columbia, 15-16; instr., *Northwestern*, 16-17, *prof. physical chem.*, 18-19, *chem.*, 19- Lieut., U. S. A., 17-18. Chem. Soc. Surface tensions of mutually soluble liquid systems; interatomic arrangements; detonation rates of high explosives; E. M. F. of non-aqueous solvents.
- Evans, Dr. W(illiam) A(ugustus)**, Tribune Building, Chicago, Ill. *Public health*. Marion, Ala., Aug. 5, 65. B.S., Miss. Agr. Col., 83, M.S., 85; M.D., Tulane, 85, LL.D.; M.D., ad eundem, Illinois, 99; D.P.H., Michigan. Demonstrator path., Col. Physicians and Surg., Illinois, 91-95, *prof.*, 95-08; *hygiene and sanit. science, Northwestern*, 08- Commissioner of Health, Chicago, 07-11; health editor, 'Chicago Tribune.' Am. Med. Ass.; Pub. Health Ass.
- Evans, Prof. W(illiam) Lloyd**, Ohio State University, Columbus, Ohio. *Chemistry*. Columbus, Dec. 22, 70. B.S., Ohio State, 92, fellow, 95-96, M.S., 96; Löwenthal fellow, Chicago, 04-05, Ph.D., 05. Asst. ceramics, Ohio State, 96-98; instr. *chem.*, high sch., Colo. Springs, Colo., 98-02; asst. prof., *Ohio State*, 05-08, assoc. prof., 08-11, *prof.*, 11- Major and director, chem. lab. and inspection div., Edgewood Arsenal, C. W. S., 17-19. A.A. (councilor, C, 16); Chem. Soc. Dissociation phenomena in aromatic carbinols; oxidation of organic compounds.
- Eve, Prof. A(rthur) S(tewart)**, McGill University, Montreal, Can. *Physics*. Silsoe, Bedfordshire, England, Nov. 22, 62. Pembroke Col., B.A., Cambridge, 84, M.A., 89; hon. Sc.D., McGill, 08. Asst. master, Marlborough Col., England, 86-03; lecturer *math*, McGill, 03-05, asst. prof., 05-09, assoc. prof., 09-12, *prof.*, 12-, *director*, 19- Capt. and major, C. E. F., 15-17, col. and director exp. sta., anti-submarine div., 17-18. Phys. Soc.; fel. Royal Soc. Can.; Royal Soc. Radio-activity; ionization.
- Everett, Prof. Walter G(oodnow)**, Brown University, Providence, R. I. *Ethics*. Rowe, Mass., Aug. 21, 60. A.B., Brown, 85, A.M., 88, Ph.D., 95; Berlin and Strasbourg, 95-96. Instr. Greek and Latin, *Brown*, 90-94, assoc. prof. *philos.*, 94-00, *prof.*, 00- Acting pres., Brown, 12-13; trustee, Butler Hosp., 13- Psychol. Ass.; Philos. Ass.; Inst. Social Sci. Ethics and religion and their mutual relations; moral values.
- Everhart, Dr. Edgar**, 150 N. Jackson St., Atlanta, Ga. *Chemistry*. Stokes Co., N. C., April 8, 54. A.B., Racine, 73, A.M., 75; Columbia, 74-75; Fresenius' Lab., Wiesbaden, 76; Ph.D., Freiburg, 78. Asst. chem., Stevens, 78-84; prof., Texas, 84-94; Cox, 94-97. Chemist, Ga. Geol. Surv., 04- A.A.; Chem. Soc.; Chem. Gesell. Organic and physiological chemistry.
- Evermann, Dr. Barton W(arren)**, Museum, California Academy of Sciences, San Francisco, Calif. **Ichthyology, Biology*. Monroe Co., Iowa, Oct. 24, 53. Howard (Ind.), 70-72; Butler, 78-79; B.S., Indiana, 86, A.M., 88, Ph.D., 91. Teacher, pub. schools, Ind., 71-79; Calif., 79-81; supt. schools, Carroll Co., Ind., 83-85; prof. biol. and geol., Ind. State Nor. Sch., 86-91; ichthyologist, U. S. Fish Commission, 91-13; asst. in charge, div. scientific inquiry, U. S. Bur. Fisheries, 03-10, chief, Alaska Fisheries Service, 10-14; curator, div. fisheries, U. S. Nat. Museum, 05-14; *director, museum, Calif. Acad.*, 14- Special lecturer, Stanford, 93-94; lecturer, Cornell, 99-03; forest sch., Yale, 04-; mem. U. S. Fur Seal Commission, 92; Board Scientific Surv. of the Philippines; assoc. Int. Fisheries Commission, 08-09; mem. Board of Educ., Washington, D. C., 06-10. Gold medal, Paris Expos., 00; Panama-Pacific Expos., 15. A.A. (v. pres., Pacific div., 17-); fel. Ornith. Union; Cooper Ornith. Club (pres., 16-18); Soc. Mammal; Plant Preservation Soc.; Soc. Preservation Wild Life; West. Soc. Nat.; Pacific Fisheries Soc.; Calif. Acad. (ed., 14-); Ind. Acad.; Wash. Acad. (ed., 04-10); Wash. Biol. Soc. (pres., 03). Geographic distribution of fishes; fishes of north and middle America, Porto Rico and Hawaii; food and game fishes; physical and biological survey of Lake Maxinkuckee; Salmonidæ; museum administration.
- Evvard, Prof. John M(arcus)**, Ames, Iowa. *Animal husbandry*. Saunemin, Ill., Nov. 6, 84. B.S.A., Illinois, 07; M.S., Missouri, 09. Asst. to dean, col. agr., Missouri, 07-10; asst. chief animal husbandry, *Iowa Exp. Sta.*, 10-14, in charge

- of sect. and chief swine production, 11-, assoc. prof. animal husbandry, *Iowa State*, 16-18; prof., 18- A.A.; Soc. Animal Production (pres); Chem. Soc.; U. S. Live Stock Sanit. Ass.; fel. Iowa Acad. Feeds and feeding; applied nutrition; swine, cattle and sheep production.
- Ewell, Dr. Arthur W(oolsey)**, Worcester Polytechnic Institute, Worcester, Mass. **Physics*. Bradford, Mass, Oct. 20, 73. A.B, Yale, 97, Sloane fellow, 97-99, Ph.D, 99; Hopkins, 99-00; Berlin, 04. Asst. physics, Yale, 97-99; instr, *Worcester*, 00-04, asst. prof, 04-10, prof, 10- Capt. and major and head, bomb unit, Air Service, A.E.F; tech. expert aerial bombs. War Dept; trustee, Dummer Acad; Baneroff Sch. Physical Soc; Am. Acad; Soc. de Physique. Optical properties of transparent bodies when subjected to torsion and other mechanical strains; elastic properties of jellies; optical properties of distorted jelly and glass; magnetic double refraction; electrolytic conduction; ozone; electrode potentials; dispersion in artificial rotatory polarization; measurement of explosive waves and forces.
- Ewell, Dr. Marshall D(avis)**, 749 Tate St, Memphis, Tenn. *Microscopy*. Oxford, Mich, Aug. 18, 44. LL.B, Michigan, 68, LL.D, 79; hon. A.M, Northwestern, 79, M.D, 84. *Microscopical and handwriting expert*. A.A.; Micros. Soc. (pres, 91, 06); Physical Soc; Philos. Soc; Ill. Micros. Soc. (pres, 09-11); Optical Soc; hon. fel. Chicago Acad. Med; fel. Royal Micros. Soc. Metrology; handwriting; medical jurisprudence.
- Ewing, Prof. Dwight T**, East Lansing, Mich. *Chemistry*. Iowa. B.S, Parsons, 11; M.S, Chicago, 15, duPont fellow, 18-19, Ph.D, 20. *Asst. prof. chem, Mich. Agr. Col*, 14- Asst. physical chem, Chicago, summer, 18. Chem. Soc. Adsorption; electrometric titration of uranium salts.
- Ewing, Prof. Ephraim M(acDonald)**, Asheville, N. C. *Physiology*. Kansas City, Mo, Sept. 18, 89. A.B, Missouri, 09, A.M, 10; Sc.D, N. Y. Univ, 12, M.D, 18. Asst. physiol, Missouri, 09-10; instr, Univ. and Bellevue Hosp. Med. Col, 10-12, asst. prof, 12-16; acting prof. Fordham, 14; Tulane, 19-20. Physiol. Soc; Soc. Exp. Biol. Adropin and pilocarpin on saliva; the venous pulse; carbohydrate metabolism and internal secretions; experimental shock.
- Ewing, Dr. H(enry) E(llsworth)**, National Museum, Washington, D. C. *Entomology*. Arcola, Ill, Feb. 11, 83. Knox, 02-04; A.B, Illinois, 06, A.M, 08; Chicago, 06-07; Schuyler fellow, Cornell, 10-11, Ph.D, 11. Lab. asst. biol, Knox, 03-04; zool, Illinois, 07-08; science teacher, Marshall Township High Sch, 08-09; asst. zool, Iowa State, 09-10; entom. Oregon Exp. Sta, 11-14; asst. prof, Iowa State, 14-16, assoc. prof, 16-19; *specialist, bur. entom, U. S. Dept. Agr*, 19- A.A.; Entom. Soc; Ass. Econ. Entom; Ecol. Soc; Nature Study Soc; Iowa Acad; Ill. Acad. Arachnida; the parasitic Acarina; animal parasites; pure line inheritance; racial persistence through segregation; mutation under the influence of natural selection.
- Ewing, Prof. James**, 717 E. Second St, Northfield, Minn. *Botany*. Aberdeen, Scotland, June 14, 88. M.A, Aberdeen, 10, B.Sc, 11; Sc.D, Chicago, 16. Asst. lecturer bot, Aberdeen, 11-12; instr. *biol, Carleton*, 12-13, asst. prof, 13- Ecol. Soc. Plant ecology.
- Ewing, Prof. James**, Cornell University Medical College, 477 First Ave, New York, N. Y. **Pathology*. Pittsburgh, Pa, Dec. 25, 66. A.B, Amherst, 88, A.M, 91; M.D, Columbia, 91; Vienna, 95; hon. Sc.D, Pittsburgh, 12. Tutor histol, Columbia, 93-97, Clark fellow, 96-99, instr. clin. path, 97-98; *prof. path, med. col, Cornell*, 99- A.A.; Ass. Path. and Bact. (pres, 06); Am. Physicians; Soc. Exp. Biol. (pres, 12); Soc. Bact; Ass. Cancer Control; Ass. Cancer Research (pres, 07); Harvey Soc. (pres, 08); Am. Med. Ass; N. Y. Acad. Med. Blood; ganglion cells; malaria; variola; autointoxication; tumors.
- Exner, Dr. Franz F(rederick)**, Carleton College, Northfield, Minn. *Chemistry*. Silesia, Austria, March 23, 68. A.B, Carleton, 95; Ph.D, Pennsylvania, 03. Teacher science and math, high sch, Madelia, Minn, 95-98; science, Wilton, 98-00; instr. gen. chem, Pennsylvania, 01-02; *prof. chem, Carleton*, 03- A.A.; Chem. Soc. Complex inorganic acids of WO_3 , V_2O_5 , and P_2O_5 ; purification of tungsten and its atomic weight; halids of tungsten; rapid precipitation of metals by electrolysis; determination of Pb in baking powders and of Fe_2O_3 in phosphate rocks; quantitative sublimation.
- Eycleshymer, Prof. Albert Chauncey**, 201 S. Ridgeland Ave, Oak Park, Ill. **Anatomy, Histology, Embryology*. Cambridge, N. Y., 67. B.S, Michigan, 91; fellow, Princeton, 91; fellow, Clark, 91-92; fellow, Chicago, 92-93, Ph.D, 94; Cambridge, England, 95-96; Austin fellow, Harvard Med. Sch, 00-01; M.D, St. Louis, 10. Asst. animal morph, Michigan, 89, bot, 90; chief asst, Allis Lake Lab, 90-91; asst. biol, Chicago, 93-95, assoc. anat, 95-97, instr, 97-02, asst. prof, 02-03; director, anat. dept, St. Louis, 03-13; *prof. anat. and head of dept, med. dept, Illinois*, 13-, *dean, col. med*, 17- Lecturer human embryol, Rush Med. Col, 97-98, asst. prof, 98-99. A.A.; Soc. Nat; Soc. Zool; Ass. Anat; Am. Acad. Med. Vertebrate embryology; histogenesis; normal plates on Neoturus; atlas of topographical anatomy; anatomical names.
- Eyer, B(enjamin) F(ranklin)**, 3430 Bellefontaine St, Kansas City, Mo. *Electrical engineering*. Toronto, Can, 69. Chicago; B.S, Armour, 02, E.E, 08. Teacher physics and chem, high sch, Topeka, Kans, 95-00; prof. physics and elec. eng, Kansas State, 00-08, elec. eng, 08-13; *sales engineer, Elwell-Parker Elec. Co, Cleveland, Ohio*, 13- Assoc. Elec. Eng; Kans. Acad. (v. pres, 06); Kans. Elec. Light Ass.
- Eyerman, John**, The Griswold, Cleveland, Ohio. *Chemistry, Mineralogy*. Easton, Pa, Jan. 15, 67. Lafayette, 84-87; Harvard, 87; Princeton, 88-96. Lecturer determinative miner, Lafayette, 87-92; assoc. ed, 'Jour. Anal. Chem'; 'Am. Geologist', 88-98. A.A.; Chem. Soc; Geol. Soc; Paleont. Soc; Soc. Vert. Paleont; fel. Am. Geog. Soc; Phila. Acad; fel. N. Y. Acad; British Ass; London Geol. Ass. Mining geology; paleontology; mineralogy of Pennsylvania; Temnoceyon; Hypotemnodon; zirconium; tantalum; glucinum.

Eyster, Prof. J(ohn) A(ugustine) E(nglish), University of Wisconsin, Madison, Wis. **Physiology, Pharmacology*. Augusta Co, Va, July 31, 81. B.S, Md. Col, 99; Hopkins, 99-01, M.D, 05, fellow, 05-06; Freiburg, 06. Asst. physiol, Hopkins, 06-07, instr, 07-08, assoc, 08-09; *prof. pharmacol*, Virginia, 09-11; *physiol, Wisconsin*, 11- A.A.; *Physiol. Soc*; *Soc. Pharmacol*; *Soc. Exp. Biol*; *Am. Physicians*; *Am. Med. Ass.* *Physiology of respiration and circulation*.

Eyster, Dr. William H(enry), University of Missouri, Columbia, Mo. *Biology*. Fishers Ferry, Pa, July 13, 89. A.B, Bucknell, 14, A.M, 15; Ph.D, Cornell, 20. *Prof. biol*, Pa. State Forest Acad, 14-16; *nat. science and head*, dept. science, Cortland State Nor. and Training Sch, 16-18; *asst. plant breeding*, Cornell, 18-19, *instr. bot*, 19-20, *Missouri*, 20- A.A.; *Bot. Soc*; *Nature Study Soc.* *Genetics*; *evolution*.

F

Fabis, Adolph Ira, Brownwood, Tex. *Entomology*. B.S. Col. City of N. Y, 12; Cornell, 13-14. *Scientific asst, bur. entom, U. S. Dept. Agr*, 14- A.A.; *Entom. Soc*; *Wash. Entom. Soc.* *Nut insects*.

Fabyan, Prof. Marshal, Harvard Medical School, Boston, Mass. *Pathology*. Brookline, Mass, Feb. 17, 79. A.B, Harvard, 00, M.D, 04. *Intern*, Mass. Gen. Hosp, 04-05; *asst. res. physician*, Hopkins Hosp, 06-07; *instr. comp. path*, *Harvard Med. Sch*, 09-12, *asst. prof*, 12- *Ass. Path. and Bact.* *Comparative pathology*.

Faccioli, Giuseppe, General Electric Co, Pittsfield, Mass. *Electrical engineering*. Rome, Italy, April 7, 77. E.E, Polytech, Milan, Italy, 99. *Asst. to William Stanley, Jr*, 05-08; *asst. engineer*, *Gen. Elec. Co*, 08-14, *works elec. engineer*, 13- *Elec. Eng*; *British Inst. Elec. Eng*; *Ital. Soc. Elec. Eng.* *High tension and high frequency phenomena*.

Fackenthal, B(enjamin) F(ranklin), Jr, Riegelsville, Pa. *Mining engineering, Chemistry*. Doylestown, Pa, June 2, 51. Lafayette, 74-75, hon. A.M, 97, Sc.D, 11. *Manager, works and mines*, Durham Iron Works, 76; *gen. manager, blast furnaces*, Cooper, Hewitt and Co, Pequest and Ringwood, 79-93; *pres*, Thomas Iron Co, 93-13; *Ironton R. R. Co*, 93-14; *Clymer Power Co.* *V. pres*, Easton Trust Co, 93-; *consulting mining engineer and metallurgist*; *pres*, board of trustees, Franklin and Marshall. *Min. Eng*; *Soc. Test. Mat*; *British Iron and Steel Inst.* *Metallurgy*.

Fahrenwald, Dr. Frank A, 1692 Glenmont Road, Cleveland Heights, Ohio. *Mining engineering*. S. Dak, Feb. 22, 88. B.S, S. Dak. Sch. Mines; M.S, Pa. Sch. Mines; Ph.D, Michigan. *Consulting engineer*. *Min. Eng*; *Chem. Soc*; *British Inst. Metals*. *Metallurgy*; *general industrial chemistry*; *metals and alloys*.

Failla, Gioacchino, Memorial Hospital, New York, N. Y. *Physics*. Italy, July 19, 91. E.E, Columbia, 15, A.M, 16. *Physicist, Mem. Hosp*, N. Y. City, 15- *Asst. to scientific attaché*, Rome, Italy, 18-19. A.A.; *Physical Soc*; *Radium Soc.* *Radioactivity*; *radium in the treatment of cancer*; *correlation of physical properties and physiological action of radium*.

Fairbanks, Prof. Floyd C(oooper), University of Rochester, Rochester, N. Y. *Physics*. William-son, N. Y, Nov. 27, 73. A.B, Rochester, 01, 04-05; Cornell, 05-06. *Instr. science, high sch*, Geneva, N. Y, 01-04; *physics*, Drexel, 06-14, *senior instr*, 14-18; *asst. prof*, *Rochester*, 18- *Physical Soc*; *Rochester Acad*; *Phila. Physics Club*. *Heat of vaporization of liquid air*; *density of rocks from deep mines*; *optics*.

Fairbanks, Dr. H(arold) W(ellman), Tamalpais Road, Berkeley, Calif. *Geology, Physiography*. Conewango, N. Y, Aug. 29, 60. B.S, Michigan, 90; Ph.D, California, 96. *Connected with Calif. State Mining Bur*, 90-94; *asst. U. S. Geol. Surv*, 99-00; *independent research*, 00- *Assoc. ed*, 'Nature-Study Rev.' A.A; *Ass. Geog.* *Geography*; *the geology and physiography of California*.

Fairchild, C(harles) O(wen), Bureau of Standards, Washington, D. C. *Physics*. Marinette, Wis, Feb. 27, 90. M.S, Rose, 12. *Chem. engineer*, West. Chem. Mfg. Co, 12-14; *with Bur. Standards*, 15-19, *assoc. physicist*, 19- *Physical Soc*; *Optical Soc*; *Wash. Philos. Soc.* *Pyrometry*.

Fairchild, David G(randison), U. S. Department of Agriculture, Washington, D. C. **Botany, Agriculture*. Agricultural College, Mich, April 7, 69. B.S, Kansas State, 88, M.S, 93; *Naples Zool. Sta*, 93; *Breslau and Berlin*, 94; *Bonn*, 95; *Buitenzorg Bot. Gardens*, 96; *Ph.D*, Oberlin, 16. *Second asst. pathologist, U. S. Dept. Agr*, 89-92, *first asst. pathologist, div. veg. path*, 92-93, *special agent in charge, sect. seed and plant introduction*, 97-98, *agr. explorer*, 98-03, *in charge office*, 03- *Asst. to Barbour Lathrop on expeditions in search of valuable seeds and plants*, 98-00, 01-03. A.A; *Bot. Soc.* (*councilor*, 14-16); *Genetic Ass.* (*pres*, 13-); *Nat. Geog. Soc.* (*director*); *Pomol. Soc*; *Soc. Prom. Agr. Sci*; *Int. Ass. Bot.* *Plant introduction*; *plant diseases*; *microscopic fungi and marine algae*; *introduction into America of valuable seeds and plants*.

Fairchild, Prof. D(avid) S(turgess), Clinton, Iowa. *Surgical pathology*. Fairfield, Vt, Sept. 16, 47. M.D, Albany Med. Col, 68. *Prof. comp. physiol. and anat*, Iowa State, 79-93; *surg. path. and surg*, Drake, 82-09, *dean*, 03-09; *ed*, 'Jour. Iowa State Med. Soc.' *Am. Med. Ass.* (*first v. pres*, 14); *Col. Surg*; *West. Surg. Ass.* (*pres*, 98); *Iowa Acad.*

Fairchild, Prof. H(erman) L(eRoy), University of Rochester, Rochester, N. Y. **Geology*. Montrose, Pa, April 29, 50. B.S, Cornell, 74; hon. Sc.D, Pittsburgh, 10. *Teacher*, Wyoming Sem, Kingston, Pa, 74-76; *lecturer*, N. Y. City private schools, Cooper Union, etc, 77-88; *prof. geol*, *Rochester*, 88-20, *emer. prof*, 20- *Ad interim prof. geol*, Vassar, 78. A.A. (*gen. sec'y*, 94, *v. pres*, 98); *Geol. Soc.* (*sec'y*, 90-07, *pres*, 12); *N. Y. Acad.* (*sec'y*, 85-88); *Rochester Acad.* (*pres*, 89-01, 18); *hon. and cor. mem. of various other societies*. *Pleistocene geology*.

Fairlie, Andrew M(iller), Citizens and Southern Bank Building, Atlanta, Ga. *Chemical engineering*. Glasgow, Scotland, Feb. 11, 77. A.B, Harvard, 00. *Chief chemist*, Tenn. Copper Co, 06-07, *asst. supt, acid dept*, 08-16, *supt*, 16-17; *chem. engineer*, 17-18; *consulting chem. engi-*

- neer, 18- Chem. Soc; Chem. Eng; Inst. Metals (sec'y, 07). Sulphuric acid manufacture; filling material for chemical towers; protection of acid plant materials from acid corrosion; chamber process.
- Fairman, Dr. C(harles) E(dward)**, Lyndonville, N. Y. *Mycology*. Yates, N. Y. Dec. 28, 56. A.B., Rochester, 74, A.M., 77; M.D., St. Louis Med. Col., 77. Cor. mem. Rochester Acad. Mycology of western New York; North American Pyrenomycetaceae and Lophiostomaceae.
- Fales, Prof. Harold A(thelstane)**, Columbia University, New York, N. Y. *Chemistry*. Brooklyn, N. Y., Aug. 5, 82. B.S., Brooklyn Polytech, 11; A.M., Columbia, 14, Ph.D., 16. Instr. chem., Columbia, 13-19, asst. prof., 19-. Chem. Soc. Analytical and physical chemistry.
- Falk, Dr. K(aufman) George**, Roosevelt Hospital, New York, N. Y. **Chemistry*. New York, Sept. 8, 80. B.S., Columbia, 01; Hopkins, 01-03; Ph.D., Strasbourg, 05; Berlin, 05-06. Asst. physical chem., Columbia, 06-07, tutor physics, 07-09; research assoc. physical chem., Mass. Inst. Tech., 09-11; chemist, Harriman Research Lab, Roosevelt Hosp., 11- Capt. Sanit. C., 18-19. A.A.; Chem. Soc. (v. chairman, N. Y. sect., 14); Soc. Biol. Chem.; Soc. Exp. Biol.; fel. N. Y. Acad. (sec'y, sect. astron. physics and chem., 18); London Chem. Soc. Valence; enzymes; meat spoilage; food dehydration; antibody analysis; glycin; refractive indices and temperatures; ignition temperatures; condensation of ophthaldehyde; hexamethylenetetramine.
- Fall, Prof. Delos**, 314 College Court, Albion, Mich. *Chemistry*. Ann Arbor, Mich., Jan. 29, 43. B.S., Michigan, 75, M.S., 82; hon. Sc.D., Albion, 98, LL.D., 08. Teacher science, high sch., Ann Arbor, 71; principal, high sch., Flint, 75-78; prof. science, Albion, 78-88, chem., 88- State supt. pub. instruction, Mich., 00-04; mem. State Board of Health, 88-00; chairman, committee on educ., Mich. State Constitutional Convention, 07; consulting chemist. A.A.; Pub. Health Ass. Education; sanitary science; assaying; coal and peat; Portland cement; science for beginners.
- Fall, H(enry) C(linton)**, Tyngsboro, Mass. *Entomology*. Farmington, N. H., Dec. 25, 62. B.S., Dartmouth. Entom. Soc. American Coleoptera; the Ptinidae of boreal America; the Lathridiidae; American Diplotaxes; revision of American Hydropori and Gyrini.
- Famulener, Dr. L(emuel) W(illiam)**, 385 Ft. Washington Ave, New York, N. Y. *Pharmacology, Pathology*. Galesburg, Ill., Aug. 27, 75. Ph.C., Michigan, 00, A.B., 03, M.D., 06. Asst. prof. path., Indiana, 06-07; bacteriologist and asst. director, research lab., Dept. Health, N. Y. City, 07-14; bacteriologist, St. Luke's Hosp., 13-A.A.; Ass. Path. and Bact.; Soc. Exp. Biol.; Soc. Bact.; Soc. Immunol. Physiological assays; serology; bacteriology.
- Fantus, Prof. B(ernard)**, 719 S. Ashland Boulevard, Chicago, Ill. *Pharmacology*. Budapest, Hungary, Sept. 1, 74. Real-Gymnasium, Vienna; M.D., Illinois, 99; M.S., Michigan, 17; Strasbourg, 06; Berlin, 09. Intern., Cook Co. Hosp., 99-00; adj. prof. mat. med. and thera-
- peut., Illinois, 00-02, prof., 03-12, asst. prof. clin. med., 09-12, prof. pharmacol. and therapist, 13-17; assoc. prof. therapist, Rush Med. Col., 17- Lecturer, sch. pharmacy, Illinois, 13-A.A.; Soc. Internal Med.; Pharmaceut. Ass.; Am. Med. Ass. Therapeutics; fuller's earth; comparison of optochin and quinin; candy medication; antidotes to mercuric chlorid; prescription writing; blood-pressure.
- Farabee, Dr. William C(urtis)**, University of Pennsylvania, Philadelphia, Pa. *Anthropology*. Washington, Pa., Feb. 7, 65. A.B., Waynesburg, 94, A.M., 95; A.M., Harvard, 00, fellow, 00-03, Ph.D., 03; hon. Sc.D., Waynesburg, 16. Instr. anthrop., Harvard, 03-13; curator, museum, Pennsylvania, 13- Hon. mem. faculty, Universidad Mayor de San Marcos de Lima, 09-; director, De Milhan-Harvard exped. to S. Am., 06-09; Pennsylvania exped. to Amazon, 13-16; ethnographer, Am. Committee to Negotiate Peace, Paris, 18-19; capt., 18-19, major, 19- Gold medal, Harvard Travellers Club, 09; Phila. Geog. Soc., 16; medal, Explorers Club, 16. A.A.; Anthropol. Ass. (pres, 20); hon. mem. Am. Geog. Soc.; Antiq. Soc.; Philos. Soc.; Am. Acad.; fel. Royal Geog. Soc.; Soc. anthrop. de Paris. Physical anthropology; inheritance; ethnology and archeology of South America.
- Faragher, Prof. Paul V(ance)**, 1247 Murdoch St, Pittsburgh, Pa. *Metallurgy*. Sabetha, Kans., June 17, 88. A.B., Kansas, 09, 10; Mass. Inst. Tech., 11-12, Ph.D., 13; fellow, California, 12-13. Instr. chem., Kansas, 10-11, asst. prof., 13-18, assoc. prof., 18; fellow, Mellon Inst., 18-19; chief, exp. lab., research bur., Aluminum Co. of Am. A.A.; Chem. Soc.; Min. and Metal. Eng. E.M.F. in aqueous solvents; metallography of light alloys.
- Faragher, Dr. W(arren) F(red)**, Mellon Institute, Pittsburgh, Pa. *Chemistry*. Sabetha, Kans., April 25, 84. A.B., Kansas, 05, fellow, 07-09, Ph.D., 10. Instr. chem., Kansas, 05-07; research chemist, Alden Spear's Sons Co., 09-18; fellow, Mellon Inst., 18- Lecturer chem. and tech. of petroleum, Pittsburgh, 18- A.A.; Chem. Soc.; Soc. Test. Mat.; Kans. Acad. Chemistry of power laundering; petroleum products.
- Faribault, E(ugène) Rodolphe**, Geological Survey, Ottawa, Can. *Geology*. L'Assomption, Que., Nov. 4, 60. B.A.S., C.E., Laval, 82. *Geologist*, Can. Geol. Surv., 82- Mem. jury awards, Paris Expos., 00. Gold medal, Pan-Am. Expos., 01. Int. Geol. Cong., Paris, 00. Geol. Soc.; Can. Min. Inst.; N. S. Inst.; hon. mem. N. S. Min. Soc.; fel. Royal Soc. Can. Geological survey, mapping and study of the gold fields of Nova Scotia; structure of the antidiagonal folds and auriferous saddle-veins and their recurrence in depth.
- Faris, Prof. Ellsworth**, University of Chicago, Chicago, Ill. *Psychology*. Salem, Tenn., 74. B.S., Tex. Christian Col., 94; Ph.D., Chicago, 14. Prof. philos., Tex. Christian Col., 06-11; instr., Chicago, 12-13; asst. prof., Iowa, 13-14; instr. psychol., Chicago, 14-15; assoc. prof., and later prof. psychol., Iowa, 15-20, acting director, Child Welfare Research Sta.; prof. sociol., Chicago, 20-A.A.; Psychol. Ass. Psychology of punishment; primitive peoples.

- Faris, R(obert) L(ee)**, U. S. Coast and Geodetic Survey, Washington, D. C. *Geophysics*. Caruthersville, Mo, 68. C.E, Missouri, 90. Civil asst. engineer, corps engineers, U.S.A, 90-91; recorder and aid, *U. S. Coast and Geod. Surv.*, 91-95, asst, 95-17, *asst. supt. director*, 20-, inspector magnetic work and chief, div. terrestrial magnetism, 06-14, *hydrog. and geod. engineer*, 17-Mem. Miss. River Commission, 19-; *Geophys. Union*. A.A.; Civil Eng; Wash. Acad. (treas); Wash. Philos. Soc. (sec'y, v. pres); Wash. Soc. Eng; Wash. Geol. Soc. Terrestrial magnetism.
- Farmer, Prof. C(hester) J(efferson)**, 2421 S. Dearborn St, Chicago, Ill. *Biological chemistry*. North Andover, Mass, July 18, 86. Diploma, Lowell Textile Sch, 07; A.M, Harvard, 13. Teaching fellow, Harvard Med. Sch, 09-11, asst. biol. chem, 11-13; *prof. chem*, Marquette, 13-18; *assoc. prof*, *Northwestern*, 18-19, *prof*, 19-Chem. expert, referee board, U. S. Dept. Agr, 08-09. A.A.; Chem. Soc. Bacterial metabolism; urine analysis; estimation of carbon in physiological fluids.
- Farmer, F(rank) M(alcolm)**, 15 W. 91st St, New York, N. Y. *Electrical engineering*. Iliion, N. Y, March 28, 77. M.E, Cornell, 99. Inspector, U. S. Navy Dept, Brooklyn, 00-02; engineer, *Elec. Testing Laboratories*, 03-11, *chief engineer*, 11- A.A.; Elec. Eng; Soc. Test. Mat; N. Y. Elec. Soc. Electrical measurements; tests and materials; insulating materials.
- Farnam, Prof. Henry (Walcott)**, Yale University, New Haven, Conn. *Economics*. New Haven, Nov. 6, 53. A.B, Yale, 74, A.M, 76; Berlin; Göttingen; R.P.D, Strasbourg, 78. Tutor, *Yale*, 78-80, *prof. econ*, 80-18, *emer. prof*, 18- Sec'y, dept. econ. and sociol, Carnegie Institution, 03-09, chairman, 09-16. A.A.; Econ. Ass. (pres, 10-); Am. Acad. Polit. and Social. Sci; Sociol. Soc; Ass. Labor Legis. (pres, 07-10); Statist. Ass; Am. Hist. Ass; Conn. Acad; N. Y. Acad. Polit. Sci; Verein für Sozialpolitik; Soc. de Légis. comp. Labor legislation; economic history of the United States.
- Farnau, Prof. E(arl) F(rederick)**, University of Cincinnati, Cincinnati, Ohio. *Chemistry*. Covington, Ky, July 5, 83. A.B, Cincinnati, 05, A.M, 07, Ph.D, 12. Instr. chem, Cincinnati, 07; N. Y. Univ, 12-16, asst. prof, 16-18; *assoc. prof. org. chem*, *Cincinnati*, 18- Chem. Soc. Luminescence; colloids.
- Farr, Prof. C(lifford) B(aily)**, 117 S. 22d St, Philadelphia, Pa. *Medicine*. Vineland, N. J, April 17, 72. A.B, Haverford, 94, A.M, 12; M.D, Pennsylvania, 98. Instr. med, Pennsylvania; *prof. diseases of stomach and intestines*, Phila. Polyclinic; with div. med. research, B. F. Goodrich Co; *prof. gastroenterol*, Pennsylvania. Major, M.R.C. A.A.; Phila. Col. Physicians (chairman, sect. med, 16-). Influence of certain drugs on nitrogenous excretion; non-protein nitrogen and urea of blood in nephritis, liver diseases and pregnancy.
- Farr, Prof. Clifford H(arrison)**, University of Iowa, Iowa City, Iowa. *Botany*. New Hampton, Iowa, July 24, 88. A.B, Iowa, 11, M.S, 12; Ph.D, Columbia, 15, Cutting traveling fellow, 15-16. Asst. prof. biol, Tex. Col, 16-18; asst. microscopist, bur. plant. indust, U. S. Dept. Agr, 18-19; *asst. prof. bot*, *Iowa*, 19- Prof. bot, Rutgers, summers, 16, 17; bot. explorations in Jamaica, 15. A.A.; Bot. Soc; fel. Iowa Acad. Morphology of Ambrosiaceae; cell division of flowering plants; ferns of Jamaica.
- Farr, Dr. M(arcus) S(tults)**, 20 Vandeventer Ave, Princeton, N. J. *Geology, Paleontology*. Cranbury, N. J, Feb. 19, 70. A.B, Princeton, 92, fellow, 92-93, M.S, 93, Sc.D, 96; fellow, Chicago, 93-94, A.M, 94. Lab. asst. paleont, Princeton, 96-98; asst. zoologist, N. Y. State Museum, Albany, 98-00; *asst. geol. and curator vert. paleont*, *Princeton*, 00- A.A.; Paleont. Soc. (sec'y-treas, 06); assoc. Ornith. Union; hon. mem. Del. Valley Ornith. Club. Morphology and phylogeny of extinct vertebrates; Cretaceous and early Tertiary fossil vertebrates of Montana; fossil birds of Patagonia; birds of New York.
- Farrand, Dr. Livingston**, American Red Cross, Washington, D. C. **Anthropology, Psychology*. Newark, N. J, June 14, 67. A.B, Princeton, 88; M.D, Columbia, 91; Cambridge, 91-92; Berlin, 92-93. Instr. physiol. psychol, Columbia, 93-99, psychol, 99-01, adj. prof, 01-03, *prof. anthrop*, 03-14; pres, Colorado, 14-19; *chairman, exec. committee, Red Cross*, 19- A.A.; Soc. Nat; Psychol. Ass. (sec'y, 95-04); fel. Ethnol. Soc. (sec'y, 99-); Folk-lore Soc. (pres, 03); Ass. Tuber. (exec. sec'y, 05-); fel. N. Y. Acad. Anthropology of American Indians.
- Farrar, Dr. C(larence) B**, 22 Vittoria St, Ottawa, Can. *Psychiatry*. New York, N. Y, 74. A.B, Harvard, 96; M.D, Hopkins, 00; Heidelberg, 02-04. Asst. physician, Shepard-Pratt Hosp, Baltimore, 00-02, asst. physician and director of lab, 04-13; research asst, Carnegie Institution, 04-06; instr. psychiat, Hopkins, 06-08, *assoc*, 08-13; lecturer abnor. psychol, Princeton, 13-16; *chief psychiatrist, Dept. Soldiers Civil Re-establishment, Can*, 18- Capt. and major, C.A.M.C, 16-19; various hospital positions. Neuropsychiatry; cerebral histology and histopathology; psychopathology; diagnosis and treatment of nervous diseases; military psychiatry.
- Farrell, Dean F(rancis) D(avid)**, Kansas State Agricultural College, Manhattan, Kans. *Agriculture*. Smithfield, Utah, March 13, 83. B.S, Utah Col, 07. Scientific asst, bur. plant indust, U. S. Dept. Agr, 07-09; director, exp. farms, Idaho, 10-11; agronomist, bur. plant indust, U. S. Dept. Agr, 12-14; agriculturist in charge agr. development, govt. irrig. projects, 14-18; *dean, Kansas State, and director, Exp. Sta*, 18- A.A.; Soc. Agron; Ass. Agr. Legis; Wash. Bot. Soc. (treas, 16). Agronomy; irrigation; agricultural industries.
- Farrington, Prof. E(dward) H(olyoke)**, University of Wisconsin, Madison, Wis. *Dairying*. Brewer, Maine, Dec. 20, 60. B.S, Maine, 81, M.S, 82; Sheffield Sci. Sch, Yale, 82. Asst. chemist, Conn. Exp. Sta, 83-89; chemist, Ill. Exp. Sta, 90-94; in charge, dairy dept, *Wisconsin*, 94- Chemist dairy tests, Columbian Expos. 93; La. Purchase Expos, 04. Examination and manufacture of dairy products.
- Farrington, Dr. Oliver C(ummings)**, 5741 Kenwood Ave, Chicago, Ill. **Geology, Mineralogy*.

- Brewer, Maine, Oct. 9, 64. B.S., Maine, 81, M.S., 88; Ph.D., Yale, 91. Teacher science, Maine Academics, 83-87; asst. miner. and biol., Yale, 89-91; miner, U. S. Nat. Museum, 93-94; *curator geol. Field Museum Nat. Hist.*, 94- Professorial lecturer determinative miner, Chicago, 95-03; collaborator, mines and mining, Paris Expos, 00; mem. jury awards, La. Purchase Expos, 04. Int. Cong. Arts and Science, St. Louis, 04 (chairman, sect. petrol. and miner). A.A.; Geol. Soc.; Mus. Ass. (pres, 15); Soc. astron. de France. Meteorites.
- Farwell, Prof. H(ermon) W(aldo)**, Columbia University, New York, N. Y. *Physics*. Keene, N. H., Dec. 29, 79. A.B., Dartmouth, 02, A.M., 06. Instr. *physics*, Dartmouth, 04-06; asst. *Columbia*, 06-09, tutor, 09-10, instr., 10-17, *asst. prof.*, 17-. A.A.; assoc. Physical Soc. Ionization in gases; geometrical optics; laboratory management.
- Farwell, Oliver A(tkins)**, 271 Smith Ave, Detroit, Mich. *Botany*. Boston, Mass., Dec. 13, 67. Mich. Nor. Sch., 90-92. Teacher, pub. schools, 89-90; *curator of herbarium and drug inspector*, Parke, Davis and Co, 92-. Prof. bot. and pharmacog., Detroit Col. Pharmacy, 18-19. A.A.; Pharmaceut. Ass.; Bot. Soc.; Bot. Cent. States; Torrey Bot. Club; Mich. Acad. Michigan flora.
- Farwell, Dr. Stanley P(rince)**, Winnetka, Ill. *Electrical engineering*. Chicago, Ill., Sept. 29, 83. B.S., Illinois, 07, M.S., 10, fellow, 13-14, Ph.D., 14. Asst. prof. elec. eng., Cent. Univ. of Ky., 08-10; instr. theoret. and applied mech., Illinois, 10-13; service engineer, Pub. Utilities Commission of Ill., 14-17; indust. engineer, Arthur Young and Co, 17-20; *v. pres.*, Bur. Commercial Econ, 20-. Elec. Eng. Corona produced by continuous potentials.
- Fassig, Dr. Oliver L(anard)**, U. S. Weather Bureau, San Juan, P. R. *Meteorology*. Columbus, Ohio, April 5, 60. B.S., Ohio State, 82; Berlin, 96-97; Ph.D., Hopkins, 99. *Sect. director*, U. S. Weather Bur., 83-; instr. meteorol., Hopkins, 97-98, assoc., 98-09; *in charge* P. R. sect., U. S. Climatol. Service, 09-12, *West Indies and Caribbean Service*, U. S. Weather Bur., 19- Chief instr. sch. meteorol., Sig. C, 18. Meteorologist, Md. State Weather Service, 00-19; mem. scientific exped. to Bahama Islands, 03; Ziegler Arctic Relief Party, 05; Int. Commission for Sci. Aeronautics, 07-. A.A.; Ass. Geog. (sec'y, 19); Ecol. Soc.; Meteor. Gesell. Bibliography and history of meteorology; climatology; the climate of Baltimore; the climate of Porto Rico.
- Fasten, Dr. Nathan**, Oregon Agricultural College, Corvallis, Oregon. *Zoology*. Austria, Dec. 4, 87. B.S., Col. City of N. Y., 10; Ph.D., Wisconsin, 14. Prof. biol., Marshall, 10-11; asst. *zool.*, Wisconsin, 11-14; instr., Washington (Seattle), 14-19, asst. prof., 19-20; *assoc. prof.*, Oregon Col., 20-. Asst., Bur. Fisheries, Woods Hole, summer, 11; special investigator, Wis. Fish Commission, summers, 12-14; in charge invert. *zool.*, Puget Sound Biol. Sta., summers, 15, 16, 20. A.A.; Soc. Zool.; West. Soc. Nat.; Pacific Fisheries Soc. Cytology of Decapoda; parasites of fishes.
- Fath, Prof. E(dward) A(rthur)**, Carleton College, Northfield, Minn. *Astrophysics*. Rheinischsheim, Germany, Aug. 23, 80. B.S., Carleton, 02; fellow, Lick Observatory, 06-09; Ph.D., California, 09. Instr. math, Wilton, 02-04; Redfield, 04-05; astron., Illinois, 05-06; asst. astronomer, Mt. Wilson Solar Observatory, 09-12; director, Beloit Observatory, 12-14; pres, Redfield, 14-20; *prof. math. and astron.*, Carleton, 20-. Assoc. ed., 'Popular Astron.', 20-. A.A.; Astron. Soc.; fel. Royal Astron. Soc. Zodiacal light; nebulae; spectra of nebulae and star clusters.
- Faught, Prof. J(ohn) B(rookie)**, Yankton College, Yankton, S. Dak. *Mathematics*. Oaktown, Ind., Feb. 28, 63. A.B., Indiana, 93, A.M., 95; Chicago, 96-97; Ph.D., Pennsylvania, 99. Prof. *math.*, Vincennes, 93-94; asst. prof., Indiana, 94-00; *prof.*, North. State Nor. Sch., Mich., 00-10; West. State Nor. Sch., Mich., 10-14; Kent Nor. Col., 14-20; *Yankton*, 20-. A.A.; Math. Ass.; Math. Soc.
- Faull, Prof. J(oseph) Horace**, University of Toronto, Toronto, Can. *Botany*. L'Anse, Mich., May 3, 70. A.B., Toronto, 98, 00-01; Austin fellow, Harvard, 01-03, Ph.D., 04, 09-10. Master math, Albert, 98-00; lecturer *bot.*, Toronto, 02-07, assoc. prof., 07-18, *prof.*, 18-. A.A.; Bot. Soc.; Phytopath. Soc.; fel. Royal Soc. Can. (pres, E, 19); Can. Inst. (ed., 'Trans.', 17-). Cytology; mycology; plant pathology; anatomy of ferns.
- Faust, Dr. Ernest Carroll**, Union Medical College, Peking, China. *Parasitology*. Carthage, Mo. A.B., Oberlin, 12; A.M., Illinois, 14, Ph.D., 17. Research asst. parasitol., Illinois, 12-14, instr. *zool.*, 17-19; *assoc. parasitol.*, Union Med. Col., Peking, 19-. A.A.; Ill. Acad. Morphology and life history of digenetic trematodes.
- Faville, Prof. A(lpheus) D(avis)**, Laramie, Wyo. *Animal husbandry*. Lake Mills, Wis., Feb. 27, 80. B.S., Lawrence, 02; Wisconsin, 06-08, M.S., 15. Instr. high sch., Lake Mills, Wis., 02-03; *prof. animal husbandry*, Wyoming, 08-, *director*, Exp. Sta., 18-. Soc. Animal Production. Stock feeding and management, especially in Wyoming.
- Fawcett, Prof. H(oward) S(amuel)**, Citrus Experiment Station, Riverside, Calif. *Plant pathology*. Salem, Ohio, April 12, 77. B.S., Iowa State, 05; M.S., Florida, 08; Ph.D., Hopkins, 18. Asst. bot. and hort., Florida, 05-06; plant pathologist, Fla. Exp. Sta., 06-12; Calif. State Commission Hort., 12-13; *assoc. prof. plant path.*, California, 13-18, *prof.*, 18-. A.A.; Phytopath. Soc.; West. Soc. Nat.; St. Louis Acad. Temperature relations of certain parasitic fungi; fungus parasites of insects; citrus diseases.
- Fay, Dr. Henry**, 11 Worthington Road, Brookline, Mass. *Chemistry, Metallography*. Williamsburg, Pa., Jan. 12, 68. A.B., Lafayette, 89, A.M., 92, Sc.D., 15; Ph.D., Hopkins, 95. Lecture asst., Hopkins, 93-95; instr. anal. chem., Mass. Inst. Tech., 95-00, asst. prof. anal. chem. and metallog., 00-05, *assoc. prof. anal. chem.*, 05-07, *prof.*, 07-. A.A.; Chem. Soc.; Inst. Metals; Soc. Test. Mat.; Am. Acad.; British Iron and Steel Inst. Analytical chemistry; properties of metals and alloys; manganese sulphid and slag as causes of steel rail breakages; effect of heat

treatment on various kinds of steel and iron; microscopic examination of steel; erosion of large calibre guns.

Fay, Prof. Irving W(etherbee), 578 E. 21st St, Brooklyn, N. Y. *Chemistry*. Natick, Mass, Nov. 30, 61. A.B., Harvard, 86; Ph.D., Berlin, 96. Instr. sciences, Montpelier Sem, 86-87; chem. and physics, Belmont Sch, Calif, 87-93; *prof. chem.*, Ohio (Athens), 96-97; *Brooklyn Polytech*, 97- A.A.; Chem. Soc; fel. Brooklyn Inst. (pres, dept. chem); Chem. Gesell. Sugars and related acids and alcohols; temperature of reduction of metallic oxides by hydrogen and carbon monoxid; influence of concentrated sulphuric acid upon sulphate salts containing water of crystallization; red and white anilin salts of Congo red; application of electrolysis to detection of coal-tar dyes.

Fehr, Roy B(enner), 301 Grafton Ave, Dayton, Ohio. *Mechanical engineering*. Perkasio, Pa, Oct. 27, 90. B.S., Pa. State, 10, M.E., 12, M.S., 14. Special eng. apprentice, Westinghouse Machine Co, 10-11; teaching fellow eng, Pa. State, 11-12, instr. mech. eng. and electrochem, 12-15, asst. prof. mech. eng, 15-18, in charge various investigations, eng. exp. sta, Pa. State, 11-18; asst. physicist, *Recording and Computing Machine Co*, 18-19, *physicist*, 20- A.A.; Mech. Eng. Engineering thermodynamics; vertical pressure in earth; absorption of ultraviolet light; annealing of carbon steels; magnetic metals; explosions in grain dust; corrosion of metals and alloys; gas engines; heat transmission.

Feild, A(lexander) L(ittlejohn), Electro Metallurgical Co, Niagara Falls, N. Y. *Chemistry*. Oxford, N. C., Nov. 14, 90. A.B., North Carolina, 11; M.S., N. C. Col, 14. Asst. chemist, N. C. Exp. Sta, 13-14; junior physical chemist, U. S. Bur. Mines, Pittsburgh, 14-16; asst. metallurgist, 16-17; *research physical chemist*, Nat. Carbon Co, 18-20; *Electro Metal*, 20- A.A.; Chem. Soc; Physical Soc; Min. Eng; Faraday Soc. Ferrous metallurgy; electrometallurgy.

Feinberg, Dr. B(enjamin) G(eorge), College of the City of New York, New York, N. Y. *Chemistry*. New York, Aug. 16, 86. B.S., Col. City of N. Y., 06; A.M., Columbia, 10, Ph.D., 13. *Instr. chem. Col. City of N. Y.*, 16- A.A.; Chem. Soc; Chem. Teachers Club. Analysis and reactions of aldehydes.

Feingold, Dr. Gustave A(lexander), 37 Tremont St, Hartford, Conn. *Psychology, Education*. Russia, June 17, 83. B.S., Trinity (Conn), 11, M.S., 12; A.M., Harvard, 12, Ph.D., 14. Asst. philos. and psychol, Harvard, 12-14; psychol, Clark, 15-16; *instr. and consulting psychologist*, *Hartford Pub. High Sch*, 17- A.A.; Psychol. Ass. General and applied psychology; mental tests.

Fellers, Dr. Carl R(aymond), National Cannery Association, L. C. Smith Building, Seattle, Wash. *Bacteriology*. Hastings, N. Y., Oct. 4, 93. A.B., Cornell, 15; fellow, Rutgers, 15-17, M.S., 16, Ph.D., 17. Instr. bacter. and agron, N. J. Col, and asst, Exp. Sta, 17; sanit. bacteriologist, U. S. Pub. Health Service, 18; *bacteriologist*, *bur. chem.*, U. S. Dept. Agr, 19- Commissioned asst. sanitarian, U. S. Pub. Health Service, 19. Soc. Bact; Chem. Soc; Pub. Health Ass. Microbiol-

ogy of food products; sanitary science; agar agar; soy beans and soya oil; soil bacteria; soil Protozoa; bacteriology of fish.

Fellows, A(braham) Lincoln, 301 Custom House, Denver, Colo. *Civil engineering*. Kennebunk, Maine, Nov. 1, 64. A.B., Yale, 86. Various positions, 87-97; deputy state engineer, Colo, 97-98; res. hydrographer, U. S. Geol. Surv, 98-02; dist. engineer, U. S. Reclamation Service, 02-05; state engineer, N. Dak, 05-07; mem. and pres, Pub. Utilities Commission, Denver, 10-16; *irrig. engineer*, U. S. Dept. Agr, 18- Civil Eng; Water Works Ass; Munic. Eng; Nat. Highways Ass; New Eng. Water Works Ass. Irrigation; evaporation; water supplies; flood prevention.

Felsing, Prof. W(illiam) A(ugust), 3007 Washington Square, Austin, Tex. *Physical chemistry*. Denton, Tex, May 19, 91. A.B., Texas, 13, A.M., 15; Savage fellow, Mass. Inst. Tech, 17-18, Ph.D., 18. Tutor *chem*, *Texas*, 13-16, adj. prof, 18-19, *assoc. prof*, 19- Capt, C.W.S. Chem. Soc; Tex. Sci. Club. Equation of state; free energy and electromotive work; free energy of selenids.

Felt, Dr. E(phriam) P(orter), Geological Hall, Albany, N. Y. **Entomology*. Salem, Mass, Jan. 7, 68. Mass. Col, 91; B.S., Boston, 91; fellow, Cornell, 92-93, Se.D., 94. Teacher science, Clinton Liberal Inst, 93-95; asst. to state entomologist, N. Y., 95-98, *state entomologist*, 98- Collaborator, bur. entom, U. S. Dept. Agr; entom. ed, 'Country Gentleman,' 98-11; mem. supervisory board, 'Am. Year Book'; ed, 'Jour. Econ. Entom,' 08- Gold medal and three silver medals, Pan-Am. Expos, 01. A.A.; Ass. Econ. Entom. (pres, 02); Entom. Soc. (v. pres, 16); N. Y. Entom. Soc; Wash. Entom. Soc. Shade and forest tree insects; agricultural pests and gall insects.

Fennel, Dr. Charles T(heodore) P(iderit), Cincinnati College of Pharmacy, Cincinnati, Ohio. *Chemistry*. Cincinnati, Sept. 5, 54. Ph.G., Cincinnati Col. Pharmacy, 82, Phar.D., 90. *Prof. chem*, *Cincinnati Col. Pharmacy*, 86- State chemist, Ohio, 86-16. Chem. Soc. (pres, Cincinnati sect, 15); Pharmaceut. Ass. (chairman, sci. sect, 93). Iodin; general pharmacy.

Fenneman, Prof. Nevin M., University of Cincinnati, Cincinnati, Ohio. **Geology*. Lima, Ohio, Dec. 26, 65. A.B., Heidelberg (Ohio), 83; A.M., Chicago, 00, Ph.D., 01. *Prof. physical science*, Colo. State Nor. Sch, 92-00; geol, Colorado, 02-03; Wisconsin, 03-07; *geol. and geog*, *Cincinnati*, 07- Assoc. geologist, U. S. Geol. Surv; v. chairman, div. geol. and geog, Nat. Research Council; in charge, scientific work on Africa for inquiry preparatory to Paris Peace Conf. A.A.; Geol. Soc; Ass. Geog. (pres, 18); Ohio Acad. Work of waves on shores; survey of Wisconsin lakes; oil fields of Colorado and the Gulf states; areal and economic geology in Colorado, Missouri and Ohio; physiographic provinces of the United States.

Fenner, Dr. C(larence) N(orman), Geophysical Laboratory, Washington, D. C. *Geology*. Near Paterson, N. J., July 19, 70. E.M., Columbia, 92, A.M., 09, Ph.D., 10. Mining geologist, U. S. Can, Mex. and S. Am, 92-07; *petrologist*, *geophys.*

- lab, Carnegie Institution, 10— In charge, optical glass plant, W. I. B., 17–18. N. Y. Acad. exped. to P. R., 14; geologist, Nat. Geog. Soc. exped. to Mt. Katmai, Alaska, 19. A.A.; Geol. Soc.; Physical Soc.; Am. Geog. Soc.; Min. Eng.; Seismol. Soc.; N. Y. Acad.; Wash. Acad.; Wash. Geol. Soc.; Wash. Philos. Soc.; Wash. Petrol. Club. Geology of New Jersey Trias; zeolitic and silica minerals; ore deposition; gneisses of New Jersey; igneous and metamorphic rocks of District of Columbia; volcanoes; optical glass.
- Fenner, Robert C(oyner),** Cutler-Hammer Mfg. Co, Chicago, Ill. *Electrical engineering.* Baltimore, Md., Aug. 28, 80. M.E., Cornell, 03. Instr. physics, Cornell, 03–06; district manager, Cutler-Hammer Mfg. Co, Boston, 06–09, Chicago, 09–15; treas., George Zucker Co, 15–17; v. pres., A. P. Munning and Co, 17–; sec'y, Roth Bros. Co, 19–
- Fenninger, W(illiam) N(orman),** Brooklyn Edison Co, Inc, 360 Pearl St, Brooklyn, N. Y. *Physics.* Gap, Pa, Feb. 28, 89. Ph.B., Franklin and Marshall, 10; fellow, Ohio State, 11–13, A.M., 13. Asst. instr. physics, Pratt, 13–15, instr., 15–19; educ. director, Brooklyn Edison Co, Inc, 19— Assoc. Physical Soc. Hall effect in mercury; variation of stray power losses in a generator and motor with change of load.
- Fenton, Dr. F(rederick) A(zel),** Iowa State College, Ames, Iowa. *Entomology.* Willimantic, Conn., Nov. 4, 92. A.B., Clark, 14; M.S., Wisconsin, 15; fellow, Ohio State, 16–18, Ph.D., 18. Scientific asst., bur. entom., U. S. Dept. Agr., 15–16; asst. chief, entom. sect., Iowa Exp. Sta., 19— Deputy state nursery inspector, Wis., summer, 15; field agent, bur. plant indust., U. S. Dept. Agr., 18. A.A.; Entom. Soc.; assoc. mem. Ass. Econ. Entom. Scale insects (Coccidae); parasites of leaf-hoppers (Hymenoptera).
- Ferguson, Alexander McGowen,** Sherman, Tex. *Botany.* Belton, Tex., Jan. 7, 74. B.S.H., Tex. Col., 94, M.S., 96; Mo. Bot. Garden, 97–98; Cornell, 01–02. Asst. prof. hort. and mycol., Tex. Col., 99–00; instr. bot., Texas, 00–06; manager, Tex. Seed Breeding Farms, 06–08; pres., *Ferguson Seed Farms, and Ferguson Pub. Co.*, 08— Special agent, U. S. Dept. Agr., 03–04, 08–09; supply prof. agr., Okla. Col., 09–10. A.A.; Pomol. Soc.; Soc. Agron.; Soc. Hort. Sci.; fel. Tex. Acad. Crotons of the United States; ant fungus gardens; embryology of Ephedra; plant physiology; fungi cultivated by ants of Texas; flora of Austin quadrangle; mushrooms.
- Ferguson, Dr. A(lfred) L(ynn),** Packard Road, Ann Arbor, Mich. *Chemistry.* Grass Lake, Mich., 84. A.B., Michigan, 08, A.M., 09, Ph.D., 15. Principal, high sch., 04–07; supt., 09–10; private research asst., 10–11; asst. chem., Michigan, 11–15, instr., 15— Chem. Soc.; Electrochem. Soc. Physical chemistry; electrochemistry.
- Ferguson, Prof. George O(scar), Jr,** University, Va. *Psychology.* Leesburg, Va., Nov. 16, 85. A.B., William and Mary, 07; A.M., Columbia, 11, Ph.D., 17. Adj. prof. philos. and educ., William and Mary, 07–11, prof. philos. and psychol. and assoc. prof. educ., 11–16; assoc. prof. psychol. and educ., Colgate, 16–19; prof. educ. psychol., Virginia, 19— Principal, William and Mary Nor. Acad., 13–16. Lieut., Sanit. C., 17. Psychol. Ass. Psychology of the negro; mental tests.
- Ferguson, Henry G(ardiner),** Geological Survey, Washington, D. C. *Geology.* San Rafael, Calif., June 21, 82. A.B., Harvard, 04, B.S., 05, A.M., 06. Asst. geologist, Cleveland Cliffs Iron Co, 06–07; econ. geologist, Bur. Science, P. I., 07–10; U. S. Geol. Surv., 11— Philippine geology and physiography; economic geology of the United States.
- Ferguson, Dr. J(eremiah) S(weetser),** 330 W. 28th St, New York, N. Y. *Histology.* Searsport, Maine, May 31, 71. B.S., Maine, 89, M.S., 92; M.D., N. Y. Univ., 92. Asst. histol., N. Y. Univ., 92–96, instr., 96–98; med. col., Cornell, 98–08, asst. prof., 08–13, pediat., 19—, sec'y, 09— Tutor physiol., N. Y. Univ., 97–98. A.A.; Ass. Anat.; N. Y. Acad. Med.
- Ferguson, Prof. J(ohn) A(rden),** State College, Pa. *Forestry.* Canandaigua, N. Y., Dec. 23, 73. A.B., Hamilton, 96, A.M., 03; M.F., Yale, 08. Teacher, Brooklyn Polytech., 96–97; prep. sch., Rutgers, 98–06; asst. prof. forestry, Pa. State, and asst. forester, Pa. Exp. Sta., 08–11; prof. forestry, Missouri, 11–12, Pa. State, 13— A.A.; Forestry Ass.; Soc. Foresters. Reforestation of denuded lands; preservative treatment of timber with creosote.
- Ferguson, J(ohn) B(right),** University of Toronto, Toronto, Can. *Physical chemistry.* Londesborough, Ont., Nov. 2, 89. B.A., Toronto, 12. Physical chemist, geophys. lab, Carnegie Institution, 12–19; West. Elec. Co., 19–20; assoc. prof. research chem., Toronto, 20— Manufacturer optical glass, W. I. B., 17–18. Chem. Soc.; Wash. Acad.; Wash. Philos. Soc. Inorganic analytical chemistry; silicate systems; gas equilibria; high temperature technic; Bucher cyanid process; ternary systems of silica, alumina, magnesia and lime.
- Ferguson, Louis (Aloysius),** 72 W. Adams St, Chicago, Ill. *Electrical engineering.* Dorchester, Mass., Aug. 67. B.S., Mass. Inst. Tech., 88. Elec. engineer, Chicago Edison Co, 90–97, gen. supt., 97–02, second v. pres., 02–07; Commonwealth Elec. Co, 02–07; v. pres., *Commonwealth Edison Co.*, 07— Lecturer, Wisconsin. Elec. Eng. (pres., 08, 09); Nat. Elec. Light Ass. (pres., 02); Franklin Inst. Electric lighting; acetylene gas as an illuminant; economy in distribution of electric energy; underground electric construction; relation of candle-power, energy, current and voltage of incandescent lamps; rates for electrical energy; centralization of power supply.
- Ferguson, Dr. Margaret C(lay),** Wellesley, Mass. *Botany.* Phelps, N. Y., Aug. 20, 63. Wellesley, 89–91; B.S., Cornell, 99, fellow, 99–00, Ph.D., 01. Teacher and principal, pub. schools, 86–88; dept. science, Harecourt Place Sem, Gambier, Ohio, 92–93; instr. bot., Wellesley, 94–96, 01–04, assoc. prof., 04, prof. and head of dept., 05— Asst. bot., summer sch., Cornell, 01, 02, instr., 03, 04. A.A.; Bot. Soc.; Micros. Soc. (v. pres., 14); Boston Soc. Nat. Hist. Fertilization and related phenomena; germination of the spores of basidiomycetous fungi; spongy tissue of Strasburger; life history of Pinus.

Ferguson, Dr. Meade, 28 N. Ninth St, Richmond, Va. *Bacteriology*. Appomattox, Va, March 17, 69. B.S., Va. Polytech, 96, M.S., 98; Ph.D., Göttingen, 02. Assoc. prof. bacter., Va. Polytech, 02-08; *bacteriologist*, Va. State Health Dept., 08- Consulting bacteriologist, Norfolk and West. R. R., 04-08. Soc. Bact.; Micros. Soc.; Pub. Health Ass. Fermentation and decomposition of milk; nitrogen assimilating and denitrifying bacteria; soil inoculation; sanitary aspects of the oyster industry in Virginia; streptococci serum treatment for follicular tonsillitis.

Ferguson, Prof. Olin Jerome, 645 N. 30th St, Lincoln, Nebr. *Electrical engineering*. Annawan, Ill, Nov. 21, 75. B.S.(E.E.), Nebraska, 03; M.E.E., Union, 09. Instr. *elec. eng.*, Union, 05-06, asst. prof., 06-10, assoc. prof., 10-12; *prof.*, Nebraska, 12-, *dean*, *col. eng.*, 20- Elec. Eng.; Elec. Ry. Ass.; Eng. Educ.; Illum. Eng. Soc.; Nat. Elec. Light Ass. Synchronous converters; three-wire generators; transmission and distribution of electric power.

Fergusson, S(terling) P(rice), U. S. Weather Bureau, Washington, D. C. *Meteorology*. Dixon's Spring, Tenn, Nov. 8, 68. Pub. schools. Asst., Blue Hill Observatory, 87-11; *prof. meteorol.*, Nevada, and assoc. meteorologist, Exp. Sta., 11-16; *meteorologist*, U. S. Weather Bureau, 16-, *in charge, testing lab*, 17- A.A.; Wash. Philos. Soc.; Boston Sci. Soc.; Appalachian Mt. Club. Anemometry; apparatus for aerology; meteorology of total solar eclipses; exploration of atmosphere with kites and balloons; hygrometry; relation of wind to aeronautics.

Fernald, Prof. C(harles) H(enry), Amherst, Mass. *Entomology*. Mt. Desert, Maine, March 16, 38. A.M., Bowdoin, 71; Ph.D., Maine, 86. Principal, Litchfield Acad., Maine, 65-66; Houlton Acad., Maine, 66-71; *prof. nat. hist.*, Maine, 71-86; *zool.*, Mass. Col., 86-10, *director*, *grad. sch.*, 08-10, *hon. director*, 10- Acting pres., Mass. Col., 91-92. A.A.; Ass. Econ. Entom. (pres, 96); Boston Soc. Nat. Hist.; fel. London Entom. Soc. Insects; Crambidae and Pterophoridae of North America; Pyralidae of North America; Tortricidae.

Fernald, Dr. Grace M(axwell), 1311 McCollum St, Los Angeles, Calif. *Psychology*. Clyde, Ohio, Nov. 29, 79. A.B., Mt. Holyoke, 03, A.M., 05; Bryn Mawr, 04-06; fellow, Chicago, 06-07, Ph.D., 07. Asst. psychol. and educ., Bryn Mawr, 07-08; acting head, dept. psychol., Lake Erie, 08-09; asst. director, Chicago Psychopathic Inst., 09; director, psychol. lab., State Nor. School, Los Angeles, 09-18; *asst. prof. psychol.*, California (south. branch), 18- Psychol. Ass. Peripheral vision; Purkinje phenomena in peripheral vision; delinquent children.

Fernald, Dr. H(enry) T(orsey), Amherst, Mass. *Entomology*. Litchfield, Maine, April 17, 66. B.S., Maine, 85; Wesleyan, 85-86; M.S., Maine, 88; Ph.D., Hopkins, 90. Prof. *zool.*, Pa. State, 90-99; state zoologist, Pa., 98-99; *prof. entom.*, Mass. Col., 99- State nursery inspector, Mass., 02-18. A.A.; Soc. Nat.; Entom. Soc.; Ass. Econ. Entom. Economic entomology; injuries of insecticides to foliage; Sphecidae of America.

Fernald, Prof. Mabel R(uth), 509 15th Ave, S. E., Minneapolis, Minn. *Psychology*. Springfield,

Ohio, May 7, 83. A.B., Mount Holyoke, 06; Ph.D., Chicago, 10. Instr. prep. dept., Denison, 06-07; psychol., Chicago Nor. Col., 10-14; psychologist, Lab. of Social Hygiene, Bedford Hills, N. Y., 14-18; S. G. O., 18-19; *asst. prof. psychol.*, Minnesota, 19- A.A.; Psychol. Ass. The diagnosis of mental imagery; mental tests; delinquency.

Fernald, Prof. M(errick) L(yndon), Cambridge, Mass. **Botany*. Orono, Maine, Oct. 5, 73. B.S., Harvard, 97. Asst., Gray Herbarium, Harvard, 91-02, instr. bot., Harvard, 02-05, asst. prof., 05-15, *Fisher prof. nat. hist.*, 15- Instr. bot., Alstead Sch. Nat. Hist., N. H., 99-01; assoc. ed., 'Rhodora,' 99- A.A.; Bot. Soc.; Ass. Geog.; Am. Acad.; New Eng. Bot. Club. Relationships and distribution of higher plants of North America; relations of North American and old world plants; systematic and geographic botany of North America, especially New England and eastern Canada and Newfoundland.

Fernald, Prof. R(obert) H(eywood), University of Pennsylvania, Philadelphia, Pa. *Mechanical engineering*. Orono, Maine, Dec. 31, 71. B.M.E., Maine, 92; Mass. Inst. Tech., 92-93; M.E., Case, 98; fellow, Columbia, 00-02, A.M., 01, Ph.D., 02. Instr. math. and mech. eng., Case, 93-96, asst. prof., 96-01; *prof. mech. eng.*, Washington (St. Louis), 02-07; Case, 07-12; *Whitney prof. dynamical eng.*, Pennsylvania, 12- Engineer in charge, tech. branch, U. S. Geol. Surv., 04-10; consulting engineer, U. S. Bur. Mines, 10- Mech. Eng. (v. pres, 19); Eng. Educ.; Soc. Test. Mat.; Franklin Inst. Gas engine investigations; conservation of the fuel resources of the United States; producer-gas for power purposes; low grade fuels in gas producers; combustion of fuels; the engineering of power plants.

Fernandez, Dr. Francisco M(aria), Prado 105, Havana, Cuba. *Medicine*. Matanzas, Cuba, June 18, 86. B.S., Matanzas Inst., 00; M.D., Columbia, 08; Havana, 08. Visiting ophthalmologist, San Lazaro Hosp. for Lepers, 10; *ophthalmologist*, Insane Asylum, 13-16; *Benéfica Hosp.*, 13- Delegate Int. Cong. Sch. Hygiene, Paris, 10. Acad. Ophthal. and Oto-Laryngol; Am. Med. Ass.; Cuban Ophthal. Soc. (sec'y, 11); Havana Soc. Clin. Studies. Trachoma; ocular tuberculosis; ocular leprosy; auto-serum therapy.

Fernberger, Prof. Samuel W(eiller), Clark University, Worcester, Mass. *Psychology*. Philadelphia, Pa., June 4, 87. B.S., Pennsylvania, 08, A.M., 09, Ph.D., 12. Asst. psychol., Pennsylvania, 08-10, instr., 10-12; *asst. prof. exp. psychol.*, Clark, 12- A.A.; Psychol. Ass. Experimental psychology; psychophysical measurement methods.

Fernekes, Dr. G(ustave), East Liverpool, Ohio. *Chemistry*. Milwaukee, Wis., Feb. 10, 78. B.S., Wisconsin, 00, fellow, 02-03, Ph.D., 03; Berlin, 00-02. Instr. quant. anal., Mich. Col. Mines, 03-07; *Carnegie Inst. Tech.*, 07-11, *indust. research*, 11-; *city chemist*, East Liverpool, Ohio; *research chemist*, Am. Wiremold Co.; *National Tube Co.* Asst. instr., Wisconsin. A.A.; Chem. Soc. (sec'y, Pittsburgh sect). Industrial chemistry.

Fernow, Prof. B(ernhard) E(duard), University of Toronto, Toronto, Can. *Forestry*. Inowrac-

- law, Prussia, Jan. 7, 51. Forest Acad, Münden, 70-73; Königsberg, 74; LL.D., Wisconsin, 96; Queen's (Can.), 03; Toronto, 20. Chief, forestry div, U. S. Dept. Agr, 86-98; director, N. Y. State Col. Forestry, Syracuse, 98-03; dean, faculty of forestry, Toronto, 07-19, *emer. prof.*, 19- Hon. curator, U. S. Nat. Museum, 87-; mem. jury awards, Columbian Expos, 93; Pan-Am. Expos, 01; La. Purchase Expos, 04; chief, forestry dept, Atlanta Expos, 95; mem. Commission of Conservation of Can. A.A. (sec'y, F, 88, I, 90, 91, v. pres, 95); Forestry Ass. (sec'y, 84-89, v. pres, 98-); Soc. Foresters (pres, 16); Soc. Prom. Agr. Sci; life mem. Min. Eng; Soc. Can. Foresters (v. pres, 08-); British Arboric Soc; hon. mem. Swedish Forest. Ass; hon. mem. St. Petersburg Acad. Timber physics; economics; forest meteorology.
- Ferree, Dr. C(larence) E(rrol)**, Bryn Mawr, Pa. **Psychology*. Sidney, Ohio, April 11, 78. A.M., Ohio Wesleyan, 00, M.S., 02; Sage fellow, Cornell, 02-03, Ph.D., 09. Asst. psychol, Cornell, 03-05; instr. physics and exp. psychol, Arizona, 05-06; asst. psychol, Cornell, 06-07; lecturer, Bryn Mawr, 07-09, assoc, 09-12, assoc prof. and director psychol. lab, 12-17, *prof.*, 17-A.A.; Psychol. Ass; Illum. Eng. Soc; Optical Soc; Ass. Prof. Lighting; hygiene of the eye; methods of refraction; methods of photometry; ocular functions in aviation and navy signal service; color sensitivity in the peripheral retina; spectroscopic, optical and ophthalmological apparatus.
- Ferree, Mrs. C. E. (Dr. Gertrude Rand)**, Bryn Mawr, Pa. *Psychology*. New York, N. Y., Oct. 29, 86. A.B., Cornell, 08; fellow, Bryn Mawr, 09-11, A.M., Ph.D., 11, fellow, 11-12, Sarah Berliner research fellow, 12-13. Reader *exp. psychol.*, Bryn Mawr, 13-14, *assoc.*, 14-A.A.; Psychol. Ass; Ass. Prof; Optical Soc. Experimental and applied psychology; lighting in relation to the eye; hygiene and refraction of the eye; photometry; color sensitivity; psychological optics; ocular functions in aviation and navy signal service; optical and ophthalmological apparatus.
- Ferris, Prof. C(harles) E(dward)**, Kingston Pike, Knoxville, Tenn. *Mechanical engineering*. Napoleon, Ohio, Sept. 23, 64. B.S., Mich. Agr. Col, 90; B.S., McGill, 04. Civil engineer, Mich. and Ky, 90-92; instr. mech. eng. and drawing, Tennessee, 92-98, *prof.*, 98-03, *mech. eng.*, 03-, *dean, col. eng.*, 15- Mech. Eng. Internal cooling of the gas engine; descriptive geometry.
- Ferris, G(ordon) F(loyd)**, Stanford University, Calif. *Entomology*. Bayard, Kans, Jan. 2, 93. A.B., Stanford, 16, A.M., 18. Asst. *entom.*, Stanford, 16-17, *instr.*, 17- Mem. exped. to Lower Calif, summer, 19. Entom. Soc; Ass. Econ. Entom; West. Soc. Nat; Pacific Coast Entom. Soc. Scale insects; ectoparasites of birds and mammals.
- Ferris, Dr. H(arry) B(urr)**, 395 Saint Ronan St., New Haven, Conn. *Anatomy, Anthropology*. Old Greenwich, Conn, May 21, 65. A.B., Yale, 87, M.D., 90. Instr. *anat. med. dept.*, Yale, 91-92, asst. prof, 92-95, *prof.*, 95- A.A.; Soc. Nat; Ass. Anat; Soc. Zool; Am. Med. Ass; Conn. Acad. Mitosis in cancer; chronic internal hydrocephalus with absence of optic chiasm; cerebrospinal fluid; the Indians of Cuzco and the Opurimac.
- Ferriss, James H(enry)**, Joliet, Ill. *Biology*. Yorkville, Ill. Nov. 18, 49. *Editorial writer*, Joliet, Ill. Ill. Acad; St. Louis Acad. American ferns and land shells; exploring Arizona.
- Ferry, Prof. E(rvin) S(idney)**, 629 South St., La Fayette, Ind. **Physics*. Croydon, N. H., June 14, 68. B.S., Cornell, 89, 91-93; Hopkins, 93-94; Upsala, 97-98. Prof. nat. science, Kalamazoo, 89-91; instr. *physics*, Wisconsin, 95-99; *prof.*, Purdue, 99- Physical Soc; Astron. Soc; Electrochem. Soc; Soc. de Physique. Radiation; physiological optics; specific inductive capacity; pyrometry.
- Ferry, Pres. Frederick C(arlos)**, Hamilton College, Clinton, N. Y. *Mathematics*. Braintree, Vt, Jan. 22, 68. A.B., Williams, 91, A.M., 94, LL.D., 17; A.M., Harvard, 95; Ph.D., Clark, 98; Christiania, 98-99; hon. Sc.D., Colgate, 09; LL.D., Hamilton, 17. Instr. math. and classics, Williams, 91-94, asst. prof. math, 99-02, *prof.*, 02-17, dean of faculty, 02-03, dean of col, 03-17; *pres.*, Hamilton, 17- Nat. Conference Committee on Standards of Colleges and Secondary Schools; trustee, Teachers Ins. and Annuity Ass. A.A.; Math. Soc; Math. Ass; Ass. Colleges State of N. Y. (pres). Geometry; the special geometries of particular surfaces; geometry on the conoidal cubic cone and on the cubic scrolls of the first kind and of the second kind.
- Fessenden, R(eginald) A(ubrey)**, 45 Waban Hill Road, Chestnut Hill, Mass. **Physics, Engineering*. Bolton, Que, Oct. 6, 66. Bishop's Col, Que. Principal, Whitney Inst, Bermuda, 85-86; inspecting engineer, Edison Machine Works, 86-87; head chemist, Edison Lab, 87-90; electrician, Westinghouse Elec. and Mfg. Co, 90-91; prof. elec. eng, Purdue, 92-93; elec. eng. and post-grad. math, Pittsburgh, 93-00; special agent, U. S. Weather Bur, 00-02; gen. manager, Nat. Elec. Signaling Co, 02-10; *consulting engineer*, Submarine Sig. Co, 10- Soc. Prom. Quaternions; Archeol. Inst. Electrostatic doublet theory of matter; qualitative mathematics; nature of quantum; nature of electron; gravitation and inertia; hysteresis in social, moral and economic functions; design of electrical machines, instruments and methods; wireless telephone; sine wave and commutated wave telegraphy; heterodyne system; undamped radiation; wireless pelorus; sound ranging for aeroplane, submarine, artillery and icebergs; echo sounding; Doppler effect aeroplane log.
- Fettermann, Prof. J(ohn) C(olvin)**, University of Pittsburgh, Pittsburgh, Pa. *Biology*. Mt. Lebanon, Pa, Dec. 29, 75. Ph.B., Pittsburgh, 96, Ph.M., 99. Instr. *biol.*, Pittsburgh, 97-08, *prof.*, 08-, *dean, sch. lib. arts.*, 10- Bacteriologist, Rieck-McJunkin Co. A.A.; Soc. Baet; West. Pa. Bot. Soc; Pittsburgh Acad. Bacteriology of milk and milk products; water supply.
- Fetterolf, Dr. Daniel (Webster)**, 25 Cleveland Terrace, East Orange, N. J. *Chemistry*. Deep Creek Valley, Pa, March 28, 63. Ph.G., Col. Pharmacy, 87; M.D., Pennsylvania, 93. Asst. demonstrator chem. med, dental and vet. departments, Pennsylvania, 93-97, demonstrator,

- 97-11; *director, lab, U.S.A., 11-* Chem. Soc; Am. Med. Ass. The Lloyd reaction for morphin and other alkaloids, for heroin and veratrin; diabetic foods; antienzyme in tapeworm; laboratory manual.
- Fetterolf, Dr. George**, 2047 Chestnut St, Philadelphia, Pa. *Anatomy*. Collegeville, Pa, March 31, 69. A.B, Pennsylvania, 87, M.D, 91; Sc.D, Ursinus. *Asst. prof. anat, Pennsylvania*. *Laryngologist*, various hospitals. *Ass. Anat*; *Laryngol. Ass*; *Phila. Col. Physicians*. *Clinical anatomy*; the chest; the tonsils.
- Fettke, Prof. Cha(rie)s R(einhard)**, Carnegie Institute of Technology, Pittsburgh, Pa. *Geology, Petrology*. San Francisco, Calif, March 25, 88. B.S, Washington (Seattle), 10; A.M, Columbia, 11, Ph.D, 14. *Field asst, Wash. State Geol. Surv.*, 09-11; *asst. geol, Columbia*, 11-13; *instr. geol, Carnegie Inst, Tech*, 13-18, *asst. prof.*, 18-20, *assoc. prof.*, 20- *Instr. geol, Columbia*, summer, 12; *geol. aid, U. S. Geol. Surv.*, 13; *geologist, Pa. Topog. and Geol. Surv.*, 14-15, 17-19; *Nat. Hist. Surv.*, P. R, 16; *cooperating geologist, Pa. Geol. Surv.*, 19- *A.A.*; *Ass. Petrol. Geol*; *fel. Mineral Soc*; *Min. and Metal. Eng*; *Ceramic Soc*; *N. Y. Acad. Economic geology*; *Manhattan schist*; *limonite deposits*; *glass*; *geology of Porto Rico*; *magnesia bricks*; *oil resources of Pennsylvania*; *oil shales*.
- Fetzer, Prof. L(ewis) W(illiam)**, Dallas, Tex. *Physiology, Pharmacology*. Brooklyn, N. Y., Oct. 3, 78. *Cooper Union*, 00; *Ph.D, Munich*, 02; *M.D, George Washington*, 10; *Sc.D, Dallas*, 20. *Instr. bacter. and chief, biol. dept, U. S. Brewers' Acad.*, N. Y, 03-06; *instr. chem, George Washington*, 07; *physiol. chemist, Md. Exp. Sta.*, 07-09; *specialist biol. chem, office exp. stations, U. S. Dept. Agr.*, 09-15; *assoc. prof. path. chem, Georgetown*, 12-15; *prof. physiol. and biochem, Fordham*, 15-16; *pharmacol, Baylor*, 16-17, *physiol. and pharmacol*, 18- *Lieut, M. C.*, 17- *A.A.*; *Chem. Soc.* *Plant and animal chemistry and physiology*.
- Fewkes, Dr. J(esse) Walter**, Bureau of American Ethnology, Washington, D. C. **Ethnology*. Newton, Mass, Nov. 14, 50. A.B, Harvard, 75, A.M, Ph.D, 77; Leipzig, 78-80; LL.D, Arizona, 15. *Asst. museum comp. zool, Harvard*, 81-89; *ed, 'Jour. of Ethnol. and Archeol.'* 90-94; *ethnologist, Bur. Am. Ethnol.* 95-17, *chief*, 18- *Nat. Acad*; *A.A.*; *Soc. Nat*; *Anthrop. Ass.* (pres, 11); *Ass. Geog*; *Folk-lore Soc*; *fel. Am. Acad*; *Wash. Anthropol. Soc.* (v. pres, 07, pres, 09); *Wash. Acad.* (v. pres, 16); *Anthrop. Gesell.* *American archeology and ethnology*; *zoology*.
- Fieberger, Col. G(ustav) J(oseph)**, West Point, N. Y. *Engineering*. Akron, Ohio, May 9, 58. *Grad. U. S. Mil. Acad.*, 19, *Eng. Sch. of Application*, 79-82. *Officer, corps of engineers, U.S.A.*, 79-96; *instr. and later asst. prof. eng, U. S. Mil. Acad.*, 83-88, *prof.*, 96- *Mem. board of trustees, Thayer Eng. Sch, Dartmouth.* *Civil Eng.*
- Field, Miss Ada M(artitia)**, Peabody College, Nashville, Tenn. *Chemistry*. Climax, N. C, Sept. 30, 77. A.B, Guilford, 98; A.M, Washington (Seattle), 09; Columbia, 13. *Instr. science, Intermountain Inst, Weiser, Idaho*, 04-07; *prof. chem, Guilford*, 10-12; *asst. prof. home econ, Peabody Col. Teachers*, 14-16, *assoc. prof.*, 16- *Lecturer nutrition, Woman's Med. Col.*, 13-14. *Home Econ. Ass.* (mem. council, 17-); *S. Home Econ. Ass.* (pres, 17, sec'y-treas, 18). *Potable water supplies*; *coagulation of protein*.
- Field, Crosby**, 21 Burling Slip, New York, N. Y. *Chemical engineering*. Jamestown, N. Y, March 12, 89. B.S, N. Y. Univ, 09; M.E, Cornell, 12; M.S, Union, 14. *Engineer, Gen. Elec. Co, Schenectady*, N. Y, 12-14; *consulting engineer*, 14-15; *chief engineer, Standard Aniline Products, Inc.*, 15-17; *eng. manager, Nat. Aniline and Chem. Co.*, 19- *Lieut, capt. and major, ordnance dept*, 17-19. *Chem. Soc*; *Elec. Eng*; *Chem. Eng*; *Electrochem. Soc*; *Mech. Eng*; *N. Y. Chemists Club*. *Electrical conduction*; *chemical apparatus*; *lightning arresters*; *coherers*; *refrigeration*.
- Field, Dr. Cyrus W(est)**, 126 E. 64th St, New York, N. Y. *Pathology*. New York, N. Y, April 27, 78. M.D, Yale, 00. *Asst. path. lab, Presby. Hosp.*, N. Y. City, 00-03; *bacteriologist, research lab, Dept. Health*, N. Y. City, 03-08; *prof. path, Fordham*, 05-08; *path. and bacter, med. dept, Louisville*, 08-10; *asst. director, Bellevue and allied hospitals*, 10-15. *Tutor path, Columbia*, 02. *A.A.*; *Ass. Path. and Bact*; *Soc. Exp. Biol*; *Soc. Biol. Chem.* *Bacteriology*; *tetanus toxin*; *etiology of scarlet fever and measles*; *typhoid infection from oysters*; *colloidal chemistry and immunity*; *standard antigens for Wassermann reaction*.
- Field, Prof. Floyd**, Decatur, Ga. *Mathematics*. Salem, Oregon, Dec. 19, 73. A.B, Willamette, 97; A.B, Harvard, 00, A.M, 02. *Instr. math. and physics, Allen Sch, West Newton, Mass.*, 00-01; *Pa. State*, 02-03; *head, math. dept, Evanston Acad, Ill.*, 03-06; *adj. prof. math, Ga. Tech*, 06-07, *junior prof.*, 07-09, *prof. and head of dept.*, 09- *Math. Soc.*
- Field, Dr. George W(ilton)**, Cosmos Club, Washington, D. C. **Biology*. North Bridgewater, Mass, Sept. 29, 63. A.B, Brown, 87, A.M, 90; Ph.D, Hopkins, 92; *Smithsonian table, Naples Zool. Sta. and Munich*, 92-93. *Asst. biol, Hopkins*, 91-92; *assoc. prof. cellular biol, Brown*, 93-96; *biologist, R. I. Exp. Sta.*, 96-01; *instr. econ. biol, Mass. Inst. Tech.* and *director, Sharon Biol. Observatory*, 01; *biologist, Mass. Commission on Fisheries and Game*, 03, *chairman*, 04-16; *in charge, mammal and bird reservations, biol. surv, U. S. Dept. Agr.*, 16-19; *biologist, Brazil Ministry of Marine*, 19- *Soc. Nat*; *Soc. Zool*; *Soc. Mammal*; *Mass. Audubon Soc*; *British Ass.* *Morphology and physiology of echinoderms*; *planktology*; *biology of birds*; *factors which determine sex and the secondary sex characteristics*; *removal of the odors and tastes in drinking water due to the presence of micro-organisms*; *biology of edible fish and shell-fish*.
- Field, Dr. Herbert Haviland**, K  llikerstr, 9, Z  rich, Switzerland. **Zoology, Anatomy*. Brooklyn, N. Y, April 25, 68. Brooklyn Polytech, 82-86; A.B, Harvard, 88, A.M, 90, Ph.D, 91; Freiburg, 91-92; Leipzig, 92-93; Paris, 93-95. *Director, Concilium Bibliographicum*, 95- *Hon. asst. zool, univ. museum, Harvard*, 02- *With*

- Am. Commission to Negotiate Peace, 19. A.A; Library Ass; Zool. Gesell; Anat. Gesell; Soc. zool. de France; Schweiz. Nat. Gesell; hon. mem. Leipzig Nat. Gesell; Zürich Nat. Gesell; Unione Zool. Ital. Development of the pronephric system, the vascular system and the spinal column; pronephros in Amphiuma; lymphatics of the frog; microscopic technique; scientific bibliography. [Died April 5, 21.]
- Field, Prof. I(rving) A(ngell)**, Clark College, Worcester, Mass. *Zoology*. Winona, Minn., June 16, 79. B.S. Denison, 03; Harvard, 03-06, A.M., 12; hon. fellow, Clark, 11-19, Ph.D., 13. Instr. ornith. Denison, 02-03; asst. zool. Harvard, 03-05, Austin teaching fellow, 05-06; prof. chem. and biol. West. Maryland, 06-11; instr. *biol.*, Clark Col., 11-13, asst. prof., 13-16, assoc. prof., 16-18, *prof.*, 18- Scientific asst., U. S. Bur. Fisheries, summers, 02-16, surv. mussel beds, North Atlantic Coast, summers, 17, 18. Seventh Int. Zool. Cong. Boston; fourth Int. Fisheries Cong., Washington, D. C. A.A; Fisheries Soc.; Wilson Ornith. Club. Ornithology; fisheries; biology and economic value of *Mytilus edulis*; algal gelatins.
- Field, Prof. Peter**, 904 Olivia Ave., Ann Arbor, Mich. *Mathematics*. Mitchell Co., Iowa, Sept. 1, 76. B.S. Minnesota, 96, M.S., 97; fellow, Cornell, 98-99, Ph.D., 02. Prof. *math.*, Carthage, 99-03; instr. *Michigan*, 03-07, asst. prof., 07-13, assoc. prof., 13-19, *prof.*, 19- Asst. math., Cornell, 01-02. A.A; Math. Soc. Analytical mechanics; forms of quintic curves; the circuits of a plane curve; plane quintic curve with five real cusps; theory of friction.
- Field, Prof. Richard M(ontgomery)**, Brown University, Providence, R. I. *Geology*. Jamaica Plain, Mass., April 21, 85. B.S., Harvard, 10, A.M., 14, Ph.D., 19. Asst. geol., Harvard, 15; lecturer and instr. geol., Brown, 16-19; asst. invert. paleont., museum comp. zool., Harvard, 18; *asst. prof. geol.*, Brown, 20- A.A; Paleont. Soc.; Boston Soc. Nat. Hist. Paleontology; stratigraphy; historical geology; X-ray photography of fossils; origin of limestones; intraformational structures; stratigraphy of Pennsylvania.
- Field, Robert F(ranklin)**, 132 Appleton St., Cambridge, Mass. *Physics*. Center Tuftsboro, N. H., July 10, 85. A.B., Brown, 06, A.M., 07; Harvard, 16. Instr. *physics*, 10-15; Harvard, 17- A.A; Physical Soc.; Radio Eng. High frequency resistance of coils and condensers; selective radio telegraphic sets.
- Field, William L(uske) W(ebster)**, Milton Academy, Milton, Mass. *Zoology*. Milton, July 17, 76. Harvard, 94-98. Instr. nat. science, *Milton Acad.*, 00-14, asst. head master, 14-17, *head master*, 17- Instr. Alstead Sch. Nat. Hist., summers, 99-04; ed., 'Psyche,' 04-09. A.A; Soc. Nat.; Entom. Soc.; New Eng. Bot. Club; Boston Soc. Nat. Hist.; Cambridge Entom. Club; Harvard Travellers Club; Harvard Teachers Ass; Harvard Eng. Soc. Experimental evolution; insects; variation; variation and inheritance in Lepidoptera.
- Fieldner, A(rno) C(arl)**, Bureau of Mines, Pittsburgh, Pa. **Chemistry*. Ney, Ohio, Dec. 12, 81. B.S., Ohio State, 06. Indust. fuel engineer and chemist, 06-07; asst. chemist, U. S. Geol. Surv. and Bur. Mines, 07-13; chemist in charge fuels, chem. lab, *Pittsburgh Exp. Sta.*, Bur. Mines, 13-17, *supervising chemist*, 19- Chemist in charge, gas mask research sect., Am. Univ. Exp. Sta., U. S. Bur. Mines, 17-18; major, C. W. S., 19. Chem. Soc. (chairman, Pittsburgh sect., 15, counselor, 16-18); Soc. Test. Mat.; West. Pa. Eng. Soc. Fuels; gas; coal and coke; coal ash and slags; gas masks.
- Fields, Dr. J(ohn) Charles**, University of Toronto, Toronto, Can. *Mathematics*. Hamilton, Can., May 14, 63. B.A., Toronto, 84; fellow, Hopkins, 85-86, fellow by courtesy, 86-89, Ph.D., 87; Paris, Göttingen and Berlin, 93-00. Prof. *math.*, Allegheny, 89-92; special lecturer, *Toronto*, 02-04, assoc. prof., 04-14, *prof.*, 14- A.A; Math. Soc.; fel. Royal Soc. Can. (pres, sect. III); Can. Inst. (pres, 19); fel. Royal Soc.; London Math. Soc.; Soc. math. de France. Algebraic functions and Abelian integrals; theory of the algebraic functions of one or more variables; theory of algebraic numbers.
- Fields, W(alter) S(amuel)**, U. S. Department of Agriculture, Washington, D. C. *Plant pathology*. Buffalo, N. Y., July 22, 86. B.S., Mich. Agr. Col., 13. Instr. plant path., Arkansas, 13-16, asst. prof., 16-18; asst. state pathologist, Ark., 13-18; exten. pathologist, Miss., 18-19; *path. inspector, fed. hort. board, U. S. Dept. Agr.*, 19- Phytopath. Soc.; Wash. Bot. Soc.
- Finch, J(ohn) W(ellington)**, 301 High St., Denver, Colo. *Geology*. Earlville, N. Y., Nov. 3, 73. A.B., Colgate, 97, A.M., 98; fellow, Chicago, 98-99. Instr. geol. and physics, Colgate, 98; geol., Chicago, 99; consulting geologist, 01-16; state geologist, Colo., 01-04; gen. manager, Goldfield Cons. Mines Co., 06-07; *v. pres. and gen. manager, N. Y. Orient Mines Co.*, 16- A.A; Min. Eng.; Colo. Sci. Soc.
- Finch, Prof. V(ernor) C(lifford)**, College Hills, Madison, Wis. *Geography*. Tecumseh, Mich., S3. B.S., Kalamazoo, 08; Chicago, 08; Ph.D., Wisconsin, 16. Instr., asst. prof. and later *assoc. prof. geog. Wisconsin*, 11- Asst. agr. geog., U. S. Dept. Agr., 15; special expert foreign trade and shipping, U. S. Shipping Board, 18-19. Economic and agricultural geography.
- Findlay, Prof. M(erlin) C(hamberlin)**, Parkville, Mo. *Anatomy*. Franklinville, N. Y., Oct. 24, 68. A.B., Hamilton, 92, A.M., 95; Chicago; Minnesota; Sc.D., Park, 17. Prof. *biol.*, Park, 92- A.A; Micros. Soc.; Health League.
- Findlay, Dr. William**, McMaster University, Toronto, Can. *Mathematics*. Gleanford, Ont., June 21, 74. B.A., McMaster, 96, M.A., 98; Ph.D., Chicago, 01. Tutor *math.*, Barnard, Columbia, 01-05; *prof.*, McMaster, 05- Math. Soc. Finite groups.
- Fine, Prof. H(enry) B(urchard)**, Princeton, N. J. **Mathematics*. Chambersburg, Pa., Sept. 14, 58. A.B., Princeton, 80; Ph.D., Leipzig, 85; LL.D., Williams, 09. Tutor *math.*, Princeton, 81-84, asst. prof., 85-90, *prof.*, 91-, *dean*, 03-12, *departments of science*, 12- Math. Soc.; Philos. Soc. Singularities of curves; functions defined by differential equations; number concept.

- Fine, Dr. Morris S.**, Calco Chemical Co, Bound Brook, N. J. *Pathological chemistry*. Bridgeport, Conn, Nov. 8, 86. Ph.B., Yale, 08, Ph.D, 11. Instr. path. chem, N. Y. Post-Grad. Med. Sch, 11-14, lecturer, 14-15, adj. prof, 15-17; *director lecturer, Calco Chem. Co*, 17- A.A.; Chem. Soc; Soc. Biol. Chem; Soc. Exp. Biol. Utilization of vegetable proteins; metabolism in pellagra; creatin, creatinin and uric acid metabolism and elimination; mineral metabolism; uremia.
- Fink, Prof. Bruce**, Miami University, Oxford, Ohio. **Botany*. Blackberry, Ill, Dec. 22, 61. B.S., Illinois, 87, M.S., 94; A.M., Harvard, 96; Ph.D., Minnesota, 99. *Prof. biol*, Upper Iowa, 92-03; *bot*, Grinnell, 03-06; *Miami*, 06- Instr. bot, Harvard, 96; ed, 'Mycologia'; lichenist, Minn. Bot. Surv, 96-03; in charge bot, marine sta, Washington (Seattle), 06. A.A.; Soc. Nat; Bot. Soc; Bot. Cent. States; Iowa Acad. (pres, 04); Ohio Acad. (v. pres, 10, pres, 12); Iowa Park and Forestry Ass; Ohio Forestry Ass. Nature and classification of lichens; Graphidaceae; classification of Ascomycetae.
- Fink, Dr. Colin G(arfield)**, 202d St. and Tenth Ave, New York, N. Y. **Electrochemistry*. Hoboken, N. J, Dec. 31, 81. A.B., Columbia, 03; Ph.D, Leipzig, 07. Asst. electrochem, Leipzig, 06-07; research chemist, Gen. Elec. Co, 07-17; *director, research lab, Chile Exploration Co*, 17- A.A.; Chem. Soc. (ed, sect. electrochem, 'Chem. Abstracts'); Electrochem. Soc. (pres, 17); Min. and Metal Eng; N. Y. Chemists Club; Faraday Soc; Soc. de Chim. indust; Bunsen Gesell. Kinetics of contact sulphuric acid; electrometallurgy; vacuum furnace metallurgy; tungsten; ductile tungsten and molybdenum; leading-in wires; insoluble anodes; corrosion; catalysis.
- Fink, David Ely**, Riverton, N. J. *Entomology*. Russia, Nov. 28, 82. B.S.A., Cornell, 11, M.S.A., 13. *Asst. entomologist, bur. entom*, U. S. Dept. Agr, 12- A.A.; Entom. Soc; Ass. Econ. Entom; Wash. Entom. Soc. Truck crop insects.
- Fink, Dr. G(ail) J.**, 724 Augustus Place, Niagara Falls, N. Y. *Chemistry*. Yountsville, Ind, June 19, 87. A.B., Wabash, 09; Ph.D, Cornell, 14. Asst. prof. chem, Iowa State, 15-16; *research chemist, Hooker Electrochem. Co*, 16- Chem. Soc.
- Finkel, Prof. B(enjamin) F(ranklin)**, 1227 Clay St, Springfield, Mo. *Mathematics, Physics*. Fairfield Co, Ohio, July 5, 65. B.S., Ohio Nor. Univ, 88; Chicago, summers, 95-00; special fellow, A.M., Pennsylvania, 04, Harrison fellow, 05-06, Ph.D, 06. Teacher, pub. schools, Ohio, 84-88; instr. math, Fostoria Acad, 89; principal, Gibson Acad, Tenn, 90; supt. schools, North Lewisburg, Ohio, 90-92; instr. math, Kidder Inst, 92-95; *prof. math. and physics, Drury*, 95-, director, summer sch, 16-18. Founder and ed, 'Am. Math. Monthly,' 94; in charge, dept. math, Colorado, summers, 13, 18. A.A.; Math. Soc; Math. Ass; London Math. Soc; Circolo Mat. di Palermo. Pure mathematics.
- Finlay, Prof. G(eorge) I(rving)**, 32 Waverly Place, New York, N. Y. *Geology*. Ulster Co, N. Y, July 9, 76. A.B., Harvard, 98; Ph.D, Columbia, 03. Asst. *geol*, Columbia, 01-03; *prof*, Colo. Col, 03-13; N. Y. Univ, 13- Asst. geologist, U. S. Geol. Surv, 01- Petrography; general geology; geologic folio of the Colorado Springs region.
- Finlay, J(ames) R(alpha)**, 45 Cedar St, New York, N. Y. *Mining engineering*. Blenheim, Can, Sept. 30, 69. A.B., Harvard, 91. Supt. mines, Minn, 95; Ecuador, 96-99; manager, Idaho, Colo, 00-04; *mining engineer*, 04-; *gen. manager, Goldfield Cons. Mines Co*, 10- Lecturer economics of mining, Harvard, 08- Min. and Metal. Soc. (sec'y); Min. Eng. Ore deposits; cost of mining.
- Finley, Prof. George William**, Greeley, Colo. *Mathematics*. Parallel, Kans, Nov. 22, 76. B.S., Kansas State, 96, M.S., 20. Teacher pub. schools, Kans, 97-00; supt. schools, Peru, Kans, 01-02; *prof. math*, prep. sch, Oklahoma, 02-12; *Colo. State Teachers Col*, 12- Math. Ass; Colo. Sci. Soc. Arithmetic.
- Finley, William Lovell**, 651 E. Madison St, Portland, Oregon. *Ornithology*. Santa Clara, Calif, Aug. 9, 76. A.B., California, 03. Lecturer for Nat. Ass. Audubon Societies. A.A.; mem. Ornith. Union; Oregon Audubon Soc. (pres). American birds; the California condor; birds of the desert areas.
- Fippin, Prof. Elmer O(tterbein)**, 918 C St, N. W, Washington, D. C. *Agriculture*. Columbus, Ohio, Sept. 18, 79. B.S., Ohio State, 00. Asst. bur. plant indust, U. S. Dept. Agr, 00-01, bur. soils, 01-05; asst. prof. soils, Cornell, 05-09, prof. soil tech, 09-13, exten. prof, 13-19; *manager, agr. dept, Nat. Lime Ass*, 19- Lecturer soils, Cornell, 04-05. A.A. Soil classification and surveying; physical properties of soil; soil granulation; lateral capillary movements of soil moisture; land drainage; lime in relation to soil improvement.
- Fireman, Dr. Peter**, 601 Cass St, Trenton, N. J. **Chemistry*. Lipovetz, Russia, April 4, 63. Odessa, 81; Königsberg, Zürich and Bern, 88-93, Ph.D, Bern, 93. Asst. chem, George Washington, 93-95, instr, 95-98, asst. prof, 98-01; prof, Mo. Sch. Mines, 01-02; chem. geologist, U. S. Nat. Museum, 01-06, in charge, chem. research lab, Alexandria, Va, 04-06; *mfg. chemist*, 06- A.A.; Chem. Soc. (pres, Wash. sect); Wash. Philos. Soc. Physical chemistry; preparation of organic phosphines; action of ammonium chlorid on certain chlorids; action of phosphonium iodid on polychlorids; replacement of three atoms of hydrogen by one of nitrogen in organic compounds; oxid pigments.
- Firket, Dr. Jean**, Johns Hopkins Medical School, Baltimore, Md. *Anatomy*. Liege, Belgium, Nov. 20, 90. M.D., Liege, 14. Prosector anat, Liege, 11-14; asst. res. officer, infectious diseases dept, Belgian Army, 17-19; *instr. anat, Hopkins*, 19- Ass. Anat; Soc. Belge de Biol. Physiological pathology; embryology of the urogenital system; histology and pathology of the kidney.
- Fischelis, Prof. Philipp**, 828 N. Fifth St, Philadelphia, Pa. *Histology, Embryology*. Odessa, Russia, Dec. 10, 57. Studied biol. under Metschnikof and Kowalewsky at Odessa; Leipzig, Königsberg and Berlin, 80-85; M.D., Berlin, 85. Instr. laryngol, Phila. Polyclinic, 94-02; demonstrator histol. and embryol, Medico-Chirurg.

- Col. Phila, 03-09, assoc. prof, 09-17; assoc. prof. and later *prof. histol. embryol. and gen. path, and director of laboratories, Temple*, 17- A.A.; Ass. Anat.; Am. Med. Ass.; New Russia Soc. Nat. Development of thyroid, thymus gland and lungs; reproduction and evolution; anatomy and histology of the mouth and teeth; building human intelligence.
- Fischer, Prof. Charles Albert**, Trinity College, Hartford, Conn. *Mathematics*. Wheaton, Ill, Oct. 3, 84. A.B, Wheaton (Ill), 05; A.M, Illinois, 10; fellow, Chicago, 11-12, Ph.D, 12. Instr. *math*, Wheaton (Ill), 08-09; Columbia, 12-19; *Seabury prof, Trinity (Conn)*, 19- A.A.; Math. Soc.; Math. Ass. Calculus of variations; theory of functionals; integral equations.
- Fischer, Louis A (lbert)**, U. S. Bureau of Standards, Washington, D. C. **Physics*. Washington, Jan. 4, 64. B.S, George Washington, 03. U. S. Office Weights and Measures, 90-01; physicist in charge, div. weights and measures, Bur. Standards, 01-17; major, ordnance dept, 17-19; *chief, div. weights and measures, Bur. Standards*, 19- Sec'y, Nat. Conf. Weights and Measures; mem. jury of awards, Panama-Pacific Expos, 15. A.A.; Physical Soc; Mech. Eng; Wash. Acad; Wash. Philos. Soc. (v. pres, 10, pres, 11); Soc. de Physique. Physical measurements, especially length.
- Fischer, Dr. Martin H (enry)**, General Hospital, Cincinnati, Ohio. **Physiology, Medicine*. Kiel, Germany, Nov. 10, 79. Fellow, Rush Med. Col, 00, M.D, 01. Student asst. path, Rush Med. Col, 98-00; asst. physiol, Chicago, 00-01, assoc, 01-02; instr. California, 02-03, asst. prof, 03-05; *prof. path, Oakland Col. Med. and Surg*, 05-10; *physiol, Cincinnati*, 10- Nathan Lewis Hatfield prize, Phila. Col. Physicians, 09; Cartwright prize, Col. Physicians and Surg, N. Y. City, 11; gold medal for research, Am. Med. Ass, 13, diploma, 15, silver medal, 16. Trustee, Helen S. Troumstine Foundation, pres, 17-20. A.A.; Physiol. Soc; Soc. Exp. Biol; Am. Med. Ass; Soc. Biol. Chem; Cincinnati Research Soc. (pres, 12). Histology of motor ganglion cells; false diverticula of the intestine; toxic effects of formaldehyde; artificial alimentary excretion; edema, nephritis, glaucoma and coma; theories of growth, muscular contraction and hemolysis; absorption and secretion of water and dissolved substances by plants and animals; emulsions; fatty degeneration; focal infections; colloids; soaps.
- Fischer, Prof. Richard**, University of Wisconsin, Madison, Wis. *Chemistry*. New Ulm, Minn, Nov. 18, 69. Ph.C, Michigan, 92, B.S, 94; Ph.D, Marburg, 00. Asst. chem, Michigan, 92-94; instr. pharmacy, *Wisconsin*, 94-98, asst. prof, 00-09, *prof. chem*, 09- State chemist, Wis, 03-09; consulting chemist, Wis. Food and Drug Commission, 09- A.A.; Chem. Soc; Pharmaceut. Ass; Ass. State and Nat. Food and Dairy Departments (chairman, committee on food standards, 06-09). Organic chemistry; alkaloids; chemistry of foods.
- Fischer, Dr. S (iegfried)**, Jr, 4533 Edgeware Road, San Diego, Calif. *Chemistry*. Zürich, Switzerland, Dec. 21, 82. Zürich; Polytech, Zürich; Polytech, Charlottenburg; Leipzig; B.S, Columbia, 07, M.S, 15, Ph.D, 16. Chemist, Am. Casein Co, 07; Celler Celluloid Works, 08; Spencer Kellogg Linseed Oil Co, 08; research chemist and manager, B. F. Stinson and Co, 09; prof. chem. and physics, Westminster (Pa), 09-10; instr. physics and electrometal, Colo. Sch. Mines, 10-12; efficiency engineer, West. Elec. Co, 13; instr. metal, Lehigh, 13-15; west. ed, 'Metal. and Chem. Eng,' 16; consulting engineer, 17-19; *pres. and directing manager, San Diego Rare Metals Products Co*, 19- Electrochem. Soc; Min. and Metal. Eng. Metallurgy; chemical engineering; rare metal alloys; electrometallurgy.
- Fish, Prof. F (red) A (lan)**, Ames, Iowa. *Electrical engineering*. Milan, Ohio, Feb. 21, 75. M.E, Ohio State, 98; hon. fellow, Wisconsin, 01. Asst. prof. *elec. eng*, Ohio State, 01-05, assoc. prof, *Iowa State*, 05-09, *prof*, 09- Elec. Eng; Eng. Educ; Nat. Elec. Light Ass.
- Fish, Prof. H (arold) D (ufur)**, University of Pittsburgh, Pittsburgh, Pa. *Zoology*. Tunbridge, Vt, Aug. 13, 83. A.B, Dartmouth, 07; A.M, Harvard, 15. Prof. biol, Highland, 12-14; Austin teaching fellow, Harvard, 14-15; research asst, Bussey Inst, and asst. *zool*, Harvard and Radcliffe, 15-16; *prof*, Denison, 16-19; *Pittsburgh*, 20-; *research assoc, dept. genetics, Carnegie Institution*, 19- A.A.; Ohio Acad. Animal genetics; inheritance in rabbits.
- Fish, Prof. J (ohn) C (harles) L (ounsburry)**, Stanford University, Calif. *Railway engineering*. Collins, Ohio, June 3, 70. C.E, Cornell, 92. Asst. engineer, Sandusky and Columbus R. R, 91; instr. civil eng, Cornell, 92-93; asst. prof, *Stanford*, 93-98, assoc. prof, 98-09, *prof. railroad eng*, 09- Recorder, U. S. Coast and Geod. Surv, 99; field asst, U. S. Geol. Surv, 00; res. engineer, L. S. and M. S. Ry, 05-07, div. engineer, 07-09. Fuertes gold medal, Cornell, 15. Civil Eng; R. R. Eng. Engineering economics.
- Fish, Prof. P (ierre) A (ugustine)**, 931 State St, Ithaca, N. Y. **Comparative physiology*. Chat-ham, N. Y, Feb. 17, 65. B.S, Cornell, 90, Sc.D, 94, D.V.M, 99. Instr. physiol, vert. zool. and neur, Cornell, 90-95; asst, bur. animal indust, U. S. Dept. Agr, 95-96; asst. prof. comp. physiol. and pharmacol, *Cornell*, 96-02, *prof. vet. physiol*, 02- Instr, Woods Hole, 91-95; major, Vet. C, 18-19. Vet. Med. Ass. (ed. 'Jour,' 15-18). Physiologic action of various drugs upon the circulation; mature and immature meat; salivary digestion in the horse; fat absorption.
- Fishberg, Dr. Maurice**, 170 W. 59th St, New York, N. Y. *Medicine, Anthropology*. Kamenetz-Podolsk, Russia, Aug. 16, 72. M.D, N. Y. Univ, 97. *Prof. clin. med, Univ. and Bellevue Hosp. Med. Col*, 15- Attending physician, Montefiore Home and Hosp, N. Y. City. A.A.; Ethnol. Soc; Anthropol. Ass; Folk-lore Soc; N. Y. Acad. (chairman, sect. psychol. and anthrop, 09-10). Physical anthropology; medicine; ethnic and social conditions of the Jews; some clinical phases of tuberculosis; pulmonary tuberculosis.
- Fisher, A (lbert) (Kenrick)**, U. S. Department of Agriculture, Washington, D. C. *Biology*. Ossining, N. Y, March 21, 56. Col. Physicians and Surg, Columbia, 76-79. Asst. ornithologist, U.

- S. Dept. Agr.*, 85-96, asst. biologist, 96-02, asst. chief, biol. surv., 02-06, in charge econ. investigations, 06-; Fel. Ornith. Union (v. pres, pres, 14); cor. mem. Nuttall Ornith. Club; Soc. Mammal; Fisheries Soc; Wash. Biol. Soc; Wash. Biol. Field Club (pres); Cooper Ornith. Club; cor. mem. N. Y. Linnean Soc. Geographic distribution and natural history of vertebrates.
- Fisher, C(assius) A(sa)**, 702 First National Building, Denver, Colo. *Geology*. Fremont, Nebr., Feb. 15, 72. A.B., Nebraska, 98, A.M., 00. Asst. geologist, U. S. Geol. Surv., 96-09, geologist, 09-10, asst. chief fuel sect; mem. firm, *Arnold and Fisher, consulting geologists and engineers, Los Angeles, Calif., and Denver, Colo.*, 09-; Asst. instr. geol., Yale, 02-03. A.A.; Geol. Soc; Wash. Geol. Soc; Wash. Acad. Water; coal; fuels.
- Fisher, D(urward) F(rederick)**, Bureau of Plant Industry, Washington, D. C. *Plant pathology*. Clarence, N. Y., Aug. 17, 88. B.S., Mich. Agr. Col., 12; M.Hort., 18. *Pathologist, fruit disease investigations, U. S. Dept. Agr.*, 12- A.A.; Soc. Hort. Sci; Phytopath. Soc. Fruit diseases.
- Fisher, Prof. Elizabeth F(lorette)**, Wellesley, Mass. *Geology, Geography*. Boston, Mass., Nov. 26, 73. B.S., Mass. Inst. Tech., 96. Instr. geol. and geog., *Wellesley*, 94-06, assoc. prof. geol. and miner, 06-09, *prof. geol. and geog.*, 09-; Lecturer geog., Boston Commission Exten. Courses, 12-; oil field expert, summers, 18-; Int. Geol. Cong., St. Petersburg, 97. A.A.; Am. Geog. Soc; Boston Soc. Nat. Hist. Physiography; commercial and industrial geography; river terraces; oil geology; conservation.
- Fisher, Dr. G(eorge) Clyde**, American Museum of Natural History, New York, N. Y. *Botany*. Near Sidney, Ohio, May 22, 78. A.B., Miami, 05; Ph.D., Hopkins, 13. Principal acad., Palmer, 07-09, acting pres, 09-10; asst. curator, *dept. pub. educ., Am. Museum Nat. Hist.*, 13-17, *assoc. curator*, 17- A.A.; assoc. mem. Ornith. Union; Wilson Ornith. Club; Soc. Mammal; fel. N. Y. Acad; N. Y. Linnean Soc. Plant morphology.
- Fisher, Dr. Harry L(inn)**, B. F. Goodrich Co., Akron, Ohio. *Chemistry*. Kingston, N. Y., Jan. 19, 85. A.B., Williams, 09; A.M., Columbia, 10, Ph.D., 12. Asst. org. chem., Columbia, 10-11; instr. med. col., Cornell, 11-12; Columbia, 12-19; *research chemist, B. F. Goodrich Co.*, 19-; See'y, org. sect., Eighth Int. Cong. Applied Chem., 12. Chem. Soc. Rubber; resins; organic combustions; nitrogen heterocycles.
- Fisher, Henry W(right)**, Perth Amboy, N. J. *Electrical engineering*. Youghal, Ireland, Jan. 31, 61. M.E., Cornell, 88. Asst. engineer, Bergmann and Co, 88; *S. U. Cable Co.*, 88-89, elec. engineer and supt., Pittsburgh factory, 89-99, *chief engineer and manager, rubber and lead cable factories, Perth Amboy, N. J.*, 15-; Elec. Eng. (past chairman, Pittsburgh sect, mem. standards committee, 11-20); Soc. Test. Mat; Electrochem. Soc; West. Pa. Eng. Soc. (past pres). Electric cables; glucenum by electrometallurgy; insulation and electrostatic temperature coefficients of different cables; power factors of cables; losses, induced volts and amperes in armor and lead of cables; carrying capacity of cables.
- Fisher, Prof. Irving**, 460 Prospect St., New Haven, Conn. *Political economy*. Saugerties, N. Y., Feb. 27, 67. A.B., Yale, 88, Ph.D., 91; Berlin and Paris, 93-94. Tutor math., Yale, 91-93; asst. prof., 93-95, *polit. econ.*, 95-98, *prof.*, 98-; Pres, Pro-League Independents, 20; mem. Commission for the Conservation of Nat. Resources; Hitchcock lecturer, California, 17. A.A.; Am. Acad; Math. Soc; Econ. Ass; Anthrop. Ass; Eugenics Research Ass. (pres, 20); Am. Acad. Med; Acad. Polit. and Social Sci; fel. Statist. Ass; Conn. Acad; fel. Royal Statist. Soc; Royal Econ. Ass. Mathematical economics; statistics; public health; capital and income; rate of interest; purchasing power of money; high cost of living.
- Fisher, Prof. James**, Houghton, Mich. *Mathematics, Physics*. Hancock, Mich., March 29, 73. E.M., Mich. Col. Mines, 93; Cornell, 99. Draftsman, Mich. Col. Mines, 93-94; Hodge Iron Works, 94-95; instr. *math. and physics, Mich. Col. Mines*, 95-99, *prof.*, 99- A.A.; Eng. Educ; Lake Superior Min. Inst.
- Fisher, Prof. M(artin) L(uther)**, 325 Vine St., La Fayette, Ind. *Agriculture*. Near Murray, Ind., Oct. 24, 71. B.S., Purdue, 03; M.S., Wisconsin, 11. *Prof. agron. and head of dept., Purdue*, asst. chief soils and crops, *Exp. Sta.* Soc. Agron; Soc. Prom. Agr. Sci; Farm Econ. Ass; Ind. Acad; Ind. Audubon Soc. (pres, 19). Agronomy; forage crops; corn pollination.
- Fisher, Prof. R(ichard) T(hornton)**, Petersham, Mass. *Forestry*. Brooklyn, N. Y., Nov. 9, 76. A.B., Harvard, 98; M.F., Yale, 03. Special agent, U. S. Biol. Surv., 98; asst. English, Harvard, 99; *forest asst., bur. forestry, U. S. Dept. Agr.*, 01-; *asst. prof. forestry, Harvard*, 05-; *director, Harvard Forest*. Soc. Foresters; Ecol. Soc. The redwood; the woodlot.
- Fisher, Dr. S(ara) C(arolyn)**, 326 E. Ave. 60, Los Angeles, Calif. *Psychology*. Bridgeport, Conn., Sept. 17, 89. A.B., Lombard, 09; A.M., Illinois, 10; Ph.D., Clark, 13. Instr. *psychol.*, Wellesley, 13-14; research asst., Clark, 14-15; with State Nor. Sch., Los Angeles, Calif., 15-19; *asst. prof. psychol., south. branch, California*, 19-; Mental examiner, Los Angeles Juvenile Court. Psychol. Ass. Higher mental processes; general concepts; classifying; growth of meaning.
- Fisher, Prof. W(alter) K(enrick)**, Pacific Grove, Calif. *Zoology*. Ossining, N. Y., Feb. 1, 78. A.B., Stanford, 01, A.M., 03, Ph.D., 06. Special field naturalist, U. S. Biol. Surv., 97-01; asst. *zool., Stanford*, 02-05, acting instr., 05-07, instr., 07-09, asst. prof., 09-20, *assoc. prof.*, 20-, *director, Hopkins Marine Sta.*, 17-; Asst. 'Albatross' exped., U. S. Fish Commission, 02, 04; ed., 'The Condor,' 02-06; curator invert. *zool.* Calif. Acad., 16- A.A.; mem. Ornith. Union; Calif. Acad; Cooper (Calif) Ornith. Club (pres). Anatomy of gastropods; ornithology; Echinodermata of the Hawaiian Islands; Asteroidea of the north Pacific and East Indies; West Indian Asteroidea.
- Fisher, Prof. Willard J(ames)**, Woods Hole, Mass. *Physics*. Waterford, N. Y., Sept. 29, 67. A.B., Amherst, 92; Ph.D., Cornell, 08; Göttingen, 08-09. Principal, high sch., Medway, Mass., 92-94, 96-99, 01-03; asst. biol., Amherst, 95; asst., Cor-

- nell, 03-04; instr. 04-08, 09-12; prof, N. H. Col, 12-16; hon. fellow, Clark, 16-18; lecturer, Worcester, 18; asst. prof, Univ. Philippines, 18-20. A.A.; fel. Physical Soc. Gas viscosity; height of the atmosphere; history of mechanics.
- Fisk, Prof. Harlan W (ilbur)**, 36th St. and Broad Branch Road, Washington, D. C. *Physics*. Geneva, Kans, Sept. 25, 69. B.S., Carleton, 96. Prof. math, Fargo, 99-06, dean of faculty, 04-06; *magnetician, dept. terrestrial magnetism, Carnegie Institution, 06-* A.A.; Wash. Philos. Soc; Wash. Acad. Terrestrial magnetism.
- Fiske, Dr. Augustus H (enry)**, P. O. Box 1515, Providence, R. I. *Chemistry*. Boston, Mass, May 28, 80. A.B, Harvard, 01, A.M, 02, Ph.D, 12. Instr. chem, Harvard, 12-13; asst. chemist, *Rumford Chem. Works, 14-15, chief chemist, 15-* Chem. Soc; Chem. Eng; Chem. Gesell. Halogen and nitrogen derivatives of benzol; orthoquinones; acid value of phosphates; baking powder ingredients.
- Fiske, Prof. Cyrus H (artwell)**, Harvard Medical School, Boston, Mass. *Biochemistry*. St. Paul, Minn, Sept. 22, 90. A.B, Minnesota, 10; M.D, Harvard, 14. Asst. biol. chem, Harvard Med. Sch, 14-15; assoc. biochem, Western Reserve, 15-17, *asst. prof, 17-18; biol. chem, Harvard Med. Sch, 18-* A.A; Soc. Biol. Chem; Chem. Soc. Nitrogen metabolism; mechanism of enzyme action.
- Fiske, R (aymond) J (ohn)**, Evergreen Fruit Farm, Lunenburg, Mass. *Entomology*. Cambridge, Mass, May 4, 88. B.S, Mass. Col, 10, 13. Agr. and edue. worker, P. I, 10-12; asst. entomologist, P. R, 13-14; scientific asst, bur. entom, U. S. Dept. Agr, 14-20; *proprietor, Evergreen Fruit Farm, 20-* A.A; Ass. Econ. Entom. Deceituous fruit insects.
- Fiske, Prof. Thomas S (cott)**, Columbia University, New York, N. Y. **Mathematics*. New York, May 12, 65. A.B, Columbia, 85, A.M, 86, fellow, 85-88, Ph.D, 88. Tutor *math, Columbia, 88-91, instr, 91-94, adj. prof, 94-97, prof, 97-* Acting dean, Barnard, Columbia, 99; see'y, Col. Ent. Exam. Board, 01- A.A; Math. Soc. (see'y, 88-95, ed, 'Bul,' 91-99, v. pres, 98-01, ed, 'Trans,' 99-05, pres, 02-04); Ass. Teachers Math. Middle States and Md. (pres, 04); London Math. Soc; Circolo Mat. di Palermo. Theory of functions; algebra; calculus; theory of assemblages; properties of assemblages and their application to functions.
- Fitch, Prof. A (lbert) L (ewis)**, University of Maine, Orono, Maine. *Physics*. Byron Center, Mich, Oct. 3, 87. A.B, Albion, 11, A.M, 12; Ph.D, Michigan, 16. Teacher science, high sch, Allegan, Mich, 13-15; research physicist, West. Elec. Co, 16-19; *prof. physics, Maine, 19-* A.A; assoc. Physical Soc. The aluminum rectifier.
- Fitch, Col. Graham D (enby)**, 2400 20th St, N. W, Washington, D. C. *Engineering, Mathematics*. Chicago, Ill, Feb. 19, 60. Grad, U. S. Mil. Acad, 82. All grades from lieut. to col, corps of engineers, retired, 12. Major, U. S. volunteers, Spanish-Am. War. \$500 prize for essay on fourth dimension, 'Scientific American,' A.A; Civil Eng. Lock and dam construction; space of four dimensions.
- Fitch, Prof. J (ames) B (urgess)**, Kansas State Agricultural College, Manhattan, Kans. *Dairy husbandry*. Hunterton, Ind, June 26, 88. B.S, Purdue, 10. Asst. dairying, *Kansas State, 10-11, instr, 11-13, asst. prof, 13-15, assoc. prof, 15-18, prof. dairy husbandry, 18-* Feeding and development of dairy cattle; temperature of silage fermentations; influence of material on keeping quality of silos.
- Fite, Dr. Warner**, Princeton, N. J. *Philosophy, Psychology*. Philadelphia, Pa, March 5, 67. A.B, Haverford, 89; Berlin, 91-92; Munich, 92-93; Ph.D, Pennsylvania, 94. Instr. philos. and Hebrew, Williams, 94-96, dean of faculty, 95-97; docent psychol, Chicago, 97-98, asst, 98-01, instr, 01-03; *philos, Texas, 03-06; junior prof, Indiana, 06-08, prof, 08-15; Princeton, 15-* Lecturer, Harvard, 11-12; Stanford, 13-14. Philos. Ass; Psychol. Ass. Social and ethical theory, especially with reference to psychological foundations.
- Fite, Dr. William Benjamin**, Columbia University, New York, N. Y. **Mathematics*. Marion, Ohio, Aug. 23, 69. Ph.B, Cornell, 92, Ph.D, 01. Teacher *math, Mich. Mil. Acad, 92-98; instr, Cornell, 01-05, asst. prof, 05-10; prof, Columbia, 10-* Math. Soc. Theory of groups of finite order; differential equations.
- Fitterer, Prof. J (ohn) C (onrad)**, University of Wyoming, Laramie, Wyo. *Civil engineering*. Clyde, Ohio, Dec. 15, 71. B.S, Ohio State, 98; B.S.(C.E), Colorado, 04, C.E, 12. Instr. eng. math, Colorado, 04; *prof. civil and irrig. eng, Wyoming, 08-* With U. S. Geol. Surv; U. S. Reclamation Service; res. engineer, Glenwood Tunnel, Glenwood Springs, Colo. A.A; Math. Soc; Civil Eng; Eng. Educ; assoc. mem. Soc. Test. Mat; Int. Soc. Test. Mat. Mathematics; irrigation; drainage.
- Fitz, Dr. G (eorge) W (ells)**, Peconic, N. Y. *Physiology, Hygiene, Physical education*. New York, N. Y, March 16, 60. M.D, Harvard, 91. Instr, Cook Co. Nor. Sch, Ill, 83-87; instr. and asst. prof. physiol. and hygiene and med. visitor, Harvard, 92-99. Ed, 'Am. Physical Educ. Review,' 96-01, 04-06; orthopedic surgeon, Boston Dispensary. A.A; Physiol. Soc; Physical Educ. Ass. (cor. see'y, 95-01). Respiratory types; ventilation tests (methods of CO₂); spinal curvature; physiology of exercise; photometric method of ease record; new direct-reading scoliometer; resistant forward shoulders; animal mechanics; shadow pupillometer; mirror-meter for space angles.
- Fitz, Dr. Reginald**, Rockefeller Institute, 66th St. and Ave. A, New York, N. Y. *Medicine*. Boston, Feb. 28, 85. A.B, Harvard, 06, M.D, 09. Assoc. mem. Am. Physicians; Soc. Clin. Invest. Nephritis; diabetes mellitus.
- FitzGerald, Desmond**, Brookline, Mass. *Engineering*. Nassau, Bahama Islands, May 20, 46. Phillips Acad, Andover, Mass. Chief engineer, B. and A. R. R, 71-73; engineer and supt, Boston Water Works, 73-96; dept. engineer, Metropolitan Water Works, Mass, 96-02; *consulting engineer, 02-* Chairman, Board of Park Commissioners, Brookline; Mass. Topog. Surv. Commission, 96-00; mem. Metropolitan Improv. Commission; chairman, Water Supply and Sew-

- erage Commission, Manila, P. I., 04. Norman gold medal, Civil Eng. twice. Civil Eng. (past pres); New Eng. Water Works Ass. (past pres); Am. Acad.; Boston Soc. Civil Eng. (past pres). Evaporation; hydraulics; rainfall; flow of streams; storage of water; temperature of lakes; construction of waterworks.
- FitzGerald, Francis A(lexander) J(ames)**, FitzGerald Laboratories, Inc, Niagara Falls, N. Y. **Electro-metallurgy*. Dublin, Ireland, June 1, 70. A.B. Dublin, 92; B.S. Mass. Inst. Tech, 95. Chemist Carborundum Co, 95-00; Int. Acheson Graphite Co, 00-03; *consulting engineer*, 03-A.A.; Elec. Eng.; Electrochem. Soc. (pres, 16); Franklin Inst; Faraday Soc. Electric furnaces; electric furnace products; refractories; carbon and graphite electrodes; resistor materials; electro-metallurgical products.
- Fitzgerald, Dr. F(red) F(inley)**, 120 Broadway, New York, N. Y. *Chemistry*. Clarion, Pa, June 27, 82. A.B. Stanford, 05, A.M. 06, Ph.D. 10. Instr. chem. Cooper Med. Col. 06-09; chemist, South. Pacific R. R., 09-12; asst. chemist, bur. chem, U. S. Dept. Agr., 12-13; chemist, Nat. Canners Ass, 13-20; *chief chemist*, *Am. Can. Co.*, 20- A.A.; Chem. Soc. Food chemistry; reactions of potassium amid; discoloration of canned food products; viscosity and conductivity of solutions.
- FitzGerald, Prof. J(ohn) G(erald)**, University of Toronto, Toronto, Can. *Preventive medicine*. Drayton, Ont, Dec. 9, 82. M.B. Toronto, 03. M.D., 20; Harvard Med. Sch. 08-09; Pasteur Inst. Brussels and Paris, 10; Freiburg, 11. Pathologist, Hosp. for Insane, Toronto, 07-08; lecturer bacter, Toronto, 09-11; assoc. prof, California, 11-13; assoc. prof. hygiene, *Toronto*, 13-20, *prof. hygiene and prev. med.*, 20-, *director*, *Connaught Laboratories*, 13- A.A.; Ass. Path. and Baet; Soc. Exp. Biol; fel. Royal Soc. Can. Bacteriology; immunity; neuropathology.
- Fitzpatrick, Prof. Harry M(orton)**, Cornell University, Ithaca, N. Y. *Plant pathology*. Greenwood, Ind, June 27, 86. A.B. Cornell, 09, Ph.D. 13. Asst. bot, *Cornell*, 08-11, instr. *plant path*, 11-13, *asst. prof.*, 13- A.A.; Phytopath. Soc; Bot. Soc. Mycology.
- Fitzpatrick, Prof. T. J**, Station A, Lincoln, Nebr. *Botany*. Centerville, Iowa, April 2, 68. B.S. Iowa, 93, M.S. 95; fellow, Nebraska, 13-18. Prof. math. and bot, Graceland, 95-99; collector, Iowa Hist. Soc, 04-07; prof. math, Graceland, 08-12; science, Cotner, 13-14; *asst. prof. bot*, *Nebraska*, and *curator, herbarium*, 18- A.A.; Math. Soc; Math. Ass; Bot. Soc; Fern Soc; Torrey Bot. Club; Cooper Ornith. Club; Am. Hist. Ass; fel. Iowa Acad. Flora of Iowa and midland states; bibliography of scientific literature of Iowa.
- Fitz-Randolph, R(aymond) B(ernard)**, 831 Carteret Ave, Trenton, N. J. *Bacteriology, Chemistry*. Philadelphia, Pa, Feb. 7, 72. A.C. Lehigh, 93. Instr. chem, U. S. Naval Lab, 93-94; asst. bacteriologist, Health Dept, Brooklyn, 94-95; asst. baeter, Hoagland Lab, 95-98, assoc. director, 98-03; *director, State Lab. of Hygiene, N. J.*, 03-; *chief. div. foods and drugs, State Board of Health, N. J.*, 08-15; *asst. director, State Dept. Health, N. J.*, 15- Instr. anal. chem, Long. Isl. Med. Col, 98-03. A.A.; Chem. Soc; Soc. Chem. Indust; Pub. Health Ass; N. J. Sanit. Ass; Royal Micros. Soc. Applied and sanitary bacteriology; bacteriology and chemistry of municipal milk supplies; food and drug examination.
- Flammer, Prof. Ernest**, Queen's University, Kingston, Ont, Can. *Physics*. San Francisco, Calif, April 18, 80. B.S. California, 03; Munich, 08-12; Berlin, 12-13; Göttingen, 13-15; Ph.D. Harvard, 17. Elec. engineer, various firms, 03-07; instr. elec. eng, Wisconsin, 07-08; *asst. prof. physics, Queen's (Can)*, 17- Math. Soc. Mathematical physics; electricity; aeronautics.
- Flanders, Dr. Fred F(ord)**, Eastport, Maine. *Chemistry*. Yolo Co, Calif, Sept. 5, 76. A.B. Wash. State, 02; A.M. 05; Ph.D. Harvard, 12. Instr. chem. Wash. State, 02-07; asst. chemist, bur. chem, U. S. Dept. Agr, 07-10; chemist, Mass. commission on mental diseases, Boston, 12-17; *director, sardine inspection, Nat. Canners Ass*, 19- Capt, Sanit. C, 17-19. Chem. Soc. (sec'y, div. food and agr. chem). Biological and food chemistry.
- Flather, Prof. J(ohn) J(oseph)**, 317 Oak Grove St, Minneapolis, Minn. *Mechanical engineering*. Philadelphia, Pa, June 9, 62. Ph.B. Yale, 85; M.M.E. Cornell, 90. Machinist, draftsman and foreman, machine shops, New England; supt, steam pump works, Buffalo, N. Y; instr. *mech. eng*, Lehigh, 88-91; prof, Purdue, 91-98; *prof. and head of dept, Minnesota*, 98- A.A. (sec'y, D, 97, 98, v. pres, 02); Mech. Eng; Elec. Eng; Eng. Educ. (treas, 94-99). Measurement of power; flywheel accidents; transmission of power; friction of shafting; smoke prevention; chimney draft and temperatures.
- Fleck, Dr. Herman**, Colorado School of Mines, Golden, Colo. *Chemistry*. Philadelphia, Pa, Dec. 3, 70. Pennsylvania, 86-91; Nat. Sc.D. Tübingen, 92. Prof. chem, high sch, Reading, Pa, 92-93; instr. org. chem, Pennsylvania, 93-00; chemist and asst. supt, Western Mfg. and Oil Co, 00-01; *prof. chem, Colo. Sch. Mines*, 03- Chem. Soc; West. Ass. Tech. Chem. and Metal; Colo. Sci. Soc; Chem. Gesell. Metallo-organic alkyls; molybdenyl amids; reduction with magnesium amalgam; oxyphosphates; dental chemistry, especially plastic; the technical production of uranium and vanadium; alkali lakes of the San Luis Valley; carnotite deposits of San Miguel and Montrose Counties and vanadium deposits of the Placerville region, Colo; tungsten in Colorado; importance of the rare metals.
- Fleet, Prof. R(obert) R(yland)**, Liberty, Mo. *Mathematics*. Urbana, Va, Sept. 16, 70. A.B. William Jewell, 96; Missouri, 98, fellow, 99-00, A.M. 00; Berlin and Heidelberg, 00-03; Ph.D. Heidelberg, 03. *Prof. math*, Clarksburg, 96-98; *William Jewell*, 03- A.A.; Math. Soc. Partial differential equations.
- Fleisher, Prof. Moyer S(pringer)**, St. Louis University School of Medicine, St. Louis, Mo. *Pathology*. Philadelphia, Pa, May 13, 84. B.S. Pennsylvania, 04, M.D. 07. Asst. exp. path, Pennsylvania, 07-10; path, Barnard Skin and Cancer Hosp, St. Louis, 10-15; asst. prof, *bacter, St. Louis*, 15-19, *prof*, 19- A.A.; Ass. Path. and Baet; Soc. Baet; Soc. Cancer Re-

- search; Am. Med. Ass; St. Louis Acad. Bacteriology; immunity; edema; pathology of kidneys and cardio-vascular system; coagulation of blood; tumor and tissue growth; venom of *Heloderma*.
- Flemer, J(ohn) A(dolph)**, Ingleside, Norma, Va. *Topography*. New York, N. Y., April 1, 59. Polytech. Sch. Cassel, Germany, 78; C.E. Charlottenburg, 81. Topographer, D. C. Topog. Surv, 82-86; asst. U. S. Coast and Geod. Surv, 86-00; topog. and landscape engineer, Springfield, N. J., 00-02; engineer to U. S. commissioner for demarcation of Alaskan boundry, 04-06; topog. engineer, Jamaica Bay Improv. Commission, 09-10. Wash. Soc. Eng. Topographical and landscape engineering; photo-topography.
- Fleming, J(ames) H(enry)**, 267 Rusholme Road, Toronto, Can. *Zoology*. Toronto, July 5, 72. Upper Canada. *Hon. curator ornith, Victoria Mem. Museum, Ottawa, Can.*, 13- Supt. nat. hist. Ont. Commission, Columbian Expos, 93; hon. curator, Can. Inst, 95-97. Fourth Int. Ornith. Cong, London, 05 (mem. gen. committee). Fel. Ornith. Union; Wilson Ornith. Club (mem. exec. council, 11-13); Soc. Mammal; colonial mem. British Ornith. Union; cor. mem. London Zool. Soc. Ornithology and mammalogy; island forms.
- Fleming, John A(dam)**, 36th St. and Broad Branch Road, Washington, D. C. *Physics*. Cincinnati, Ohio, Jan. 28, 77. B.S., Cincinnati, 99. Aid, U. S. Coast and Geod. Surv, 99-03, asst, 03-04, magnetic observer, 04-10; *magnetician, dept. terrestrial magnetism, Carnegie Institution, 04-* Ed. scientific results of Ziegler polar exped, 03-05. A.A.; Physical Soc; Wash. Acad; Wash. Philos. Soc. (see'y, 16). Terrestrial magnetism.
- Fletcher, Miss Alice C(unningham)**, Peabody Museum, Cambridge, Mass. **Anthropology*. Boston, Mass, March 15, 45. *Asst. ethnol, Peabody Museum, 82-*, *Thaw fellow, 91-* A.A. (v. pres, 96); Soc. Nat; Anthropol. Ass. (mem. council, 19); Archeol. Inst. (chairman, managing committee, Sch. Am. Archeol, 07-); Folk-lore Soc. (pres, 05); Wash. Acad; Wash. Anthropol. Soc. (pres, 03). Ethnology; archeology.
- Fletcher, Dr. C(harles) C(loyes)**, U. S. Department of Agriculture, Washington, D. C. *Agronomy*. Jamestown, N. Y., Aug. 29, 83. M.D., Nat. Univ, 03; George Washington. *Scientist, bur. soils, U. S. Dept. Agr, 06-* A.A.; Soc. Agron; Chem. Soc. Mechanical analysis of soils; fertilizers.
- Fletcher, Prof. Harvey**, 463 West St, New York, N. Y. *Physics*. Provo, Utah, Sept. 11, 84. B.S., Brigham Young, 07; fellow, Chicago, 10-11, Ph.D., 11. Instr. physics, Brigham Young, 07-08; Chicago, 09-10; prof., Brigham Young, 11-16; *research lab, Bell Telephone Co, 16-* Instr. physics, Chicago, summer, 11, prof., summer, 13. Physical Soc; fel. Utah Acad. (v. pres, 14). Brownian movements; gaseous ionization; determination of the elementary electrical charge and Avagadro's constant; Stokes' law; relative difficulty of interpreting fundamental sounds of spoken English.
- Fletcher, Prof. John M(adison)**, 1020 Audubon St, New Orleans, La. *Psychology*. Murfrees-
- boro, Tenn, June 27, 73. A.B., Vanderbilt, 01; A.M., Colorado, 04; fellow, Clark, 10-11; Ph.D., 12. Asst. educ. Colorado, 05-06; philos., Stanford, 09-10; psychol., Clark, 10-11, lecturer, 11-12; asst. prof. exp. and clin. psychol., *Tulane*, 12-13, prof. psychol., 13-19, *head of dept, 14-*, *prof. psychol. and educ, 19-* A.A.; Psychol. Ass; S. Soc. Philos. and Psychol. (v. pres, 19, pres, 20); New Orleans Acad. (pres. 16). Functional speech disturbances.
- Fletcher, Prof. Robert**, Dartmouth College, Hanover, N. H. *Civil engineering*. New York, N. Y., Aug. 23, 47. Col. City of N. Y., 61-64; grad, U. S. Mil. Acad, 68; hon. A.M., Dartmouth, 71, Ph.D., 81. Instr. math, U. S. Mil. Acad, 69-70; *prof. civil eng. and director, Thayer Sch. Civil Eng, Dartmouth, 71-* Pres. and engineer, Hanover Water Works Co, 93-; inspector bridges, Vt. R. R. Commission, 88; mem. N. H. Board of Health, 95-; consulting engineer, bridges, water works and sewerage works, 02-09. A.A.; Civil Eng; Eng. Educ. (pres, 01). Surveying; bridge truss analysis; hydraulics; engineering education; sanitary engineering.
- Fletcher, Prof. S(tevenson) W(hitcomb)**, State College, Pa. *Horticulture*. Littleton, Mass, Sept. 10, 75. B.S., Mass. Col, 96; M.S., Cornell, 98, fellow, 98-99, Ph.D., 00. Prof. hort, Wash. State, and horticulturist, Exp. Sta, 00-02; West Virginia, 02-03; asst. prof. exten. teaching in agr, Cornell, 03-05; prof. hort, Mich. Agr. Col, 05-07; director, Va. Exp. Sta, 07-14; *prof. hort, Pa. State, and horticulturist, Exp. Sta, 17-* Soc. Hort. Sci. Strawberry growing.
- Flexner, Dr. Simon**, 66th St. and Ave. A, New York, N. Y. **Pathology*. Louisville, Ky, March 25, 63. M.D., Louisville, 89; fellow, Hopkins, 92-93, LL.D., 15; Strasbourg and Prague, 96; hon. Sc.D., Harvard, 06; Yale, 10; Princeton, 13; LL.D., Maryland, 07; Brown, 15; Washington (St. Louis), 15; Cambridge, England, 20. Assoc. path, Hopkins, 94, assoc. prof, 96-99, prof. path. anat, 99; path, Pennsylvania, 99-03; *director, laboratories, Rockefeller Inst, 03-* Mem. Hopkins Commission to Philippines, 99; Nat. Plague Commission, 01; board of directors, Rockefeller Inst, 01-; director, Ayer Clin. Lab, Pa. Hosp, 01; director, Russell Sage Inst. Path; Huxley lecturer, Charing Cross Hosp. Med. Sch, 12; Hamilton lecturer, Smithsonian Inst, 12; Cameron prize, Edinburgh, 11. Nat. Acad; A.A. (v. pres, 01, pres, 20); Ass. Path. and Bact; Soc. Bact; Am. Physicians; Soc. Biol. Chem; Soc. Exp. Path; Soc. Exp. Biol. (pres, 06); Harvey Soc. (pres, 10); Philos. Soc; Am. Acad; N. Y. Acad; Royal Soc; Paris Acad. Med; Soc. biol. de Paris; Soc. de Path. exot; Imp. Inst. Exp. Therap, Frankfurt; Soc. Royale de Med. de Bruxelles; Bataafsch Genootschap de Proefondervindelijke Wijsbegeerte, Rotterdam; Swedish Med. Soc; cor. mem. Bologna Medico-Chirurg. Soc. Bacteriology; pathology of toxalbumin intoxication; terminal infection; snake venom; histological alterations of cytotoxic intoxication; etiology of dysentery; serum therapy of epidemic cerebrospinal meningitis; etiology and pathology of infantile paralysis; lethargic encephalitis.

- Flick, Dr. Lawrence F.**, 738 Pine St, Philadelphia, Pa. *Medicine*. Carrolltown, Pa, Aug. 10, 56. M.D., Jefferson Med. Col, 79; LL.D., Catholic Univ, 15; Villanova, 16. *Pres.*, Pa. Soc. Tuber, 92-99; *Free Hosp. for Poor Consumptives*, 95- Pres. and med. director, Phipps Inst, 03-10. Int. Cong. Tuber, Washington, D. C, 08; pres, Int. Conf. Tuber, Phila, 08. Ass. Tuber; Phila. Col. Physicians. Tuberculosis; history.
- Flint, Prof. Albert S(towell)**, 1311 Morris St, Madison, Wis. **Astronomy*. Salem, Mass, Sept. 12, 53. A.B., Harvard, 75; Mass. Inst. Tech, 76-77; A.M., Cincinnati, 80. Computer, U. S. Naval Observatory, 81-83; asst, U. S. Transit of Venus Commission, 83-88; computer, U. S. Naval Observatory, 88-89; asst. astronomer, *Wisconsin*, 89-94, astronomer, 94-20, *retired assoc. prof. astron.*, 20- A.A.; Astron. Soc; Wis. Acad. (sec'y and ed, 'Trans,' 97-99); Astron. Gesell. Astronomy and computation; meridian observations for stellar parallax, first series, 93-96, second series, 98-05; meridian determination of some proper motion stars.
- Flint, Dr. E(dward) R(awson)**, U. S. Department of Agriculture, Washington, D. C. *Chemistry, Medicine*. Boston, Mass, Sept. 8, 64. B.S., Mass. Col, 87; Ph.D., Göttingen, 92; M.D., Harvard, 03; LL.D., Florida, 19. Asst. chemist, Hatch Exp. Sta, Amherst, 87-90; asst. prof. chem, Mass. Col, 93-99; prof, Florida, 04-17; *administrative and scientific asst. office of exp. stations*, U. S. Dept. Agr, 17-, chemist, Exp. Sta, 04-05. Fertilizer experiments with citrus fruits.
- Flint, Dr. Joseph Marshall**, 320 Temple St, New Haven, Conn. **Anatomy, Surgery*. Chicago, Ill, July 8, 72. B.S., Chicago, 95; A.M., Princeton, 00; M.D., Hopkins, 00; hon. A.M., Yale, 07. Assoc. anat, Chicago, 00-01; *prof.*, California, 01-07; *surg.*, Yale, 07- Asst. anat, summer sch, Chicago, 97; asst, Hopkins Med. Commission to Philippines, 99; acting asst. surgeon, Marine Hosp. Service, San Francisco, 01; ed, 'Am. Jour. Anat,' 04-07; attending surgeon, New Haven Hosp, 07-; surgeon-in-chief, New Haven Dispensary, 07- Commanding officer, Hosp. 32, Chateau de Passy, France, 16; commanding officer, Mobile Hosp, 39, A. E. F, 17-19; liaison officer to French war office, A. E. F, 18; Officier de l'Instruction Pub, 19; D. S. medal, 19; citation for distinguished and meritorious services, A. E. F, 19. A.A.; Ass. Anat. (v. pres, 04); Surg. Ass; Col. Surg; Anthropol. Soc; Wash. Yellow Fever Inst; Manila Med. Soc; Vienna Physiol. Gesell. Suprarenal bodies; salivary glands; development of the blood vessels in organs; form of joint cavities; connective tissue; development of lung; intestinal anastomosis; hypertrophy of the intestine; healing of gastroenterostomy; surgery of the lungs; empyaema; stitch ulcers in gastro-intestinal surgery.
- Flint, Dr. William R(uthven)**, Union League Building, Los Angeles, Calif. *Chemistry*. McIndoes Falls, Vt, April 12, 75. A.B., Yale, 98, A.M., 06, Ph.D., 09. Prof. chem, Maryville, 10-11; inorg. and anal. chem, Calif. Inst. Tech, 11-14; research in photographic chem, Mt. Wilson Observatory, 15; *consulting chem. engineer*, 16- Chem. Soc; Cooper Ornith. Club; Sierra Club. Complexity of tellurium.
- Florence, Dr. P(hilip) Sargant**, 115 Vreeland Ave, Nutley, N. J. *Public health*. Nutley, June 25, 90. B.A., Cambridge, 12, M.A., 16; fellow, Columbia, 17-18, Ph.D., 18. Investigator, Health of Munition Workers Committee of England, 15-16; *supervising field investigator*, U. S. Pub. Health Service, 17- Assoc. sanitarian, R, U. S. Pub. Health Service; mem. Bur. Indust. Research, N. Y. City. British Ass; Royal Econ. Soc. Industrial fatigue; personnel administration in factories.
- Flowers, Alan E(stis)**, National Aniline and Chemical Co, 21 Burling Slip, New York, N. Y. *Engineering*. St. Louis, Mo, Oct. 4, 76. M.E. (E.E.), Cornell, 02. M.M.E., 14, Ph.D., 15. Engineer's helper, Westinghouse Elec. and Mfg. Co, 03; instr. elec. eng, Missouri, 04-06, asst. prof, 06-12, prof, Ohio State, 12-18; capt, Sig. C, 18-19; *test engineer*, Nat. Aniline and Chem. Co, 19- Asst. ed, 'Electric Jour,' 04; in design office, Bullock Elec. Mfg. Co, 07; asst. supt, light and heat sta, Missouri, 08-; engineer, Telluride Power Co, 09. Physical Soc; Electrochem. Soc; Elec. Eng; Mech. Eng; Soc. Test. Mat. Solid contact rectifiers; oil friction testing machines; ball and slanted tube viscosimeter.
- Floyd, B(ayard) F(ranklin)**, Wilson and Toomer Fertilizer Co, Jacksonville, Fla. *Botany*. Kempton, Ind, March 18, 82. A.B., Indiana, 05; A.M., Missouri, 07. Asst. bot, Missouri, 05-07; plant physiologist, Fla. Exp. Sta, 07-20; *horticulturist*, Wilson and Toomer Fertilizer Co, 20- A.A.; Bot. Soc; Soc. Hort. Sci; Fla. Hort. Soc. (sec'y). Plant pathology; plant physiology; normal and malnutrition in tropical and subtropical plants; fertilizers for citrus trees and avocados.
- Floyd, Dr. Cleaveland**, 246 Marlborough St, Boston, Mass. *Bacteriology*. Providence, R. I, Oct, 80. M.D., Harvard, 03. *Asst. prof. bacter.*, *Harvard Med. Sch*, 17- Ass. Path. and Bact; Soc. Immunol; Climat. Ass; Am. Med. Ass.
- Floyd, Prof. W(ilbur) L(eonidas)**, University of Florida, Gainesville, Fla. *Horticulture*. Nichols, S. C, April 6, 66. B.S., Citadel, 86; M.S., Florida, 06. *Prof. nat. science*, E. Fla. Sem, 92-05; *bot. and hort.*, Florida, 05- Avocado culture; deciduous fruits in Florida.
- Focke, Prof. Theo(dore) M(oses)**, Case School of Applied Science, Cleveland, Ohio. *Mathematical physics*. Massillon, Ohio, Jan. 3, 71. B.S., Case, 92; Ph.D., Göttingen, 98. Instr. math, Case, 92-93; physics, Oberlin, 93-96; *math.*, Case, 98-02, asst. prof, 02-08, *Kerr prof.*, 08-, dean, 18- A.A.; Math. Soc; Math. Ass; Eng. Educ. Heat conductivity; coefficient of expansion; alloys of nickel and cast iron; heat conductivity of fire bricks.
- Foerste, Dr. Aug(ust) F(rederick)**, 129 Wroe Ave, Dayton, Ohio. *Geology*. Dayton, May 7, 62. A.B., Denison, 87; A.M., Harvard, 88, Ph.D., 90; Heidelberg and Paris, 90-92. *Teacher physics*, *Steele High Sch.*, Dayton, 93- Asst, U. S. Geol. Surv, 87-91, 95; Ohio Geol. Surv, 92, 08-10, 18-19; Ind. Geol. Surv, 96, 97, 99;

- asst. geologist, Ky. Geol. Surv., 04-12. Geol. Soc; Paleont. Soc; Ohio Acad. Morphology of phanerogams; relations between flowers and insects; Cincinnati and Silurian geology; Paleozoic formations within the area traversed by the Cincinnati geanticline; Ordovician and Silurian cephalopods; Arctic fossil cephalopods.
- Foglesong, Dr. John E(dward)**, 1715 Girard Ave, Philadelphia, Pa. *Chemistry*. Lucerne, Ind, July 20, 85. A.B., Wabash, 10; A.M., Ohio State, 12, Ph.D., Cornell, 19. Chemist, duPont Powder Co, 12-13; King Powder Co, 13-14; org. chemist, Union Carbide Co, 14-15; chemist, Rittman Corp, 15-16; asst. chem., Cornell, 16-17, instr., 17-19; *research chemist, Barrett Co, 19*-Chem. Soc; Electrochem. Soc. Physical and organic chemistry.
- Foley, Prof. Arthur L(ee)**, Bloomington, Ind. **Physics*. Hancock Co, Ind, Feb. 22, 67. Cent. Nor. Col, 82-84; Hayward, 86-87; A.B., Indiana, 90, A.M., 91; Chicago, 94; fellow, Cornell, 96-97, Ph.D., 97; Europe, 08. Teacher, pub. schools, 84-86, 87-88; instr. *physics, Indiana, 90-91*, assoc. prof., 91-97, *prof. and head of dept, 97-*, *research prof, Waterman Inst, 17*-Director research in physics, affiliated colleges of Ind, 17- A.A.; Physical Soc; fel. Ind. Acad. (pres, 09); Ind. Sci. Teachers' Ass; Sci. Tech. Club. Surface tension; arc spectra; interference and diffraction; photographic studies of sound waves and the electric spark; transformation of matter.
- Folin, Dr. Otto (Knut Olof)**, 133 Buckminster Road, Brookline, Mass. **Physiological chemistry*. Asheda, Sweden, April 4, 67. B.S., Minnesota, 92; Ph.D., Chicago, 96, hon. Sc.D., 16; Washington (St. Louis), 15; hon. M.D., Lund, 18; Upsala, Berlin and Marburg, 97-98. Commercial chemist, Chicago, 99; asst. prof. chem., West Virginia, 99-00; research chemist, McLean Hosp., 00-07; assoc. prof. *biol. chem, Harvard Med. Sch, 07-09*, *prof, 09-* Nat. Acad; Chem. Soc; Physiol. Soc; Soc. Pharmacol; Soc. Exp. Biol; Soc. Biol. Chem. (v. pres, 08, pres, 09). Technique of urine analysis; laws governing the chemical composition of urine; metabolism in the insane; preponderance of acid or of basic inorganic constituents in urine; protein metabolism; blood analysis.
- Folkmar, Dr. Daniel**, 1730 I St, N. W., Washington, D. C. *Anthropology*. Roxbury, Wis, Oct. 28, 61. A.B., Leander Clark, 84, A.M., 88; fellow, Clark, 90; D.ès-Sc. Soc, Université Nouvelle, Brussels, 99; certificate, Ecole d'Anthropologie de Paris, 99; D.de l'Université de Paris, 00. Prof. psychol., Milwaukee State Nor. Sch, 95-98; anthrop. Université Nouvelle, Brussels, 98-01; anthropologist and lieut. governor, Bontoc, P. I., 03-06; immigrant inspector and special agent, Immigration Commission of U. S., 07-09; *chief, sect. on foreign born and Indians, 13th Census, 10-* A.A.; Anthropol. Ass; Statist. Ass; cor. mem. Wash. Anthropol. Soc. (sec'y, 15); fel. Royal Statist. Soc. Educational statistics; dictionary of immigrant races; Philippine ethnology; Igorot social institutions and law.
- Folsom, Dr. D(onald)**, Orono, Maine. *Botany*. Henderson, Iowa, Oct. 23, 91. A.B., Nebraska, 12; A.M., Minnesota, 14, Ph.D., 17. Asst. bot., Minnesota, 12-17; instr. bot. and plant path., N. C. Col, 17-18; *asst. plant pathologist, Maine Exp. Sta, 18-* A.A.; Bot. Soc; Ecol. Soc; Phytopath. Soc. Cytology; physiology; plant pathology.
- Folsom, Prof. Joseph K(irk)**, University of Pittsburgh, Pittsburgh, Pa. *Psychology*. Poundridge, N. Y., Sept. 29, 93. B.S., Rutgers, 13; A.M., Clark, 15; Ph.D., Columbia, 17. Instr. physics, St. Lawrence, 14; *asst. prof. social econ, Pittsburgh, 19-* Instr. psychol. and sociol., State Nor. Sch, Gunnison, Colo, summer, 16; psychol. examiner, U. S. A., 18-19. Sociol. Soc. Statistical study of character; mental tests; rating scales; social surveys and statistics.
- Folsom, Dr. J(ustus) W(atson)**, University of Illinois, Urbana, Ill. *Entomology*. Cambridge, Mass, Sept. 2, 71. B.S., Harvard, 95, Sc.D., 99. Prof. nat. science, Antioch, 99-00; instr. *entom, Illinois, 00-06*, assoc. 06-08, *asst. prof, 03-* Lab. asst. bot. and zool., Harvard. A.A.; Entom. Soc. (v. pres, 19); Cambridge Entom. Club (pres, 00). Anatomy, physiology and embryology of insects; systematic entomology; Colembola and Thysanura.
- Folwell, Dr. A(mory) P(escott)**, Montclair, N. J. *Civil engineering*. Rondout, N. Y., Jan. 15, 65. A.B., Brown, 85; Mass. Inst. Tech., 88; Sc.D., Lafayette, 07. Practising civil engineer, 83-97; instr. civil eng., Lafayette, 97-99, assoc. prof. munic. eng., 99-04, prof., 04-06; *ed, 'Munic. Jour. and Engineer,' 06-20; 'Pub. Works,' 20-* Soc. Munic. Improv. (pres, 04); Eng. Educ; Water Works Ass; New Eng. Water Works Ass. Sewer design and construction; municipal sanitation; flow of water in pipes, tubes and jets; law of flow of water from orifices and standard tubes; municipal refuse disposal.
- Fonda, Dr. G(orton) R(osa)**, General Electric Co, Schenectady, N. Y. *Engineering*. New York, N. Y., Nov. 27, 84. B.S., N. Y. Univ, 07, A.M., 08; Dr. Ing., Karlsruhe, 10. *Research chemist, research lab, Gen. Elec. Co, 10-* A.A.; Chem. Soc. Kinetics of reactions.
- Fondiller, William**, 961 St. Nicholas Ave, New York, N. Y. *Electrical engineering*. Russia, Dec. 21, 85. B.S., Col. City of N. Y., 03; E.E., Columbia, 09, A.M., 13. Instr. City Evening High Sch, 12-15; *div. head, eng. dept, West. Elec. Co, 15-* Elec. Eng. Loading of telephone lines; magnetic properties of iron.
- Food, Prof. J(ames) A(lfred)**, Massachusetts Agricultural College, Amherst, Mass. *Agriculture*. Portsmouth, England, Oct. 30, 72. B.S., N. H. Col, 98; M.S.A., Cornell, 02. Prof. agr., Del. Col, 03-06; assoc. prof. agron., Ohio State, 06-07; *Mass. Col, 07-08*, *prof. farm management and head, div. agr, 08-* A.A.; Soc. Agron; Farm Econ. Ass. Animal husbandry; farm management.
- Foot, Miss Katharine**, Morgan, Harjes Co, Paris, France. **Zoology*. Geneva, N. Y., Oct. 14, 52. Private schools. Soc. Nat; Soc. Zool. Cytology; maturation and fertilization of the egg of *Allolobophora fetida*; spermatogenesis and oogenesis of Hemiptera.

- Foot, Dr. N(athan) C(handler)**, Harvard Medical School, Boston, Mass. *Pathology*. New York, N. Y., July 27, 81. A.B. Harvard, 03; M.D. Columbia, 07. Intern, N. Y. Hosp, 08-09; asst. instr. path, *Harvard Med. Sch.*, 12, instr., 13-19, comp. path, 19- Ass. Path. and Bact. Comparative pathology; growth of chicken bone marrow in vitro; Rocky Mountain spotted fever; the endothelial cell in inflammation and repair.
- Foote, Prof. F(rancis) S(eeley)**, University of California, Berkeley, Calif. *Civil engineering*. Brooklyn, N. Y., March 31, 83. E.M. Columbia, 05. Engineer, coal, timber and railway companies, 05-07; asst. civil eng. Columbia, 07-10; instr. *railway eng.*, Illinois, 10-12; assoc. prof. *California*, 12-17, prof., 17- Director, summer sch. of surv. California, 12- Assoc. Civil Eng; R. R. Eng; Eng. Educ.
- Foote, Prof. H(arry) W(ard)**, 209 Livingston St, New Haven, Conn. *Chemistry*. Guilford, Conn., March 21, 75. Ph.B. Yale, 95, Ph.D, 98; Leipzig, 99-00. Asst. prof. chem, Yale, 04-12, prof., 12- Chem. Soc; Conn. Acad. Inorganic and physical chemistry; mineralogy.
- Foote, Dr. H(erbert) Elliott**, 70 Olive St, Pawtucket, R. I. *Chemistry*. Winchester, Mass., Aug. 15, 92. Ph.B. A.M. Brown, 14, Ph.D, 17. Chemist, E. I. duPont de Nemours and Co, 17-18; research chemist, *Indust. Chem. Co.*, Providence, R. I., 19- Research chemist, U. S. Bur. Mines, 18; lieut. ordnance dept, 18-19. Chem. Soc. Organic chemistry; anthraquinone compounds; cyanids.
- Foote, Prof. J(ames) S(tephen)**, Creighton Medical College, Omaha, Nebr. *Pathology*. Colchester, Conn. A.B. Yale, 77; M.D. Columbia, 81. Prof. path, Creighton, 93- 19th Int. Cong. Americanists. A.A; Micros. Soc; Am. Med. Ass. Comparative histology of bones; circulation in bone.
- Foote, Dr. Paul D(arwin)**, Bureau of Standards, Washington, D. C. *Physics*. Andover, Ohio, March 27, 88. A.B. Western Reserve, 09; A.M. Nebraska, 11; Ph.D. Minnesota, 17. Asst. physics, Nebraska, 09-11; lab. asst. *Bur. Standards*, 11-13, asst. physicist, 13-16, assoc. physicists, 16-19, physicist, 19- Sec'y, pyrometry committee, Nat. Research Council, 19- Physical Soc; Optical Soc. (sec'y, 20, ed, 'Jour,' 20-); Wash. Philos. Soc; Wash. Acad; Soc. de Physique. Pyrometry; magnetic optics; ionization potentials; atomic structure; radiation and absorption.
- Forbes, Dr. Alexander**, Harland St, Milton, Mass. *Physiology*. Milton, May 14, 82. A.B. Harvard, 04, A.M. 05, M.D, 10; Liverpool, 11-12. Instr. *physiol.*, *Harvard Med. Sch.*, 10- A.A; Physiol. Soc; Am. Med. Ass; Am. Acad; Boston Soc. Med. Sci; Boston Soc. Nat. Hist. The psycho-galvanic reflex; physiology of the central nervous system; reflex inhibition; electro-physiology of the nervous system.
- Forbes, Dr. Charles**, 121 N. Fitzhugh St, Rochester, N. Y. *Physics*. Kendall, N. Y., May 26, 44. B.S. Rochester, 64; Pennsylvania, 70; M.D. Columbia, 71. Principal, grammar sch. Rochester, N. Y. 65-68; instr. science, high sch. 71-85; prof. Macalester, 85-90; physician and sanit. inspector, U. S. Marine Hosp. Service, 91-98; prof. biol. Elmira, 98-00; curator, dept. physics, Columbia, 02-10. N. Y. Elec. Soc; N. Y. State Teachers Sci. Ass. Orthochromatic photography; optical, photographic and physical apparatus.
- Forbes, Dr. Charles S(avage)**, 68 William St, New York, N. Y. *Mathematics*. Warren, Mass., July 8, 79. A.B. Columbia, and diploma, Teachers Col, 01, A.M. 03, Ph.D. 04. Asst. math. Columbia, 01-04; statistician and supt. liability dept, Casualty Co. of Am, 04-17; consulting actuary, 17-; sec'y-treas, *Smyth, Sanford and Gerard, Inc.*, 19- Reader, Col. Ent. Exam. Board, 03-04. Math. Soc; assoc. Actuarial Soc. Geometry of circles orthogonal to a given sphere.
- Forbes, Dr. E(rnest) B(rowning)**, Ohio Agricultural Experiment Station, Wooster, Ohio. *Animal nutrition*. Normal, Ill., Nov. 3, 76. B.S. Illinois, 97, B.S.(Agr), 02; Ph.D. Missouri, 08. Asst. zool. Ill. Biol. Sta. 94-96; asst. to state entomologist, Minn., 97-98; zool. asst. Ill. State Lab. Nat. Hist, 99-01; acting state entomologist, Minn., 01; asst. animal husbandry, Ill. Exp. Sta., 01-02, instr. Illinois, 02-03; asst. prof. Missouri, 03-07; chief, dept. nutrition, *Ohio Exp. Sta.*, 07- Lecturer nutrition, Illinois, 12; major, Sanit. C. A. E. F., 18-19; mem. Nat. Research Council, 19- A.A; Physiol. Soc; Soc. Animal Production (pres, 14, 15); Soc. Prom. Agr. Sci; Chem. Soc. Mineral metabolism of the milch cow and of swine.
- Forbes, Prof. G(eorge) S(hannon)**, Boylston Hall, Cambridge, Mass. *Chemistry*. Boston, Mass., March 17, 82. A.B. Harvard, 02, A.M. 04, Ph.D. 05; Leipzig and Berlin, 06-07. Lecturer physical chem, Harvard, 05-06; assoc. chem, Bryn Mawr, 07-09; instr. physical chem, *Harvard*, 09-13, asst. prof. chem, 13-20, assoc. prof., 20- Assoc. Radcliffe, 17-20. A.A; Chem. Soc; Electrochem. Soc; Am. Acad. Electrochemistry; atomic weights; photochemistry; concentration effects in solutions.
- Forbes, Prof. R(obert) H(umphrey)**, Box 63, Cairo, Egypt. *Agricultural chemistry*. Cobden, Ill., May 15, 67. B.S. Illinois, 92, M.S. 96; Harvard, 93-94; Ph.D; California, 16. Prof. chem, Arizona, 94-02; director Ariz. Exp. Sta., 99-18, dean Ariz. Col, 15-18; agronomist, *Soc. Sultan. d'agr. Cairo, Egypt*, 18- A.A. Subtropical agriculture; soils; crops; irrigation; toxic effects of copper upon plants.
- Forbes, Prof. Stephen A(lfred)**, University of Illinois, Urbana, Ill. *Zoology, Entomology*. Silver Creek, Ill., May 29, 44. Rush Med. Col, 65-66; Ill. Nor. Univ, 72; Ph.D. Indiana, 84; LL.D. Illinois, 05. Curator, museum, Ill. State Nat. Hist. Soc, 72-77, director, Summer Sch. Nat. Hist, 76; instr. zool. Ill. State Nor. Univ, 75-78; prof., *Illinois*, 84-09, entom., 09-, dean, col. sci, 88-05; founder and director, Ill. State Lab. Nat. Hist, 77-17; state entomologist, Ill, 82-17; chief, *Ill. Nat. Hist. Surv.*, 17- Biol. exped. to Rocky Mountains, U. S. Fish Commission, 91-92; chairman, Nat. Cong. Zool. Columbian Expos, 93; director aquarium, U. S. Fish Commission, Columbian Expos, 93. Medal, Soc. d'Acclimatation de France, 86. Nat. Acad;

- A.A.; Philos. Soc; Soc. Nat; Ass. Econ. Entom. (pres, 03, 08); Entom. Soc. (v. pres, 10, pres, 12); Ecol. Soc; Soc. Prom. Agr. Sci; Wash. Acad; St. Louis Acad; Soc. entom. de France. Economic entomology of Illinois; food of birds, fishes and insects; contagious diseases of insects; Entomotraca of North America; ichthyology of Illinois; local distribution and ecology of Illinois birds and fishes.
- Forbes, Dr. William T(owbridge) M(errifield)**, 23 Trowbridge Road, Worcester, Mass. *Entomology*. Westborough, Mass, 85. A.B, Amherst, 06; Cornell, 08-09; Ph.D, Clark, 10; Harvard, 10. *Instr.* biol, Robert Col, Constantinople, 06-08; zool. and entom, Rutgers, 10-11; asst. and later *instr. entom*, Cornell, 15- With Cornell exped. to Asia Minor, 07; South America, 20. A.A; Entom. Soc; N. Y. Entom. Soc; Cambridge Entom. Club. Lepidoptera; geology.
- Forbush, E(dward) H(owe)**, Westboro, Mass. *Ornithology*. Quincy, Mass, April 24, 58. Willow Park Sem; Hinman Commercial Col. Curator, v. pres, pres. and managing director, Worcester Nat. Hist. Soc, 80-91; field director, Mass. State Board Agr, 91-00, *ornithologist*, 94-, *director, div. ornith*, 20- State ornithologist, Mass, 08. Fel. Ornith. Union; Worcester Nat. Hist. Soc. Economic entomology and ornithology.
- Force, Prof. John Nivison**, 2704 Derby St, Berkeley, Calif. *Medicine*. Arcata, Calif, Oct. 2, 77. B.S, 98, M.D, 01, M.S, 10, Grad. P.H, 15. Acting asst. surgeon, U. S. Pub. Health Service, 08; surgeon, U. S. Coast Surv, 02-08; *assoc. prof. epidemiol, California*, 11- Capt, M.C, 18-19. Pub. Health Ass; Soc. Bact; Am. Med. Ass. Communicable diseases; epidemiology; smallpox vaccination.
- Ford, Prof. Arthur H(illyer)**, Iowa City, Iowa. *Electrical engineering*. Chicago, Ill, Feb. 6, 74. B.S, Wisconsin, 95, fellow, 95-97, E.E, 96; fellow, Columbia, 97-98. Acting *prof. elec. eng*, Colorado, 00-01; *prof*, Ga. Tech, 01-05; Iowa, 05- A.A; Elec. Eng; Eng. Educ; Illum. Eng. Soc; Iowa Eng. Soc. (sec'y, 06-10). Hysteresis in sheet iron and steel; testing alternating current transformers; induction coils; automobile headlights; power line interference with telephones.
- Ford, Prof. Francis C(hipman)**, 229 N. Mayfield Ave, Chicago, Ill. *Anatomy*. Niles, Mich, June 26, 65. A.B, Michigan, 88, M.D, 90. *Prof. anat*, Nat. Med. Col, 97-00; Dunham Med. Col, 00-03; *Hahnemann Med. Col*, 06- Ass. Anat; Inst. Homeop. Regional anatomy; male and female perineum; spinal cord.
- Ford, Dr. Lester R**, 16 Wendell St, Cambridge, Mass. *Mathematics*, *Life insurance*. Rich Hill, Mo, Oct. 29, 86. A.B, Missouri, 11, A.M, 12; Harvard, 13, Ph.D, 17, traveling fellow, at Paris, 15-16. Lecturer math, Edinburgh, 14-15, 16-17; *instr. math. and life insurance*, Harvard, 17. Head, dept. math, F. A. Cent. Officers' Training Sch, 18. Math. Soc; Edinburgh Math. Soc. Actuarial science; automorphic functions; mathematics for field artillery.
- Ford, Prof. W(alter) B(urton)**, University of Michigan, Ann Arbor, Mich. **Mathematics*. Oneonta, N. Y, May 18, 74. A.B, Harvard, 97, A.M, 98, Ph.D, 05. *Instr. math*, Albany Acad, 00-01; Michigan, 01-03; Williams, 04-05; *prof*, Michigan, 05- Math. Soc. (chairman, Chicago sect, 15-17); Math. Ass. (chairman, library committee, 17); Soc. math. de France; Circolo Mat. di Palermo. The convergence of the series developments of mathematical physics; the analytic extension of functions of a complex variable; divergent series; linear difference equations; calculus of residues.
- Ford, Dr. William Ebenezer, Jr**, Yale Station, New Haven, Conn. *Mineralogy*. Westville, Conn, Feb. 18, 78. Ph.B, Yale, 99, Ph.D, 03. Asst. *miner*, Yale, 00-03, *instr*, 03-06, asst. *prof*, 06-20, *prof*, 20- Optical Soc; Geol. Soc; Am. Acad; Conn. Acad. Chemical composition and crystallography of minerals.
- Ford, Dr. W(illiam) W(ebber)**, School of Hygiene and Public Health, Johns Hopkins University, Baltimore, Md. **Hygiene, Bacteriology*. Norwalk, Ohio, Dec. 15, 71. A.B, Western Reserve, 93; M.D, Hopkins, 98; D.P.H, McGill, 00, fellow, 99-01; research fellow, Rockefeller Inst, 01-03. *Instr. bacter, med. sch*, Hopkins, 03-05, *assoc*, 05-06, *assoc. prof. bacter. and hygiene and lecturer legal med*, 06-17, *bacter, sch. hygiene and pub. health*, 17- A.A; Soc. Nat; Soc. Bact; Soc. Pharmacol; Ass. Path. and Bact; Soc. Exp. Biol; Am. Physicians; Pub. Health Ass. Diseases of the liver; intestinal bacteria; agglutinations; classification of intestinal bacteria; toxins and antitoxins; poisonous fungi; Amanita phalloides; Amanita muscaria; spore bearing bacteria in milk, water and soil; toxins and hemotoxins of Bacterium Welchii; pollution of milk; Rhus toxicodendron; poisonous glucosids; water supplies; sewage; typhoid fever; cattle poisons.
- Fordyce, Geo(rge) L(incoln)**, Youngstown, Ohio. *Ornithology*. Pub. sch. A.A; mem. Ornith. Union; Audubon Soc; Wilson Ornith. Club. Migration of birds in the vicinity of Youngstown, Ohio.
- de Forest, H(oward)**, University Club, Lawrence, Kans. *Botany*. New York, N. Y, Nov. 2, 72. B.S, Princeton, 95; M.F, Yale, 11; fellow, Chicago, 19-20, Ph.D, 20. Field asst, U. S. Forest Service, 10, forest asst, 11-12; acting asst. *prof. forestry*, Missouri, 13; asst. *prof. Kansas*, 20- A.A; Ecol. Soc; Forestry Ass.
- de Forest, Dr. Lee**, 1391 Sedgwick Ave, New York, N. Y. *Radio engineering*. Ph.B, Yale, 96, Ph.D, 99; hon. Sc.D, Syracuse, 19. Chief engineer, tech. director and v. pres, Am. de Forest Wireless Telegraph Co; pres. and gen. manager, de Forest Radio Telephone and Telegraph Co. and Lee de Forest, Inc. Gold medal, La. Purchase Expos, 04; Panama-Pacific Expos, 15. Elec. Eng; Radio Eng; Franklin Inst; N. Y. Elec. Soc. Radio phenomena; detectors and amplifiers in radio signalling.
- Forman, Prof. A(lexander) H(ardie)**, West Virginia University, Morgantown, W. Va. *Electrical engineering*. Grafton, W. Va, June 12, 83. B.S, M.E, West Virginia, 06, E.E, 08; fellow, Cornell, 08-09, M.M.E, 09, Ph.D, 11. In research div, eng. dept, Westinghouse Elec. and

- Mfg. Co, 06-07; asst. elec. lab, West Virginia, 08-09; asst. physics, Cornell, 09-10, instr, 10-13; asst. prof. and later head of dept. *exp. and elec. eng.*, West Virginia, 13- Physical Soc; Elec. Eng; Eng. Educ. Special prony brake and recording mechanism; effect of magnetization on opacity of X-rays.
- Forman, Prof. Jonathan**, College of Medicine, Columbus, Ohio. *Pathology*. Austinburg, Ohio, Sept. 30, 87. A.B., Ohio State, 10; M.D., Starling Med. Col, 13. Asst. *path.*, Starling Med. Col, 11-13; instr, *Ohio State*, 14-16, *asst. prof.*, 16- A.A.; Am. Med. Ass; Ohio Acad.
- Forrest, C(harles) N(eedham)**, Maurer, N. J. *Chemistry*. Baltimore, Md, Sept. 30, 73. Maryland Inst; George Washington. Asst. chemist, B. and O. R. R, 92-96; South. Ry, 96-97; chemist, Long Isl. R. R, 97-04; chief chemist, N. Y. Testing Lab, 04-14; *Barber Asphalt Paving Co*, 14-17, *manager, tech. dept.*, 17- A.A.; Chem. Soc; Soc. Chem. Indust; Soc. Test. Mat; Civil Eng; Min. Eng. Asphalt and petroleum; composition of native bitumens and their application in the arts.
- Forsaith, Dr. C(arl) C(heswell)**, 1030 Lancaster Ave, Syracuse, N. Y. *Forestry*. Auburn, N. H, Sept. 2, 88. A.B., Dartmouth, 13; A.M., Harvard, 14, Sheldon traveling fellow, 14-15, Ph.D, 17. Asst. bot, Radcliffe, 14-16; Austin teaching fellow, Harvard, 15-16; instr. biol, Dartmouth, 16-17; *wood technol.*, N. Y. State Col. *Forestry*, Syracuse, 17-19, *asst. prof.*, 19- Walker prize, Boston Soc. Nat. Hist, 16. Bot. Soc. Plant anatomy; ecology of peat and coal.
- Forst, Leo B**, 411 Government Building, Cincinnati, Ohio. *Chemistry*. Birmingham, Ala, 84. A.B., Louisville; B.S., Columbia. Asst. chemist, bur. chem, U. S. Dept. Agr, 10-14; Bur. Int. Revenue, 07-10; *chief*, Cincinnati Sta, bur. chem, U. S. Dept. Agr, 14- Chem. Soc. Food and drug analysis and manufacture.
- Forsyth, Prof. C(hester) H(ume)**, Thayer Lodge, Hanover, N. H. *Mathematics*. Trafalgar, Ind, March 17, 81. A.B., Butler, 06; A.M., Illinois, 10; Ph.D., Michigan, 15. Asst. instr. *math.*, Illinois, 07-11; instr, Michigan, 11-12; prof, Eureka, 12-13; instr, Michigan, 13-16; *asst. prof.*, Dartmouth, 16- Math. Soc; Statist. Ass. Vital statistics.
- Forsythe, Dr. Warren E(llsworth)**, University Health Service, Ann Arbor, Mich. *Medicine*. Joseph, Oregon, Nov. 8, 85. B.S., Oregon Col, 07; Ph.C., Michigan, 08, M.D, 13. Asst. physiol. chem, Michigan, 08-11, house physician, univ. hosp, 13-14, staff physician, health service, 14-15; col. physician, Pa. State, 15; *director, health service*, Michigan. A.A.; Am. Med. Ass; Am. Acad. Med. Physiological chemistry; trypsin; college health work.
- Forsythe, Dr. W(illiam) E(Immer)**, 1869 Noble Road, East Cleveland, Ohio. **Physics*. Muskingum Co, Ohio, Aug. 22, 81. B.S., Denison, 07; M.S., Wisconsin, 09, Ph.D, 11. Asst. physics, Wisconsin, 07-08, instr, 09-13; asst. physicist, *Nela Research Lab*, 13-19, *physicist*, 19- Physical Soc; Optical Soc. Melting points of tungsten and tantalum; radiant efficiency and temperature of incandescent filaments; relation between black body and true temperatures for various metals; high temperature measurements; comparison of capacity and inductance; optical pyrometry; monochromatic and neutral screens; notation of constant deviation prisms; acetylene flame energy; speed in signalling with light.
- Fort, Prof. Tomlinson**, University, Ala. *Mathematics*. Albany, Ga, Dec. 17, 86. A.B., Georgia, 06, A.M, 09; Harvard, 10, Ph.D, 12, Kirkland traveling fellow, Harvard, in Europe, 12-13. Instr. *math.*, Georgia, 07-09; Harvard, 10-11; Michigan, 11-13, asst. prof, 13-17; *prof.*, Alabama, 17- Assoc. ed, 'Math. Monthly,' 18. Math. Soc; Math. Ass. Linear differential difference equations and infinite series.
- Fortier, Dr. S(amuel)**, 20 Hillcrest Road, Berkeley, Calif. *Irrigation engineering*. Leeds, Que, April 24, 55. B.A.Sc, McGill, 85, M.E, 96, Sc.D, 07. Asst. and chief engineer, Colo. and Utah, 86-93; prof. civil eng, Utah Col, 93-98; consulting engineer, 93-05; res. hydrographer, U. S. Geol. Surv, 95-02; director, Mont. Exp. Sta, 99-04; agent and expert irrig. investigations, U. S. Dept. Agr, 99-03, agent and expert in charge, Pacific div. irrig. investigations, 03-07, chief, irrig. investigations, 07-20. Asst. prof. irrig. eng, California, 03-10. Grooski medal, Can. Civil Eng, 96. Civil Eng; Soc. Irrig. Eng; Mont. Soc. Eng; Can. Civil Eng. Seepage and return waters in irrigation; carrying capacities of canals; evaporation from soils; relation between soil moisture and crop yield; duty of water in irrigation; application of water to crops; storage of water.
- Fossler, Prof. Mary L(ouise)**, University of Southern California, Los Angeles, Calif. *Biological chemistry*. Lima, Ohio, Sept. 14, 68. B.S., Nebraska, 94, fellow, 97-99, A.M, 98; Chicago, summers, 00, 01, 03; med. sch, Northwestern, 02. Principal, high sch, Weeping Water, Nebr, 95-97; instr. chem, Nebraska, 99-08, *asst. prof.*, 08; *biol.*, Southern California. Chem. Soc. Organic chemistry; synthesis of certain glutaric acids; separation of a group of alkaloids; composition of some proteins.
- Foster, G(oodwin) L(eBaron)**, University of California, Berkeley, Calif. *Biological chemistry*. Calcutta, India, June 4, 92. A.B., Dartmouth, 13. Teaching fellow, Shaw Sch. of Bot, 13-14; *biol. chem.*, Harvard Med. Sch, 14-17; *instr.*, California, 19- Physiol. Soc. Plant physiology; biological chemistry.
- Foster, Prof. Mary Louise**, Smith College, Northampton, Mass. *Chemistry*. Melrose, Mass, April, 65. A.B., Smith, 91, A.M, 12; Mass. Inst. Tech, 93-97; Columbia, 07; Ph.D, Chicago, 14. Research chemist with C. A. Herter, 00-01; with indust. works, Maywood, N. J, 01-04; C. A. Herter, 04-07; *assoc. prof. chem.*, Smith, 08- Chem. Soc; Ass. Prof. Biochemistry; effect of microorganisms on proteins; lecithin.
- Foster, Dr. N(ellis) B(arnes)**, 121 E. 62d St, New York, N. Y. *Medicine*. Durhamville, N. Y, July 18, 75. B.S., Amherst, 98; M.D., Hopkins, 02. Assoc. biol. chem, Columbia, 07-12; assoc. physician, N. Y. Hosp, 08-15; asst. prof. *med.*, med. col, Cornell, 12-16; prof, Michigan, 16-18; *asst. prof.*, med. col, Cornell, 19- Lieut.

- col, M. C, 18-19. Soc. Exp. Biol; Soc. Biol. Chem; Soc. Clin. Invest; Am. Physicians; Harvey Soc. Pathological metabolism; diabetes; nephritis.
- Foster, (Shirley) W(atson)**, General Chemical Co, San Francisco, Calif. *Entomology*. Rockingham Co, N. C, April 8, 84. B.Agr, N. C. Col, 06; Cornell, 07. Asst. entom, bur. entom, U. S. Dept. Agr, 07-12; *entomologist and manager, insecticide dept, Gen. Chem. Co. of Calif*, 12- A.A; Entom. Soc; Ass. Econ. Entom; Pacific Coast Ass. Econ. Entom. Pear thrips; codling moth; grape leaf hopper; lesser apple worm and scale insects; insecticide and fungicide combinations.
- Foster, Dr. William**, Princeton, N. J. *Chemistry*. Hartford, Ky, May 15, 69. A.B, Hartford, 92; Vanderbilt, 92-93; A.M, Princeton, 96, Ph.D, 99. Prof. science, Hartford, 93-95; asst. chem, Princeton, 96-98; prof, Cent. Univ. of Ky, 99-00; instr, *Princeton*, 00-05, asst. prof, 05-10, *prof*, 10- A.A; Chem. Soc. The conductivity of electrolytes; the hydrolysis of stannic chlorid; chlorinated ethers; preparation of new acid chlorid; arsenic compounds and hydrogen sulphid; ethylene chlorid; glaze on Greek vases.
- Foster, W(illiam) J(ames)**, 2 Douglas Road, Schenectady, N. Y. *Electrical engineering*. Argyle, N. Y, Sept. 17, 60. A.B, Williams, 84, A.M, 87; M.S, Cornell, 91. Asst. principal, Burr and Burton Sem, 85-86; teacher science, Hill Sch, Pottstown, Pa, 86-90; instr, Williams, 87; *designing engineer*, Thomson-Houston Co, 91-94; *Gen. Elec. Co, Schenectady, N. Y*, 94- A.A; fel. Elec. Eng. Alternating current design.
- Foster, Prof. W(illiam) S(illiman)**, University of Minnesota, Minneapolis, Minn. *Psychology*. Water Mill, N. Y. A.B, Cornell, 08, Ph.D, 13. Asst. psychol, Cornell, 09-13, instr, 13-16, asst. prof. educ, 16-19; *assoc. prof. psychol, Minnesota*, 19- Major, Sanit. C, 17-19. Psychol. Ass. Experimental psychology of memory and feeling.
- Foster, Mrs. William S. (Dr. Josephine C(urts))**, 309 Ontario St, S. E, Minneapolis, Minn. *Psychology*. Cambridge, Mass, April 6, 89. A.B, Wellesley, 10, A.M, 12; Ph.D, Cornell, 15. Asst. psychol, Wellesley, 10-12; instr. psychol, educ. and math, William Smith, 12-13; chief psychologist, Psychopathic Hosp, Boston, Mass, 15-19. Psychol. Ass. Clinical psychology; psychotic cases.
- Foulk, Prof. C(harles) W(illiam)**, Ohio State University, Columbus, Ohio. *Chemistry*. Warren, Ohio, April 26, 69. A.B, Ohio State, 94; Leipzig, 99-01. Asst. to chemist, Ohio Board of Agr, 94-96; asst. chem, *Ohio State*, 96-98, asst. prof, 98-02, *assoc. prof*, 02-08, *prof. anal. chem*, 03- A.A; Chem. Soc. Analytical chemistry; influence of excess of reagent in the precipitation of barium sulphate; standardization of a magnesium salt solution.
- Fountain, Prof. C(laude) B(ussell)**, Mercer University, Macon, Ga. *Physics*. Ashland, Oregon, Nov. 2, 79. A.B, Oregon, 01; Ph.D, Columbia, 08. Asst. physics, Columbia, 02-05; *assoc. prof*, Idaho, 05-06; instr, Williams, 06-09; asst. prof, Kenyon, 09-13; adj. prof, Georgia, 13-18; *prof. physics and astron*, Mercer, 18- Asst. practical astron. and geod, Columbia, summers, 02-05; prof. physics, Peabody Col. Teachers, summers, 14-19. Asst. dist. educ. director, S.A.T.C, 18. A.A; *assoc. mem*, Physical Soc; Inst. Inventors (mem. exec. council); Meteorol. Soc. Electromagnetic waves; light of firefly; wireless telegraphy and telephony; laboratory instruments.
- Fowke, Gerard**, U. S. Bureau of Ethnology, Washington, D. C. *Archeology, Geology*. Maysville, Ky, June 25, 55. *Asst. ethnologist, Bur. Am. Ethnol. (at intervals)*, 84- With Jesup North Pacific exped, Am. Museum Nat. Hist, 98. Mound-builders remains; aboriginal work in stone; preglacial drainage of lower Ohio valley and eastern Missouri; cave explorations; Hawaiian Islands; Guatemala.
- Fowler, Charles Evan**, 25 Church St, New York, N. Y. *Engineering*. Bartlett, Ohio. M.C.E, Ohio State, 87. Bridge engineer, Hocking Valley Ry, 87-88; chief engineer, Youngstown Bridge Co, 91-98; pres. and chief engineer, Puget Sound Bridge and Dredging Co, 00-05; International Contract Co, 05-14; *consulting engineer*, 14- Lecturer, Washington (Seattle), 05-14; trustee, Alaska-Yukon-Pacific Expos. Civil Eng; Pacific Northwest. Soc. Eng. (past pres); Can. Min. Inst. Bridges; foundations; dredges; harbors.
- Fowler, F(rederick) Eugene**, Smithsonian Institution, Washington, D. C. *Astrophysics*. Arlington, Mass, Nov. 20, 69. B.S, Mass. Inst. Tech, 94. Asst, Harvard Col. Observatory, 87-94; *astrophys. observatory, Smithsonian Inst*, 94-07, *aid*, 07-, *ed, 'Physical Tables'*, 10- Lecturer, George Washington. A.A; Astron. Soc; Wash. Philos. Soc. Bolometric research; atmospheric absorption.
- Fowler, Henry W(eed)**, Academy of Natural Sciences, Philadelphia, Pa. *Zoology*. Holmsburg, Pa, March 23, 78. Stanford, 02. *Asst. museum, Acad. Nat. Sciences, Phila*, 03- Del. Valley Ornith. Club (pres, 16); Phila. Acad. Ichthyology; herpetology; fossil fishes; New Jersey Crustacea.
- Fowler, Prof. James**, 121 Union St, Kingston, Can. *Botany*. Bartibog, N. B, July 16, 29. Halifax, 50; A.M, New Brunswick, 72, LL.D, 00. Lecturer nat. science, *Queen's (Can)*, 80-91, prof, 91-92, bot. and geol, 92-94, bot, 94-08, *emer. prof*, 08- Fel. Royal Soc. Can. Zoology; geology.
- Fowler, S(amuel) S(tewart)**, Nelson, B. C. *Mining, Metallurgy*. New York, N. Y, Oct. 28, 60. A.B, Columbia, 81, E.M, 84. Mining and metal. engineer, 84-89; manager and mining explorer, B. C, 89-06; *manager, Bluebell Mine, Riondel, B. C*, 06- Chairman, committee on smelting rates, Can. Bur. Mines, 18-19. Min. Eng; Min. and Metal. Soc; Electrochem. Soc; Can. Min. Inst. (past pres); London Inst. Min. and Metal.
- Fox, Dr. Carroll**, U. S. Public Health Service, Washington, D. C. *Medicine*. Philadelphia, Pa, Sept. 3, 74. M.D, Pennsylvania, 97. *Commissioned officer, U. S. Pub. Health Service*, 99- Asst. director, Bur. Health, P. I, 11-12; *assoc. prof, hygiene*, Univ. Philippines, 11-12. Pub. Health Ass; Am. Med. Ass; Statist. Ass. Pre-

- ventive medicine; medical entomology; health department organization and administration; the Siphonaptera.
- Fox, Prof. Henry**, Mercer University, Macon, Ga. *Biology*. Germantown, Pa, Feb. 18, 75. B.S. Pennsylvania, 99, A.M., 03, Ph.D. 05. Instr. biol. Wisconsin, 02-03; prof. biol. and chem. Temple, 03-05; instr. science, N.E. Manual Training Sch, Phila, 05-07; prof. biol. Ursinus, 07-12; investigator, bur. entom. U. S. Dept. Agr. 12-18; *prof. biol. Mercer*, 18- A.A.; Soc. Zool.; Entom. Soc.; Ass. Eeon. Entom.; Ecol. Soc. Vertebrate embryology; insect ecology; distribution, variation and specific integration in Orthoptera; insect life histories.
- Fox, Dr. Herbert**, 3902 Locust St, Philadelphia, Pa. *Pathology*. Atlantic City, N. J, June 3, 80. A.B. Cent. High Sch, Phila, 97; M.D. Pennsylvania, 01; Vienna, 05. *Pathologist, Rush Hosp, Phila, 04-*; chief, laboratories, State Dept. Health, Pa, 06-11; *director, lab. comp. path, Phila. Zool. Soc.*, 06-; *Pepper Lab. clin. path, Pennsylvania*, 11- Ass. Path. and Bact; Pub. Health Ass; Am. Med. Ass; Phila. Acad; Phila. Col. Physicians; Phila. Zool. Soc. Bacteriology; bacteriology of typhoid fever and allied infections; neoplasms and infections of wild animals; cardiorenal and vascular diseases; pathology of the lymphatic system.
- Fox, Dr. L. Webster**, S. E. Corner 17th and Spruce Sts, Philadelphia, Pa. *Ophthalmology*. Hummelstown, Pa, March 19, 53. Pa. State Nor. Sch, 72-75; hon. A.M., Lafayette; LL.D., Dickinson, 08. Clin. asst. and house surgeon, Royal London Ophthal. Hosp, 81-82; asst. ophthalmologist, Jefferson Med. Col, Phila, 83-85; ophthal. surgeon, Germantown Hosp, 83-93; *prof. ophthal, Medico-Chirurg. Col, Phila*, 93- Lieut. Army Reserve Corps. Soc. Nat; Am. Med. Ass. Asymmetry of the face in relation to its effect upon anisometropia; diseases of the eye.
- Fox, Prof. Philip**, Dearborn Observatory, Evanston, Ill. *Astronomy*. Manhattan, Kans, March 7, 78. B.S. Kansas State, 97, M.S., 01; B.S. Dartmouth, 02; Berlin, 05-06. Asst. graphics, Kansas State, 98-99; commandant and teacher math, St. John's Mil. Sch, Salina, Kans, 00-01; asst. physics, Dartmouth, 02-03; Carnegie asst, Yerkes Observatory, 02-05; instr. astrophys, Chicago, 05-09; *prof. astron. and director, Dearborn Observatory, Northwestern*, 09- Major, Inf, 17-19, Lieut. col, Inf. R. C. Officier de l'ordre du Sauveur de la Grèce. A.A.; Astron. Soc; Am. Acad; Royal Astron. Soc. Solar physics; rotation of the sun; sun-spot spectrum; micrometric measures of double stars; Rumford spectro-heliograph; stellar parallax.
- Fox, Prof. William**, 457 W. 123d St, New York, N. Y. *Mathematical physics*. Horowitz, Bohemia, Sept. 18, 64. B.S. Col. City of N. Y, 84; M.E., Stevens, 86. Instr. Workingmen's Sch, N. Y, 86-87; mech. drawing, *Col. City of N. Y*, 87-92, applied math, 92-97, asst. prof. physics, 97-14, *prof.*, 14- Lecturer, N. Y. Optical Soc. A.A.; Physical Soc; Mech. Eng. Graphics as applied to practical calculation.
- Fox, W(illiam) J(oseph)**, Academy of Natural Sciences, Philadelphia, Pa. *Entomology*. Philadelphia, Nov. 21, 72. Pub. schools. *Asst. Librarian, Acad. Nat. Sciences, Phila*, 88- Entom. Soc; N. Y. Entom. Soc; Phila. Acad. The fossorial Hymenoptera; bibliography of natural history.
- Foxworthy, Dr. Fred W(illiam)**, Kuala Lumpur, Federated Malay States. *Botany*. Goodland, Ind, July 3, 77. B.S. De Pauw, 99; A.M., Cornell, 02, Ph.D., 04. Asst. bot. Cornell, 00-04; botanist, Bur. Science, P. I., 06-11, wood technologist, Bur. Forestry, 11-17, chief, div. investigation, 13-17; assoc. prof. dendrol, Univ. Philippines, 11-17; *forest research officer, Federated Malay States*, 18- Lecturer timber physics, Cornell, 03-04. A.A.; Bot. Soc; Soc. Foresters; Torrey Bot. Club. Systematic and economic botany; dendrology; silviculture; woods of the Indo-Malayan region.
- Foye, Dr. Wilbur G(arland)**, Middletown, Conn. *Geology*. Brockton, Mass, Feb. 8, 86. A.B. Colby, 09; A.M., Harvard, 12, Ph.D., 15, Sheldon traveling fellow, in Fiji Islands, 15-16. Instr. math, Mt. Hermon Boys' Sch, 09-11; Austin teaching fellow miner, Harvard, 12-15; asst. prof. *geol.*, Middlebury, 16-18; *assoc. prof., Wesleyan*, 18- A.A. Nephelite syenites; uplifted coral reefs and petrology of Fiji; petrography.
- Frachtenberg, Dr. L(eo) (Joachim)**, Central Department, U. S. Army, Chicago, Ill. *Anthropology*. Czernowitz, Austria, Feb. 24, 83. Gymnasium, Przemyśl, Austria, 96-04; Cornell, 04-05; A.M., Columbia, 06, Ph.D., 10. Lecturer anthrop, Columbia, 10-12; ethnologist, Bur. Am. Ethnol, 13-17; head worker, Jewish Welfare Board, 18-19; *director and supervisor, Service Clubs, U.S.A.*, 19- A.A.; Anthropol. Ass; Ethnol. Soc; Oriental Soc; Folk-lore Soc. (sec'y, N. Y. branch, 09). Ethnology; linguistics; languages of Oregon Indians; Zoroastrian literature; Coos, Siuylaw and Alsea texts and grammars.
- Fracker, Dr. S(tanley) B(lack)**, 1632 Adams St, Madison, Wis. *Entomology*. Ashton, Iowa, April 8, 89. A.B. Buena Vista, 10; Michigan, 10-11; M.S. Iowa, summer, 12; Cornell, summer, 11; Ph.D., Illinois, 14. Instr. econ. entom. Wisconsin, 14-15; asst. state entomologist, *Wis.*, 15-18, acting state entomologist, 18-20, *state entomologist*, 20- A.A.; Entom. Soc; Ass. Eeon. Entom. Reduviidae; lepidopterous larvae; Alydinae of the United States; Heteroptera; variation in Oxyurias.
- Francis, Dr. Cha(rle)s Kenworthy**, Tulsa, Okla. *Chemistry*. Chester, Pa, June 17, 75. Ph.B. Brown, 99, A.M., 04; fellow, Illinois, 07-08; Ph.D., Missouri, 10. Chemist, Richmond, Va, 92-96; instr. chem, Brown, 98-99; adj. prof, Ga. Sch. Tech, 99-01, junior prof, 01-03; prof, Converse, 03-07; instr. Missouri, 08-10; chemist, Okla. Exp. Sta, 10-17, prof. petrol. technol, 14-17; chief chemist, Cosden and Co, 17-19; manager, refineries and chem. director, Transcontinental Oil Co, 19-20; *chief chemist and tech. supt, Cosden and Co*, 20- Cement expert, U. S. Reclamation Service, 06. A.A.; Chem. Soc. Cement; coal; chemistry of beef; petroleum and natural gas.
- Francis, Dr. Mark**, College Station, Tex. *Veterinary science*. Shandon, Ohio, March 19, 63. D.V.M., Ohio State, 87. *Prof. vet science, Tex.*

- Col. and veterinarian, Tex. Exp. Sta.*, 88- Vet. Med. Ass; Tex. Vet. Ass. (pres, 02-04). Parasitic diseases of animals; blind staggers; Texas fever; infectious anemia of horses; hog cholera.
- Frandsen, Prof. Peter**, 210 Maple St, Reno, Nev. *Zoology*. Vilslev, Denmark, Sept. 27, 76. A.B. Nevada, 95; A.B. Harvard, 98, A.M., 99. Teacher, pub. schools, 95-96; asst. zool. Harvard and Radcliffe, 98-00; asst. prof. zool. and bacter, Nevada, 00-02, assoc. prof, 02-03, *prof*, 03-06, *biol*, 06- Lecturer nature-study, farmers' institutes; pub. and nor. schools; bacteriologist, Nev. Exp. Sta, 00-06, consulting biologist, 06- A.A.; Ass. Agr. Col; West. Soc. Nat; Nev. Acad. Animal behavior and habits; histology of the blood of various mammals; histology of the nervous system of flat-worms.
- Frankel, Dr. E(dward) M(ichaelson)**, Roosevelt Hospital, New York, N. Y. *Biological chemistry*. Newark, N. J, Feb. 26, 93. B.S., Col. City of N. Y., 12; fellow, Yale, 14-15, Ph.D, 16. Asst. chemist, Phila. Polyclinic Hosp, 12-13; asst. to Prof. A. I. Ringer, Pennsylvania, 13-14; asst, Sheffield Sci. Sch, Yale, 15-16; *research chemist, Harriman Research Lab, Roosevelt Hosp*, 16- Chem. Soc; Soc. Biol. Chem. Experimental diabetes; proteolytic ferments; metabolism of micro-organisms.
- Frankel, Dr. Florence Hulton**, Roosevelt Hospital, New York, N. Y. *Biological chemistry*. Philadelphia, Pa. B.S., Pennsylvania, 07, M.S., 14, Ph.D, 16. Instr, high schools, Phila, 07-15; fellow, Rockefeller Inst, 16-17; *bacteriologist and chemist, Roosevelt Hosp*, 17- Protective ferments; bacterial fermentation; lipolytic actions.
- Frankenfield, Prof. H(arry) C(rawford)**, U. S. Weather Bureau, Washington, D. C. *Meteorology*. Easton, Pa, Nov. 24, 62. A.B., Lafayette, 81, A.M., 84; M.D., Howard, 86. Observer, U. S. *Weather Bur*, 82-91, forecaster, 91-04, *prof. meteorol*, 04-17, *meteorologist*, 17- Mem. editorial board, 'Weather Forecasting in the U. S.' Storms and storm types; floods in rivers; improvements in weather forecasting.
- Frankforter, Prof. George B(ell)**, University of Minnesota, Minneapolis, Minn. **Chemistry*. Potter, Ohio, April 22, 59. A.B., Nebraska, 86, A.M., 88; Ph.D, Berlin, 93. Instr. chem, Nebraska, 85-87; high sch, Lincoln, 87-88; *prof*, Nebraska, 93-94; dean and director, sch. of chem, Minnesota, 94-17; major, ordnance dept, 17-19; tech. adviser, War Claims Board, 19-20; *prof. org. and indust. org. chem, Minnesota*, 20- Director, O.T.C. for chemists, inspectors and linemen; supervisor, control and research lab. for ordnance, Phila, Pa. U. S. Mint Commissioner, 01. A.A. (v. pres, 10); Chem. Soc; Soc. Chem. Indust; Eng. Educ; Chem. Gesell; Electrochem. Gesell. Alkaloids, narcotin, narcein, veratrin and isopyroin; vegetable oils; the terpenes, including camphor and crude pitch; eugenol; formaldehyde; the pitch of the northern pine; resins; mercury fulminate.
- Franklin, Prof. E(dward) C(urris)**, Stanford University, Calif. **Chemistry*. Geary City, Kans, March 1, 62. B.S., Kansas, 88, M.S., 90; Berlin, 90-91; Ph.D, Hopkins, 94. Asst. chem, Kansas, 89-94, assoc. prof, 94-99, *prof. physical* chem, 99-03; assoc. prof. *org. chem, Stanford*, 03-06, *prof*, 06- Chemist, sugar plantations, Donaldsonville, La, 89; gold mine, Miramar, Costa Rica, 97; mem. U. S. Assay Commission, 07; *prof. chem, hygienic lab, U. S. Pub. Health Service*, 11-12; physical chemist, Bur. Standards, 18. Nat. Acad; A.A. (exec. committee, Pacific div, 16); Philos. Soc; Chem. Soc. (chairman, Calif. sect); Kans. Acad; Calif. Acad; Wash. Acad. Liquid ammonia as an electrolytic solvent; the ammonia system of acids, bases and salts.
- Franklin, Dr. Fabian**, 617 W. 113th St, New York, N. Y. **Mathematics*. Eger, Hungary, Jan. 18, 53. Ph.B., George Washington, 69, LL.D, 04; fellow, Hopkins, 77-79, Ph.D, 80. Assoc, assoc. prof. and prof. math, Hopkins, 79-95; ed, 'Baltimore News,' 95-08; assoc. ed, 'N. Y. Evening Post,' 09-17; ed, 'The Weekly Review,' 19- Math. Soc; assoc. Am. Acad. Geometry; invariants.
- Franklin, Mrs. Fabian (Dr. Christine Ladd)**, 617 W. 113th St, New York, N. Y. **Psychology, Logic*. Windsor, Conn, Dec. 1, 47. A.B., Vassar, 69, LL.D, 87; fellow, Hopkins, 79-82; Göttingen, 91-92; Berlin, 92, 94, 01. Assoc. ed, 'Diet. Philos. and Psychol'; *lecturer, Hopkins*, 04-09, *Columbia*, 09- A.A.; Soc. Nat; Psychol. Ass; Optical Soc; Philos. Ass. The development theory of color sensation; logic; the antilogism.
- Franklin, Dr. H(enry) J(ames)**, Massachusetts Agricultural Experiment Station, Amherst, Mass. *Zoology, Entomology*. Guilford, Vt, Feb. 10, 83. B.S., Mass. Col, 03, Ph.D, 08. Instr. bot, Mass. Col, 04-06, asst. entom., Exp. Sta, summers, 06, 07; asst. to state entomologist, Minn, 08-10; *supt, cranberry sub-station, Mass. Exp. Sta*, 10- Ass. Econ. Entom. Thysanoptera; Bombidae; cranberry insects.
- Franklin, Dr. Milton W(ashington)**, General Motors Corporation, Anderson, Ind. *Electrical engineering*. San Francisco, Calif, Feb. 22, 76. M.D., California, 99; A.M.(E.E), Columbia, 06; Ph.D, Göttingen, 12. Lecturer dermat, N. Y. Post-Grad. Med. Sch, 01-03; *prof. radio-therapy, N. Y. Polyclinic. Med. Sch*, and director, radiog. clin, N. Y. City Health Dept, 03-06; asst, power and min. eng. dept, Gen. Elec. Co, 06-16, manager, ozone dept, 16; pres. and gen. manager, C. and C. Elec. and Mfg. Co, 16-17; chief consulting engineer and works manager, E. Houghton Co, 17-19; *chief consulting engineer and director inspection, Remy Elec. Div, Gen. Motors Corp*, 19- A.A.; Elec. Eng; Physical Soc; Soc. Heat and Vent. Eng. (v. pres, 19); Chem. Soc; Franklin Inst; Electrochem. Soc; N. Y. Acad. (sect. sec'y, 06). Röntgen rays; physiotherapy; electrotherapeutics; electrochemistry; electrical transmission of energy; high tension electrical phenomena; factory administration.
- Franklin, Prof. W(illiam) S(uddards)**, Massachusetts Institute of Technology, Cambridge, Mass. **Physics*. Geary City, Kans, Oct. 27, 63. B.S., Kansas, 87, M.S., 88; Sc.D, Cornell, 01. Asst. prof. physics, Kansas, 87-90; *prof. physics and elec. eng, Iowa State*, 92-97; Lehigh, 97-15; *physics, Mass. Inst. Tech*, 17- Mem. jury awards, Nat. Export Expos, Phila; Pan-Am. Expos, 01. A.A. (sec'y, B, 98, v. pres, 02);

- Physical Soc; Am. Acad; hon. mem. Kans. Acad. Elementary physics; theory of alternating currents; elements of calculus; Poynting's theorem; technical education.
- Franz, Dr. S(hepherd) I(vory)**, Government Hospital for Insane, Washington, D. C. **Physiology, Psychology*. Jersey City, N. J., May 27, 74. A.B., Columbia, 94, fellow, 95-97, Ph.D., 99; Leipzig, 96; hon. M.D., George Washington, 15; LL.D., Waynesburg, 15. Asst. psychol., Columbia, 97-99; physiol., Harvard Med. Sch., 99-01; instr. physiol. and med. physics, med. sch., Dartmouth, 01-04; path. psychologist, McLean Hosp., 04-07; *prof. physiol., George Washington*, 06-, *exp. psychol.*, 07-; psychol., *Govt. Hosp. for Insane*, 07-09, scientific director, 09-20, *director of laboratories*, 20- Research asst., Carnegie Institution; ed., 'Psychol. Bul.', 14-; assoc. ed., 'Psychobiol.', 17-; mem. psychol. committee, Nat. Research Council, 17- A.A.; Psychol. Ass. (pres, 20); Psychopath. Ass; Physiol. Soc; S. Soc. Philos. and Psychol. (v. pres, 08-10, pres, 11); Am. Med. Ass; Wash. Neur. Soc. (pres, 11). Cerebral localization; reflexes; vision; skin sensations; fatigue; aphasia; pathological physiology and psychology.
- Fraps, Dr. G(eorge) S(tronach)**, College Station, Tex. *Chemistry*. Raleigh, N. C., Sept. 9, 76. B.S., N. C. Col., 96; fellow, Hopkins, 98-99, Ph.D., 99. Asst. chem., N. C. Col., 95-96, asst. prof., 99-03, asst. chemist, Exp. Sta., 99-03; *Tex. Exp. Sta.*, 03-04, assoc. chemist, 04-05, acting chemist, 05-06, *chemist*, 06-, assoc. prof. chem., Tex. Col., 04-05, acting prof., 05-06, assoc. prof., 06-12; *state chemist, Tex.*, 06- A.A.; Chem. Soc; Soc. Chem. Indust; Ass. Agr. Chem; Tex. Acad. (v. pres, 08-09). Digestion experiments; soils; nitrification; phosphoric acid; methods of agricultural analysis; productive values of feeds.
- Frary, Dr. Francis C(owles)**, Aluminum Co. of America, New Kensington, Pa. **Chemistry*. Minneapolis, July 9, 84. A.C., Minnesota, 05, M.S., 06, Ph.D., 12; Berlin, 06-07. Asst. chem., Minnesota, 03-05, instr., 05-11, asst. prof., 11-15; research chemist, Oldbury Electrochem. Co., 15-17; capt., ordnance dept., O.R.C., and major, C.W.S., 18; *director research, Aluminum Co. of Am.*, 19- Chem. Soc. (councilor, 17); Electrochem. Soc. (v. pres, 18). Industrial and electrochemistry; photochemistry; phosgene.
- Fraser, Prof. Allan C(ameron)**, Cornell University, Ithaca, N. Y. *Plant breeding*. Brockport, N. Y., June 4, 90. B.S., Cornell, 13, Ph.D., 18. Asst. *plant breeding*, N. Y. Bot. Garden, 13-14; instr., Cornell, 14-18, *asst. prof.*, 19- Inheritance of sex in plants; inheritance in Avena.
- Fraser, Dr. C(harles) McLean**, University of British Columbia, Vancouver, B. C., Can. *Zoology*. Bluevale, Ont., June 1, 72. B.A., Toronto, 98, M.A., 03; Ph.D., Iowa, 11, fellow, 11-12. Lecturer and asst., Toronto, 01-03; *curator, Marine Biol. Lab. of Can.*, 12-; *prof. zool., British Columbia*, 20- A.A.; Ecol. Soc; West. Soc. Nat.; Pacific Coast Biol. Ass; Pacific Fisheries Soc. (v. pres, 17-19, pres, 19); Iowa Acad; fel. Royal Soc. Can; Can. Fisheries Ass; B. C. Acad. (pres, 16-18). Marine zoology; taxonomy and ecology of hydroids; life history of fishes.
- Fraser, Samuel**, Geneseo, N. Y. *Agriculture*. Cheadle, England, Feb. 2, 76. Diploma, Cheshire Agr. Col., 98; M.S.A., Cornell, 05. Asst., Cheshire Agr. Col., 96-98; manager, butter factory, 98-99; agriculturist, Sch. Practical Agr. and Hort., Briarelliff Manor, N. Y., 00-03; instr. agron., Cornell, 03-04, asst. agronomist, 04-06; agr. adviser to W. A. Wadsworth, 06-14; *consulting agriculturist*, 06- A.A.; Pomol. Soc; Potato Ass; Am. Nurserymen; fel. Scottish High. and Agr. Soc. The potato; root crops for stock; alfalfa and cultivated grasses; the rotation of crops; timothy; methods of farm management; American fruits; marketing and distribution of perishable products.
- Fraser, Prof. W(ilber) J(ohn)**, 1003 S. Wright St., Champaign, Ill. *Dairy husbandry*. Lockport, Ill., July 1, 69. B.S., Illinois, 93, M.S., 02. Asst. agr., Illinois, 93-96, instr. *dairy husbandry*, 96-01, asst. prof., 01-03, *prof.*, 03- Dairy Instr. Ass; Farm Management Ass; Soc. Animal Invest. Animal nutrition; dairy management; milk production.
- Frayne, John G(eorge)**, University of Minnesota, Minneapolis, Minn. *Electrical engineering*. Trinity (Ire), 12-14; A.B., Wisconsin, 17. Research engineer, Am. Telephone and Telegraph Co., 19; *instr. math. and mech., Minnesota*, 19- Second lieutenant, Sig. C., 18. Radio telephony.
- Frazer, Dr. John**, 8013 Navajo St., St. Martins, Philadelphia, Pa. *Chemistry*. Paris, France, Feb. 5, 82. B.S., Pennsylvania, 03, A.M., 04, Ph.D., 07. Instr. *chem., Pennsylvania*, 04-06, 07-09, *asst. prof.*, 09-, *dean, Towne Sci. Sch.*, 12-18, 19- Capt., C.W.S., A.E.F., 18-19. A.A.; Chem. Soc; Eng. Educ. Electrodeposition of indium and certain electrolytic separations by the rotating anode; the effect of combustion products on vegetation.
- Frazier, Prof. J(oseph) C(hristie) W(hitney)**, Johns Hopkins University, Baltimore, Md. **Chemistry*. Lexington, Ky., Oct. 30, 75. B.S., Ky. State, 97, M.S., 98; Ph.D., Hopkins, 01. Asst. chem., Ky. State, 97-98; asst. chem. dept., Ky. Exp. Sta., 98; *chem., Hopkins*, 02-06, assoc., 06-14, *prof. and chairman of dept.*, 14- Head, research lab., Bur. Mines, Pittsburgh, 05-11. Osmotic pressure and vapor tension of solutions; catalysis and adsorption.
- Frazier, Prof. Charles H(arrison)**, University of Pennsylvania, Philadelphia, Pa. *Surgery*. Philadelphia, April 19, 70. A.B., Pennsylvania, 89, M.D., 92, hon. Se.D. *Prof. clin. surg., Pennsylvania*, 00-, *dean, med. sch.*, 02-09. Surgeon, Univ. Hosp. A.A.; fel. Surg. Ass; Neur. Ass; Soc. Clin. Surg; Am. Med. Ass; Phila. Col. Physicians. Etiology of appendicitis; regeneration of the sensory root of the Gasserian ganglion; etiology of papilliderma in conditions of intracranial pressure; intracranial pressure; effects of cerebral decomposition with relation to the degree of intracranial pressure and the site of decompression.
- Frear, Prof. William**, State College, Pa. **Agricultural chemistry*. Reading, Pa., March 24, 60. A.B., Bucknell, 81; Harvard; Ph.D., Ill. Wesleyan, 83. Asst. nat. science, Bucknell, 81-83; asst. chemist, U. S. Dept. Agr., 83-85; asst. prof. agr. chem., Pa. State, 85-86, *prof.*, 86-08, *exp.*

- agr. chem.*, 08-, *v. director and chemist*, *Exp. Sta.*, 87-; chemist, Pa. State Board of Agr., 88-19. In charge chem. work, State Fertilizer Control, 88-16; chemist, Dept. Agr., Pa., 95-; chemist to state bur. of foods, Pa., 95-; chemist, State Cattle Food Control, 02-05; special agent, U. S. Dept. Agr., 01- A.A.; Chem. Soc.; Ass. Agr. Chem. (pres., 97); Soc. Prom. Agr. Sci. (see'y, 93-95, pres., 03); Ass. Agr. Col. (v. pres.); Franklin Inst.; Acad. Polit. and Social Sci.; Wash. Acad.; Chem. Gesell. Composition of cattle foods, soils and fertilizers; composition of vinegar and breakfast foods; culture of tobacco; fertilizer effects of lime; digestibility of cattle foods; shade culture of Sumatran tobacco; proximate composition of forage plants; lime-stones of Pennsylvania; soil acidity and liming.
- Freas, Dr. Raymond**, Tulane University, New Orleans, La. *Chemistry*. York, Pa., Jan. 23, 86. A.B., Wittenberg, 06; Ph.D., Hopkins, 17. Adj. prof. chem., Virginia, 17-18; *asst. prof.*, Tulane, 19- Chem. Soc.; Electrochem. Soc. Organic and electro-organic chemistry; limits of esterification; hexahydric alcohols; electrolytic oxidation and reduction.
- Freas, Prof. Tho(ma)s B(ruce)**, Columbia University, New York, N. Y. **Chemistry*. Newark, Ohio, Nov. 2, 68. A.B., Stanford, 96; Ph.D., Chicago, 11. Principal, Hiawathan Kansas High Sch., 96-97; chemist, West. Elec. Co., 97-98; manager, Ernst Leitz Supply House, 03-04; curator chem., Chicago, 98-03, instr., 04-11; *asst. prof.*, Columbia, 11-16, *assoc. prof.*, 16- A.A.; Chem. Soc.; Electrochem. Soc. Thermodynamics of chemistry; constant temperature apparatus; laboratory design and management.
- Fred, Prof. E(dwinn) B(rown)**, 627 Mendota Court, Madison, Wis. *Bacteriology*. Middleburg, Va., March 22, 87. B.S., Va. Polytech, 07, M.S., 08, Ph.D., 11. *Asst. bacteriologist*, Va. Exp. Sta., 07-11, bacteriologist, 11-13; *asst. prof. bacter.*, Wisconsin, 13-14, *assoc. prof.*, 14-18, *prof.*, 18- A.A.; Soc. Bact. Soil bacteriology; nitrogen-fixing bacteria; fermentation.
- Frederich, William John**, Loxley, Ala. *Plant pathology*. Galveston, Tex., Aug. 12, 96. B.S., Miss. Agr. Col., 17, M.S., 19. Instr. bacter., Miss. Agr. Col., 17-18; *asst. pathologist in charge, field lab, bur. plant indust.*, U. S. Dept. Agr., 19- Second lieut., C.W.S., 18. Phytopath. Soc. Citrus canker.
- Frederick, C(harles) W(arnock)**, 11 Fairview Heights, Rochester, N. Y. *Astronomy*. Des Moines, Iowa, May 13, 70. B.S., Kansas, 92. Computer, U. S. Naval Observatory, 01-02, *asst. on equatorial*, 02-04; *asst. astronomer in charge observatory*, Tutuila, Samoa, 04-06; *asst.*, U. S. Naval Observatory, 06-09; instr. math., U. S. Naval Acad., 09-14; *head scientific div.*, H. E. dept., Eastman Kodak Co., 14- In charge construction astron. observatory for U. S. Navy Dept., Samoa, 04-06. A.A.; Astron. Soc.; Optical Soc. Optics; instrumental constants and differential refraction; the constant of aberration and variation of latitude; the solar parallax.
- Frederick, Dr. Edwin L(ouis)**, Rolling Road, Catonsville, Md. *Chemistry*. Baltimore, Md., March 17, 91. A.B., Hopkins, 11, fellow, 13-14, Ph.D., 14. *Asst. chem.*, Hopkins, 11-12; *asst. prof.*, N. C. Col., 14-17; *research chemist*, E. I. duPont de Nemours and Co., 19- Lieut., C.W.S., 17-19. Physical and organic chemistry; osmotic pressure of mannite solutions; poisonous gases; dyes.
- Free, Dr. E(dwward) E(lway)**, Carmel, Calif. *Physics*. Dagus, Pa., May 3, 83. A.B., Cornell, 06; Ph.D., Hopkins, 17. *Asst. chemist*, Ariz. Exp. Sta., 07; *physicist, bur. soils*, U. S. Dept. Agr., 08-12; *consulting chemist*, 12- Major, C.W.S., 18; *research assee*, Carnegie Institution, 20- A.A.; Min. Eng.; Soc. Agron.; Ass. Geog.; Ecol. Soc.; Wash. Acad. Soil physics; eolian geology; desert saline deposits; soil aeration; fertilizers.
- Freeborn, Prof. Stanley B(arron)**, 568 Spruce St., Berkeley, Calif. *Entomology*. Hudson, Mass., Dec. 11, 91. B.S., Mass. Col., 14. Quarantine inspector, Mass., 13-14; instr. entom., California, 14-18, *asst. prof.*, 18- Consulting entomologist, Calif. State Board of Health, 16-; officer, Sanit. C., U.S.A., 18-19; passed *asst. sanitarian*, U. S. Pub. Health Service, 19- A.A.; Ass. Econ. Entom. Parasitology; mosquitoes and malaria; lung-worms.
- Freedman, Prof. W(illiam) H(oratio)**, American Telephone and Telegraph Co., 463 West St., New York, N. Y. *Electrical engineering, Physics*. New York, N. Y., Dec. 28, 67. C.E., Columbia, 89, E.E., 91, John Tyndall fellow, 91-92; M.S., Vermont, 08. Tutor elec. eng., Columbia, 92-95, mech., 95-98, elec. eng., 98-99; *prof.*, Vermont, 99-10; head, dept. applied elec., Pratt Inst., 10-13; *prof. elec. eng.*, Vermont, 13-20; with *Am. Tel. and Tel. Co.*, 20- *Asst. surv. and geod.*, Columbia, summers, 90-92; *assoc. ed.*, 'Electric Power,' 95-96; consulting elec. engineer, 99- A.A.; fel. Elec. Eng. The electric arc; hysteresis; eddy currents; electrolysis in railway structures.
- Freeman, Prof. E(dwward) M(onroe)**, University Farm, St. Paul, Minn. **Botany*. St. Paul, Feb. 12, 75. B.S., Minnesota, 98, M.S., 99, Ph.D., 05; Cambridge, 01-02. Instr. col. pharmacy, Minnesota, 98-01, dept. bot., 02-03, *asst. prof. bot.*, 03-05; pathologist, U. S. Dept. Agr., 05-07; *prof. bot. and plant path. col. agr.*, Minnesota, 07-, dean, col. agr. forestry and home econ., 17- Collaborator, bur. plant indust., U. S. Dept. Agr., 08- A.A.; Soc. Nat.; Bot. Soc.; Phytopath. Soc. Dendro-pathology; mycological botany; cereal rusts.
- Freeman, Prof. E(rnest) H(arrison)**, Armour Institute of Technology, Chicago, Ill. *Electrical engineering*. Topeka, Kans., Sept. 26, 76. B.S., Kansas State, 95; B.S., Armour, 02, E.E., 06. Instr. elec. eng., Armour, 02-04, *asst. prof.*, 04-06, *assoc. prof.*, 06-09, *prof.*, 09- Elec. Eng.; West. Soc. Eng.; Eng. Educ.
- Freeman, Prof. Frank N(ugent)**, University of Chicago, Chicago, Ill. *Psychology*. Rockwood, Ont., April 17, 80. A.B., Wesleyan, 04; A.M., Yale, 06, Ph.D., 08, traveling fellow, 08-09. *Asst. psychol.*, Yale, 06-08; instr. educ. psychol., Chicago, 09-13, *asst. prof.*, 13, *assoc. prof.*, 17-20, *prof.*, 20- Acting prof. educ., Washington (Md.), 07. A.A. (see'y, I, 19); Psychol. Ass.; Soc. Col. Teachers Educ.; Nat. Soc. Study Educ.

- Psychology of writing; mental tests; illumination standards; tests of instruction.
- Freeman, Dr. Geo(rge) F(ouche)**, Société Sultanienne d'Agriculture, Cairo, Egypt. *Botany*. Maple Grove, Ala, Nov. 4, 76. B.S., Ala. Polytech, 03; Sc.D., Harvard, 17. Principal, Downer Inst., Beech Island, S. C., 99-01; asst. bot., Mass. Col., 03-04; Kansas State, 04-06, instr., 06-07, asst. prof., 07-09; plant breeder, Ariz. Exp. Sta., 09-19, acting dean, col. agr., and director, Exp. Sta., 15-16; with *Soc. Sultanienne d'Agr.*, Cairo, Egypt, 19- Soc. Nat.; Soc. Agron.; Bot. Soc.; Cairo Sci. Soc. Plant breeding; alfalfa; wheat; corn; cotton; quantitative determination of transpiration in plants; evaporation; plant diseases.
- Freeman, Dr. John R(iple)**, 235 Arlington Ave., Providence, R. I. *Hydraulic engineering*. West Bridgeton, Maine, July 27, 55. B.S., Mass. Inst. Tech, 76; hon. Sc.D., Brown, 04; Tufts, 05. Principal asst. engineer, Water Power Co., Lawrence, Mass., 77-80; principal asst. to Mr. Hiram F. Mills, consulting hydraulic engineer, 80-86; consulting engineer, 86- Chief engineer and supt. inspection, Ass. Factory Mutual Ins. Companies, 87-96; mem. Mass. Metropolitan Water Board, 95-96; pres. and treas., Manufacturers' Mutual Ins. Co., 96-; consulting engineer, N. Y. Water Supply, 00-; consulting engineer, various mfg. concerns, municipalities and corporations; lecturer and mem. corp., Mass. Inst. Tech, visitor, eng. and archit. departments; mem. Board Consulting Eng., Isthmian Canal, 07-09; consulting engineer, Baltimore water supply, 08-09; San Francisco, 10; improvement of grand canal, Chinese govt, 17-; pres., Providence Gas Co., 17-18; chairman, Nat. Advisory Committee Aeronaut, 18-19. Nat. Acad.; A.A.; Civil Eng. (v. pres, 02); Mech. Eng. (pres, 04); Am. Acad.; New Eng. Water Works Ass; Boston Soc. Civil Eng. (pres, 94). Experimental hydraulics; fire protection; development of water power; municipal water supply; flow of water in pipes and pipe fittings; effect of damming tidal estuary of Charles River at Boston on health of community and on shoaling of harbor; fire protection of theatres.
- Freeman, Dr. Leonard**, St. Joseph's Hospital, Denver, Colo. *Surgery*. Cincinnati, Ohio, Dec. 16, 60. B.S., Cincinnati, 83; M.D., Med. Col. of Ohio, 86; A.M., Denver, 01. *Prof. surg.*, Woman's Med. Col., 88-94; *Colorado*, 94-; *surgeon*, Denver City and Co. Hosp. and St. Joseph's Hosp., 94- Surgeon, Christ's Hosp. and pathologist, Cincinnati Hosp., 88-94. Am. Med. Ass; Surg. Ass. (v. pres); West. Surg. Ass. (pres, 17); Int. Surg. Ass.
- Freeman, Dr. R(owland) G(odfrey)**, 211 W. 57th St, New York, N. Y. *Pediatrics, Bacteriology*. New York, June 11, 59. A.B., Columbia, 83, M.D., 86. Clin. lecturer *pediat*, Univ. and Bellevue Hosp. Med. Col., 01-09, asst. prof., 09-12, assoc prof., 12-19, *prof*, 19- Visiting pediatricist, Roosevelt Hosp; N. Y. Nursery and Child's Hosp; consulting pediatricist, N. Y. Foundling Hosp; Seaside Hosp. of St. John's Guild; Somerset Hosp; St. Agnes Hosp. Am. Physicians; *Pediat. Soc*; Ass. Tuber; Am. Med. Ass; N. Y. Acad. Med. Pediatrics.
- Frehafer, Dr. M(abel) K(atherine)**, Bureau of Standards, Washington, D. C. *Physics*. Philadelphia, Pa, 86. A.B., Bryn Mawr, 08; A.M., Wisconsin, 09; Ph.D., Hopkins, 19. Demonstrator physics, Bryn Mawr, 10-14; asst., Wisconsin, 14-16; instr., Mt. Holyoke, 16-18; *asst. physicist*, Bur. Standards, 19- Assoc. Physical Soc. Reflection and transmission of ultra-violet by sodium and potassium.
- Freiberg, Dr. Albert H**, 3577 Alaska Ave, Cincinnati, Ohio. *Orthopedic surgery*. M.D., Cincinnati, 90; Würzburg, Strasbourg, Vienna, Berlin, 91-94; LL.D., Cedarville, 15. *Prof. orthopedic surg*, Cincinnati, 02- A.A.; Am. Med. Ass; Orthop. Ass. (pres, 10).
- French, Prof. A(rthur) W(illard)**, 202 Russell St, Worcester, Mass. *Civil engineering*. Battle Creek, Mich, July 13, 68. C.E., Dartmouth, 92. Practising engineer, 92-95; asst. prof. *civil eng*, Thayer Sch. Civil Eng, Dartmouth, 95-98; *prof*, Worcester, 99- Civil Eng; Eng. Educ; Boston Soc. Civil Eng; Concrete Inst. Properties of structural materials.
- French, C(harles) A(lonzo)**, Dominion Observatory, Ottawa, Can. *Physics*. Mt. Albert, Ont, July 9, 78. B.A., Toronto, 06. Observer, Dominion Observatory, 06-08, *magnetician*, 08- Royal Astron. Soc. Can. Terrestrial magnetism.
- French, Prof. G(eorge) H(azen)**, Carbondale, Ill. *Botany, Entomology*. Tully, N. Y., March 19, 41. A.M., Ill. Agr. Col, 73. Chemist, Ill. Col., 68-77; asst. state entomologist, Ill, 77-78; *prof. physiol. and plant path*, S. Ill. Nor. Univ, 78-17. A.A.; Entom. Soc; Ass. Econ. Entom; Phila. Acad; St. Louis Acad; N. Y. Entom. Soc; Canadian, French and Belgian Entom. Societies; hon. mem. Lübeck Soc. Nat. Sci. Caetolae.
- French, G(eorge) Talbot**, 925 A E. Broad St, Richmond, Va. *Botany*. Stoughton, Mass, Jan. 14, 84. B.S., Mass. Col, 06; Cornell, 09-10. Asst. botanist, N. Y. Exp. Sta, Geneva, 06-12; *botanist in charge div. bot. and seed lab*, Va. Dept. Agr. and Immigration, 12- Ass. Seed Anal. (pres, 18, chairman, legis. committee, 18-20). Phytopath Soc. Plant pathology; seed testing and identification.
- French, Prof. H(arley) B(ellsworth)**, University, S. Dak. *Anatomy*. Delphi, Ind, Dec. 7, 73. A.B., Wash. State, 02; M.D., Northwestern, 07; M.S., Chicago, 11. *Prof. anat. and physiol*, South Dakota, 07-11, *anat. and dean, sch. med*, 11- A.A.; Ass. Anat; Am. Med. Ass.
- French, H(arry) F(ield)**, Jackson Annex, Fremont, Ohio. *Chemistry*. Plymouth, N. H., Nov. 7, 86. B.S., N. H. Col, 08. Asst. chemist, N. H. State Lab. of Hygiene, 08-10; chemist, Nat. Carbon Co, 10-12, *research chemist*, 12- A.A.; Chem. Soc. Manufacture of primary electrical batteries.
- French, Prof. Helen Somersby**, Wellesley College, Wellesley, Mass. *Chemistry*. Lynn, Mass, 84. A.B., Wellesley, 07, A.M., 10; Ph.D., Zürich, 13. Asst. chem, Wellesley, 07-10, instr., 10-11, 13-17, *asst. prof*, 17- Chem. Soc. Organic and physical chemistry; preparation of nitrobenzaldehydes.

- French, Dr. John S(haw)**, 151 Morris Ave, Providence, R. I. *Mathematics*. North Fayette, Maine, July 3, 73. A.B., Bowdoin, 95; fellow, Clark, 96-98, Ph.D., 98. Prof. math, Jacob Tome Inst, 98-08; *principal, Morris Heights Sch*, 08- Assoc. examiner math, Col. Ent. Exam. Board. A.A.; Math. Soc; Circolo Mat. di Palermo. The pertingents to a plane curve; the general class of a plane curve; the singularities of a plane curve.
- French, Owen B(ert)**, 3420 36th St, N. W., Washington, D. C. *Civil engineering*. Cleveland, Ohio, Dec. 7, 65. B.S., Case, 88, C.E., 05. Asst. U. S. Coast and Geod. Surv, 95-15; prof. geod. and astron, Inst. Mil. Surv, Peking, China, 18-19; *consulting geodesist*, 16-17, 20-; *prof. surv. and geod, George Washington*, 20- Wellman Polar exped, 94; Wheat decoration, China. A.A.; Civil Eng; Wash. Philos. Soc; Wash. Acad; Wash. Soc. Eng. (treas, 18). Invar tapes for measurement of primary base lines; telegraphic longitudes.
- French, Rev. Thomas, Jr**, R. F. D. 4, Sebastopol, Calif. *Physics, Mining engineering*. Cincinnati, Ohio, Jan. 15, 48. A.B., Harvard, 72; Ph.D., Heidelberg, 76. Asst. physics, Pennsylvania, 76-78; prof. physics and math, Urbana, 76-83; physics, Cincinnati, 83-00; substitute prof, Amherst, 02-03; *minister*, New Jerusalem Church (Swedenborgian), Buffalo, N. Y., 05-10; *Swedenborgian Church, San Francisco, Calif*, 12-; *fruit grower*, 12- Consulting city electrician, Cincinnati, 89; assoc. ed, 'Jour. Terrestrial Magnetism,' 99-00; manager, Santa Rita Mining Co, 01; lecturer, 03, 04. A.A.; assoc. mem. Elec. Eng. Electric discharges through rarefied media; efficiency of different systems of electric illumination; comparative economy of illumination by gas and by electricity.
- French, Prof. Thomas E(wing)**, Ohio State University, Columbus, Ohio. *Engineering drawing*. Mansfield, Ohio, Nov. 7, 71. M.E., Ohio State, 95. Assoc. prof. archit. and drawing, *Ohio State*, 01-06; *prof. eng. drawing*, 06- Consulting engineer, Edward H. French and Co. A.A.; Eng. Educ. (councilor, 16-19); Ass. Prof. Essentials of lettering; agricultural drawing; design of farm structures.
- Frerichs, Dr. Frederick W**, 4557 West Pine Boulevard, St. Louis, Mo. *Chemistry*. Etzel, Germany, March 23, 49. Ph.D., Göttingen, 74. Instr. chem, Göttingen, 74-79; supt, Mallinckrodt Chem. Works, St. Louis, 80-86; *director, Herf and Frerichs Chem. Co*, 86- Manager, Paint and Varnish Works of Hermann Frenkel, Leipzig; Merck and Co, St. Louis, 03-05; assoc. ed, 'Post. Zeit. für Chem. Grossgewerbe'; mem. int. jury awards, La. Purchase Expos, 04. Gold medal, La. Purchase Expos. Chem. Eng. (pres, 11); Soc. Chem. Indust; St. Louis Acad; St. Louis Chem. Soc. (pres, 03-06); Bunsen Gesell. Industrial chemistry; inorganic chemistry.
- Freund, Dr. Hugo Abraham**, 355 Woodward Ave, Detroit, Mich. *Medicine*. Detroit, Dec. 6, 81. A.B., Michigan, 03, M.D., 05. First asst. internal med, Michigan, 05-07; senior attending physician, Harper Hosp, 10; pres, Board of Health, Detroit, Mich. A.A.; Ass. Path. and Bact; Therapeut. Soc; Ass. Endocrinol. Internal medicine; intestinal parasites; cardiac arrhythmias; diabetes; Hodgkins disease; Trichomonas hominis of the intestinal tract; osteomalacia; influenza; legarthic encephalitis.
- Frevort, Dr. Harry L(ouis)**, Midvale Steel Co, Philadelphia, Pa. *Chemistry*. Dayton, Ohio, June 21, 82. A.B., Harvard, 05, Ph.D., 08. Instr. physical chem, Harvard, 06-09; chief chemist, *Midvale Steel Co*, 09-11, *supt. armor dept*, 13-17, *armor, ordnance and heat treatment*, 17- Atomic weights; heats of combustion; amalgams; steel.
- Frey, H(enry) C(arroll)**, 1349 Richard St, Milwaukee, Wis. *Chemistry*. Philadelphia, Pa, Oct. 5, 84. A.B., Temple, 06. Chemist, Barrett Mfg. Co, 02-06; N. Z. Graves Co, 06-09; chemist and asst. supt, Detroit White Lead Works, 09. Chem. Soc. Sulphur dioxid in refined linseed oil; petroleum naphtha in turpentine; red lead for storage battery use; production of fine dry colors; paints.
- Friedenwald, Prof. Harry**, 1020 Madison Ave, Baltimore, Md. *Ophthalmology, Otolaryngology*. Baltimore, Sept. 21, 64. A.B., Hopkins, 84; M.D., Col. Physicians and Surg, Baltimore, 86. Asst, Prof. Hirschberg's Eye Hosp, Berlin, 87-89; assoc. prof. *ophthal. and otol*, Col. Physicians and Surg, Baltimore, 94-02, *prof*, 02-15; *Maryland*, 15- Ophthalmic and aural surgeon, Baltimore Eye, Ear and Throat Charity Hosp, Mercy, Union, Memorial, Woman's and Hebrew Hospitals. A.A.; Ophthal. Soc; Otol. Soc; Am. Med. Ass; Md. Med. and Chirurg. Faculty; Ophthal. Gesell.
- Friedenwald, Prof. Julius**, 1013 N. Charles St, Baltimore, Md. *Medicine*. Baltimore, Dec. 20, 66. A.B., Hopkins, 87; M.D., Col. Physicians and Surg, Baltimore, 90; A.M., Loyola, 94. *Prof. gastro-enterol, Maryland*. Gastro-enterologist, Union Protestant Infirmary; Mercy Hosp; Church Home and Infirmary; Women's Hosp; Hebrew Hosp. A.A.; Am. Physicians; Gastro-Enterol. Ass. (pres, 08-10); Am. Acad. Med; Am. Med. Ass; Therapeut. Ass; Gastro-Enterol. Ass. Gastro-enterology; dietetics; functional diseases of the stomach.
- Friedline, Prof. C(ora) L(ouisa)**, Randolph-Macon Woman's Col, Lynchburg, Va. *Psychology*. New York, N. Y., Jan. 21, 93. A.B., Nebraska, 13, A.M., 15, fellow, Bryn Mawr, 15-16; Ph.D., Cornell, 18. Asst. *psychol*, Nebraska, 14-15; tutor, Cornell, 17-18; *adj. prof, Randolph-Macon Woman's Col*, 18- The discrimination of cutaneous patterns below the two point limen.
- Fries, Dr. Harold H**, 92 Reade St, New York, N. Y. *Chemistry*. Cincinnati, Ohio, Jan. 17, 66. Sch. mines, Columbia, 85; Ph.D., Berlin, 87. A.A.; Chem. Soc; Soc. Chem. Indust; British Ass; Chem. Verein.
- Fries, J(oens), E(lias)**, T. C. I. and R. R. Co, Birmingham, Ala. *Electrical engineering*. Sweden, April 6, 76. E.E., M.E., Royal Polytech, Stockholm, 98. With various indust. concerns, Sweden, 98-03; U. S., 03-08; Crocker-Wheeler Co, 08-10, indust. engineer, 10-12, Pacific Coast engineer, 12-14, asst. chief engineer, 14-16; chief elec. engineer, *Tennessee Coal, Iron and*

- E. R. Co*, 16-19, chief engineer, 19- A.A.; fel. Elec. Eng; N. Y. Eng. Club. Electric drive of turbine pumps; current surge; 60 vs. 25 cycles; gear ratio; reversing steel mill drives; relativity; fungi.
- Fries, J(öns) A(ugust)** State College, Pa. *Animal nutrition*. Hälsingborg, Sweden, Aug. 31, 63. B.S., Pa. State, 99, M.S., 06; Halle, 94; Bonn, Leipzig, Zürich, 04-05. Asst. chemist, Pa. Exp. Sta, 89-98, expert asst. animal nutrition, 98-08, asst. director, inst. animal nutrition, Pa. State, 08- Chem. Soc; Soc. Animal Production; Soc. Prom. Agr. Sci. Bomb calorimetry; respiration calorimetry with cattle; gas analysis.
- Frink, Prof. H(orace) W(estlake)**, 17 E. 38th St, New York, N. Y. *Psychology*. Irontdale, N. Y., Feb. 7, 83. M.D., Cornell, 05. Asst. prof. neur., med. col., Cornell, 14-; asst. attending neurologist, Bellevue Hosp, 14- Psychopath. Ass. (sec'y, 15-); N. Y. Psychoanal. Soc. (pres, 14-16); N. Y. Acad. Med. Psychoneuroses; morbid fears; sex psychology.
- Frisby, Prof. Edgar**, U. S. N. (retired), 1607 31st St, N. W., Washington, D. C. *Mathematics, Astronomy*. Great Easton, England, May 22, 37. A.B., Toronto, 63, A.M., 64. Acting prof. math., Northwestern, 67-68; asst. U. S. Naval Observatory, 68-78, prof. math. U. S. N., 78-99. In charge solar eclipse exped. to Calif., 80. A.A. (v. pres, 94); Astron. Soc. Orbits of comets and kindred subjects.
- Frissell, Dr. Lewis F(ox)**, 113 E. 56th St, New York, N. Y. *Medicine*. Bloomfield, N. J., Aug. 2, 72. A.B., Yale, 95, A.M., 97; M.D., Columbia, 00. Asst. prof. clin. med., Col. Physicians and Surg., Columbia. A.A.; Ass. Tuber; N. Y. Acad. Med. Rheumatism; tuberculosis.
- Frizell, Prof. A(rthur) B(owes)**, 366 Harvard St, Cambridge, Mass. *Mathematics*. Boston, Mass., July 14, 65. A.B., Harvard, 93, A.M., 00; Göttingen, 06-08; Ph.D., Kansas, 10. Asst. math., Mass. Inst. Tech, 88-91; instr., N. Y. Univ, 95-96; Harvard, 97-06; prof., Midland, 08-09; instr., Kansas, 09-12; prof., McPherson, 12-17; instr., Worcester, 19-20, Mass. *Naut. Sch.*, 20- Instr. math., Harvard, summer, 08. Int. Cong. Math., Rome, 08. Math. Soc; Math. Verein; Circolo Mat. di Palermo. The theory of sets; abstract groups applied to arithmetic; transfinite ordinals.
- Froeberg, Dr. Sven**, University of Utah, Salt Lake City, Utah. *Psychology*. Sweden, 80. A.B., Bethany, 03; Ph.D., Columbia, 08. Instr. and prof. psychol., Upsala, 08-15; asst. prof., Pa. State, 17-18; with U. S. Dept. Justice, 20; asst. prof. psychol., Utah, 20- Vocational adviser, Fed. Board for Vocational Educ, 19. A.A.; Psychol. Ass. Applied and vocational psychology; mental efficiency tests; effects of smoking.
- Fromme, Prof. F(red) D(enton)**, Blacksburg, Va. *Botany*. St. Paris, Ohio, April 2, 86. B.S., S. Dak. Col., 11; Ph.D., Columbia, 14. Asst. bot., Columbia, 12-13; asst. botanist, Ind. Exp. Sta, 14-15; prof. plant path. and bacter., Va. Polytech, and plant pathologist and bacteriologist, Exp. Sta, 16- A.A.; Bot. Soc; Phytopath. Soc; Bot. Cent. States. Phytopathology; cytology, morphology and physiology of fungi.
- Frost, Prof. Edwin B(rant)**, Williams Bay, Wis. *Astrophysics, Astronomy*. Brattleboro, Vt., July 14, 66. A.B., Dartmouth, 86, A.M., 89; Strasbourg, 90-91; hon. Sc.D., Dartmouth, 11; Cambridge, 12. Instr. high sch., Hancock, N. H., 86; physics and astron., Dartmouth, 87-90; volunteer and asst., Astrophys. Observatory, Potsdam, Germany, 91-92; asst. prof. astron., Dartmouth, 92-95, prof., 95-02 (non-res, 98-02); prof. astrophys., Chicago, and astrophysicist, Yerkes Observatory, 98-, director, 05- Asst. ed., 'Astrophys. Jour.', 95-01, ed., 02- Nat. Acad; A.A. (sec'y, A, 96); Astron. Soc. (v. pres, 12); Philos. Soc; Am. Acad; for. assoc. Royal Astron. Soc; Astron. Gesell; for. mem. Soc. Astron. Ital. Thermal radiation of the sun; sunspots; stellar spectroscopy; spectrographic determination of velocities of stars in line of sight.
- Frost, Prof. E(liott) P(ark)**, 8 Granger Place, Rochester, N. Y. *Psychology*. Oxford, Mass., Jan. 9, 84. A.B., Dartmouth, 05, A.M., 06; Ph.D., Harvard, 08, fellow, at Berlin, 08-09. Instr. psychol., Princeton, 09-10; Yale, 10-14; prof. psychol. and head of dept., Tennessee, 14-18, director, Indust. Management Council, and Manufacturers' Council, Rochester, N. Y., 19- Chairman, athletic council, Tennessee, 14-18; capt., U. S. A., 18-19. Psychol. Ass. Individual differences; dreams; military morale; industrial relations.
- Frost, Dr. G(ilman) D(uBois)**, Hanover, N. H. *Medicine*. Randolph, Vt., May 7, 64. A.B., Dartmouth, 86, A.M., 89; M.D., Harvard and Dartmouth, 92. Prof. anat., med. sch., Dartmouth, 93-10, clin. med., 10- Ass. Anat.
- Frost, Dr. Howard B(rett)**, Citrus Experiment Station, Riverside, Calif. *Botany*. Dairyland, N. Y., Sept. 28, 81. B.S.A., Cornell, 08, M.S.A., 10, Ph.D., 13. Asst. hort., N. Y. State Col. Agr., Cornell, 10-12; Citrus Exp. Sta., California, 13-17, instr., 17-20, plant breeding, grad. sch. tropical agr., 13-20, research assoc., 20- Clerk, U. S. Civil Service Commission, 09-10. A.A.; Soc. Hort. Sci; West. Soc. Nat. Plant breeding; heredity in hybrids.
- Frost, Dr. Wade H(ampton)**, Johns Hopkins School of Hygiene and Public Health, Baltimore, Md. *Medicine*. Marshall, Va., March 3, 80. A.B., Virginia, 01, M.D., 03. Asst. surgeon, U. S. Pub. Health Service, 05-09, passed asst. surgeon, 09-17, surgeon, 17-; head, dept. epidemiol., sch. hygiene and pub. health, Hopkins, 19- Soc. Bact; Pub. Health Ass; Am. Med. Ass. Epidemiology; stream pollution; infectious diseases.
- Frost, Prof. W(illiam) D(odge)**, 1010 Grant St, Madison, Wis. *Bacteriology*. Lake City, Minn., Sept. 13, 67. B.S., Minnesota, 93, M.S., 94; Ph.D., Wisconsin, 03; D.P.H., Harvard, 13. Biologist, Minn. State Board of Health, 94-95; instr. bacter., Wisconsin, 95-02, asst. prof., 02-07, assoc. prof., 07-15, prof. agr. bacter., 15- Lecturer bacter., Wis. Col. Physicians and Surg., 99-01. A.A.; Soc. Bact; Pub. Health Ass. Physiological botany; laboratory technique; antagonism among bacteria; effect of external conditions on bacteria; fermentative organisms; experimental hygiene; tuberculosis; bacteriology of milk.

- Frothingham, Dr. Channing**, 395 Marlboro St, Boston, Mass. *Medicine*. Brooklyn, N. Y., May 10, 81. A.B., Harvard, 02, M.D., 06. *Instr. med.*, *Harvard Med. Sch.*, 13- Ass. Path. and Bact.; Soc. Clin. Invest; Am. Physicians. Trichinosis; proteolytic ferments; pancreas; liver; hexamethylenamin; typhoid agglutinins; arteriosclerosis; renal function.
- Frothingham, E(arl) H(azeltine)**, U. S. Forest Service, Washington, D. C. *Forestry*. Manchester, Iowa, Aug. 31, 80. A.B., Michigan, 04, M.S., 06. Forest asst, U. S. Forest Service, 06-12, forest examiner, 12-20, *silviculturist*, 20-A.A.; Soc. Foresters (sec'y, 11-14); Ec. Soc.; Wash. Acad.; Wash. Biol. Soc. Silviculture; forest management; ecology; growth, characteristics and requirements of forest trees.
- Frothingham, Dr. Langdon**, Harvard Medical School, Boston, Mass. *Pathology*. Boston, April 21, 66. M.D.V., Harvard, 89; Dresden, 91, 92, 94; Prague, 92. *Instr. physiol.*, Nebraska, 90-91; asst. bacter, Yale, 91-94; instr. comp. path, vet. sch, Harvard, 95-00, asst. path, med. sch, 96-98, Austin teaching fellow bacter, 00-06, instr, 07-14. Ass. Path. and Bact; Vet. Med. Ass; Mass. Vet. Ass. (pres, 97-99); Boston Soc. Med. Sci. Bacteriology; tuberculosis; glands; lesion caused by blastomycetes; cancer bodies in tumors of animals; rabies.
- Fry, Prof. H(arry) S(hiopley)**, University of Cincinnati, Cincinnati, Ohio. *Chemistry*. Cincinnati, Oct. 24, 78. A.B., Cincinnati, 01, fellow, 01-02, A.M., 02, Ph.D., 05. Asst. chem, *Cincinnati*, 02-04, instr, 04-07, asst. prof., 07-10, assoc. prof., 10-18, *prof. and head of dept*, 18- Lecturer inorg. chem, summer sch, Tennessee, 07; trustee, Univ. Sch, Cincinnati. A.A.; Chem. Soc. (pres, Cincinnati sect, 07). Appreciation of difference of phase of sound-waves; reduction of aromatic nitrocompounds; preparation of chromyl compounds and thiocarbonylids; reactions in non-aqueous solvents; electrotonic conception of positive and negative valence; electrotonic formula of benzene; electrotonic isomerism and tautomerism in relation to absorption spectra; free radicals.
- Fry, Prof. Howard M(asse)**, 726 Avenue H, Bethlehem, Pa. *Physics*. Drifton, Pa, Oct. 2, 89. E.E., Lehigh, 10, M.S., 15. *Asst. prof. physics*, *Lehigh*. Prof. in charge telegraph sch, Lehigh, 18. Physical Soc; Elec. eng.
- Fry, T(hornton) C(arle)**, 463 West St, New York, N. Y. *Mathematics*. Findlay, Ohio, Jan. 7, 92. A.B., Findlay, 12; A.M., Wisconsin, 13, Ph.D. 20. Instr. math, Wisconsin, 12-16; *mathematician*, *Am. Telephone and Telegraph Co. and West. Elec. Co.*, 16- Math. Soc. Applied mathematics; mathematical physics; divergent integrals.
- Fry, William H(enry)**, U. S. Department of Agriculture, Washington, D. C. *Mineralogy*. Fayetteville, N. C, Sept. 22, 88. A.B., North Carolina, 10, 11. Asst. geol, North Carolina, 08-10, instr, 10-11; *scientist, soil lab. investigations, bur. soils, U. S. Dept. Agr.*, 11- Chem. Soc. Physiography; areal geology; soil mineralogy and chemistry; crystal optics.
- Frye, Royal M(errill)**, Massachusetts Institute of Technology, Cambridge, Mass. *Physics*. Milford, N. H., May 27, 90. A.B., Boston, 11, A.M., 12, Sleeper fellow, 12-13; Harvard, 12-13. *Instr. physics*, Boston, 13-15; *Mass. Inst. Tech.*, 15- Physical Soc; Chem. Soc; East. Ass. Physics Teachers; New Eng. Ass. Chem. Teachers. Radiation; spectroscopy; residual rays; X-rays.
- Frye, Prof. T(heodore) C(hristian)**, University Station, Seattle, Wash. *Botany*. Washington, Ill, Sept. 15, 69. B.S., Illinois, 94; Ph.D., Chicago, 02. Asst. bot, Chicago, 00-02; *prof. biol.*, Morningside, 02-03; *bot, Washington (Seattle)*, 03-, *director, Biol. Sta.*, 14-, acting dean, col. science, 14-16. Head Puget Sound Marine Sta, 05, 07, 08, 09; in charge, U. S. soils kelp exped. to Alaska, 13. A.A. (mem. exec. committee, Pacific div, 16); Bot. Soc; West. Soc. Nat; Sullivant Moss Soc. (pres, 08, 09). Experimental plant morphology; taxonomy of western mosses; marine algae; kelp products.
- Fryer, Prof. Ja(me)s R(obert)**, University of Alberta, Edmonton, Alta, Can. *Botany*. Wilsonville, Ont, Jan. 9, 84. B.A., Toronto, 13, M.A., 15. *Asst. prof. field husbandry, Alberta*, 13-A.A.; Ec. Soc. Effect of frost on maturing grains.
- Fuertes, Louis Agassiz**, Cornell Heights, Ithaca, N. Y. *Ornithology*. Ithaca, Feb. 7, 74. A.B., Cornell, 97. A.A.; fel. Ornith. Union. Ornithological illustrating.
- Fulcher, Dr. Gordon S(cott)**, Corning, N. Y. **Physics*. Evanston, Ill, March 21, 84. B.S., Northwestern, 05, M.S., 06; Clark, 06-07, fellow, 07-08, Ph.D., 10. Research asst. physics, Clark, 06-07; instr, Amherst, 08-09; Wisconsin, 09-15, asst. prof., 15-18; exp. engineer, U. S. A., 18-19; scientific assoc, Nat. Research Council, 19-20; *physicist, Corning Glass Works*, 20- A.A.; Physical Soc. Canal rays; electrostatic dangers to balloons; glass.
- Fullaway, David T(immins)**, Board of Agriculture and Forestry, Box 207, Honolulu, Hawaii. *Entomology*. Philadelphia, Pa, Sept. 21, 80. A.B., Stanford, 08. A.M., 10. Sec'y to pres, Stanford, 03-08; *entomologist, Hawaii Exp. Sta.*, 08-13; *Hawaii Board Agr. and Forestry*, 13-A.A.; Ass. Econ. Entom; Entom. Soc; Hawaiian Entom. Soc. Hymenoptera.
- Fuller, Prof. Almon H(omer)**, Iowa State College, Ames, Iowa. *Civil engineering*. Campton, Pa, Dec. 29, 71. C.E., Lafayette, 97, M.S., 00; fellow, Cornell, 97-98, M.C.E., 98. *Prof. civil eng.* and dean, col. eng, Washington (Seattle), 98-17; Lafayette, 17-20; *Iowa State*, 20- Consulting bridge engineer, Iowa State Highway Commission, 20- Civil Eng; Soc. Test. Mat; Eng. Educ. (mem. council, 14-17); Pacific Northwest Soc. Eng. (pres, 07). Structural engineering; tests of concrete; stresses in steel bridges.
- Fuller, Prof. C(aleb) A(llen)**, 71 Charles Field St, Providence, R. I. *Bacteriology, Hygiene*. Providence, June 13, 76. Ph.B., Brown, 99, A.M., 00, Ph.D., 03. Asst. Wis. State Hygienic Lab, 04-06, bacteriologist, 06-08; instr. bacter, Wisconsin, 06-10, asst. prof., 10-14; *deputy in-*

- spector milk, Providence, R. I., 15- A.A.; Soc. Bact; Pub. Health Ass. Pollution of shell-fish by sewage; longevity of B. typhosus in water and sewage; fermentative energy of yeast; pasteurization of milk.
- Fuller, Prof. Geo(rge) D(amon)**, University of Chicago, Chicago, Ill. *Plant ecology*. Adamsville, Que., Jan. 18, 69. B.A., McGill, 01, McGill scholar, Woods Hole, 01-02; Chicago, 06-07, Ph.D, 13. Asst. bot, McGill, 01-02; director, Macdonald Sch. Gardens, 02-06; asst. bot, Chicago, 07, assoc. sch. educ, 07-09, instr. *plant ecol*, 09-19, asst. prof, 19- In charge plant ecol, Cold Spring Harbor, 08; acting prof. biol, Ill. State Nor. Univ, 09. A.A.; Ecol. Soc; Bot. Soc. Forest ecology of Illinois.
- Fuller, George Warren**, 170 Broadway, New York, N. Y. *Sanitary science*. Franklin, Mass, Dec. 21, 68. B.S. Mass. Inst. Tech, 90. Biologist, Mass. State Board of Health, Lawrence Exp. Sta, 90-95; in charge pub. water purification, Louisville and Cincinnati, 95-99; *engineer and sanit. expert*, N. Y. City, 99- A.A.; Soc. Nat; Soc. Bact; Chem. Soc; Pub. Health Ass; Civil Eng; Water Works Ass; Boston Soc. Arts. Methods of purifying water and sewage; application of biology, chemistry and engineering to sanitary aspects of water supply and sewage disposal.
- Fuller, Henry C(orbin)**, Institute of Industrial Research, Washington, D. C. *Chemistry*. Worcester, Mass, Nov. 13, 79. B.S., Worcester, 01. Chemist, indust. firms, 01-07; U. S. Dept. Agr, 07-11; *drug and food investigator*, Inst. Indust. Research, 11-, *treas. and manager, farms*, 14- Chem. Soc; Agr. Chem. (referee, 09-11, 14); Soc. Chem. Indust; Pharmaceut. Ass; Wash. Biol. Field Club (pres, 16-); Ornith. Union. Pharmaceutical chemistry; food technology and analysis; drug plant introduction and propagation; alkaloids.
- Fuller, Dr. Leonard F(ranklin)**, 209 Rialto Building, San Francisco, Calif. *Electrical engineering*. Portland, Oregon, Aug. 21, 90. M.E., Cornell, 12; Ph.D, Stanford, 18. Chief elect. engineer, Fed. Telegraph Co, 12-19; *consulting research engineer*, 19- Elec. Eng; Radio Eng. Radio telegraphy; large bi-polar electromagnets; apparatus design.
- Fuller, M(yron) L(eslie)**, 157 Spring St, Brockton, Mass. *Geology, Hydrology*. Brockton, April 19, 73. B.S. Mass. Inst. Tech, 96. Asst. geologist, Mich. Geol. Surv, 97; asst. and instr. geol, Mass. Inst. Tech, 97-00; asst. geologist, U. S. Geol. Surv, 00-03, chief, east. sect, div. hydrol, 03-07, geologist, 07-12; consulting geologist water supplies, San Francisco, 12-13; oil explorations, China, 13-15; Cuba, 16; chief geologist, Sun Co. 17-20. Reviewer miner. and geol. chem, 'Tech. Quarterly' and 'Rev. Am. Chem. Research,' 97-00; special agent, Paris Expos, 99-00. Walker prizes, Boston Soc. Nat. Hist, 97, 05. A.A.; Geol. Soc; Seismol. Soc; Wash. Geol. Soc. Petroleum engineering; glacial geology; stratigraphic geology; detailed geologic surveying in Indiana, Illinois and New York; underground water in eastern and central states.
- Fullerton, Prof. George S(tuart)**, 287 Mill St, Poughkeepsie, N. Y. **Philosophy*. Fatehgarh, India, Aug. 18, 59. A.B. Pennsylvania, 79, A.M, 82; B.D, Yale, 83; hon. Ph.D, Muhlenberg, 92, LL.D, 00. Instr. *philos*, Pennsylvania, 83-85, adj. prof, 85-87, prof, 87-03; *Columbia*, 03- Dean, grad. sch, Pennsylvania, 89-90, col, 94-96, v. provost, 94-98; exchange prof, Austria, 13-14. A.A.; Psychol. Ass. (pres, 95); Philos. Ass. Metaphysics.
- Fullmer, Prof. E(dward) L(awrence)**, Berea, Ohio. *Biology*. Defiance, Ohio, July 30, 70. B.S. Ohio State, 97, M.S, 98, fellow, 98-99. Lab. asst, Ohio State, 98-99; *prof. nat. science*, S. Dak. Wesleyan, 99-03; *Baldwin*, 03-09, *biol*, 09- A.A.; Ohio Acad. Myxomycetes of Ohio.
- Fulmer, Prof. Ellis I(ngham)**, Iowa State College, Ames, Iowa. *Chemistry*. Nebr, 91. A.B. Nebr. Wesleyan, 12; A.M, Nebraska, 13; Ph.D, Toronto, 19. Asst. chem, Nebraska, 12-13; Pennsylvania, 13-14; in charge chem, Leander Clark, 14; Friends, 15-16; asst. chem, Toronto, 16-19; *asst. prof. in charge agr. chem*, Iowa State, 19- Chemist in charge, Aetna Explosives Co, 17; chemist, Cent. Exp. Farm, Ottawa, 18. A.A.; Chem. Soc; Can. Inst. Chem. Agricultural biochemistry; fermentation.
- Fulmer, Prof. Henry L(uman)**, Saluda, S. C. *Bacteriology*. Saluda, March 20, 88. B.S., Clemson, 11; M.S. Ph.D, Wisconsin, 17. Instr. bacter, Idaho, 13-14; Wisconsin, 14-17; *asst. prof*, Pa. State, 17- Mil. service, 17. Soil, milk and hygienic bacteriology.
- Fulton, Prof. Charles H(erman)**, Missouri School of Mines, Rolla, Mo. *Metallurgy*. Ludwigshafen, Germany, 74. Pratt Inst, 93; E.M, Columbia, 97; hon. Sc.D, S. Dak. Sch. Mines, 11. Asst. assaying, Columbia, 97-98; metallurgist, Colo, 98-99; instr. mining and metal, Wyoming, 99-00; prof. metal, S. Dak. Sch. Mines, 00-05, pres, 05-11; prof. metal, Case, 11-20; *director*, Mo. Sch. Mines, 20- Min. Eng; Min. and Metal. Soc; Electrochem. Soc; Cleveland Eng. Soc. Metallurgy of non-ferrous metals.
- Fulton, Dr. Frank T(aylor)**, 273 Bowen St, Providence, R. I. *Pathology, Medicine*. Westmoreland Co, Pa, April 28, 67. B.S. Knox, 94; A.B, Hopkins, 95, M.D, 99. Path. intern, Boston City Hosp, 99-00; instr. path. and nor. histol, Brown, 03-09. Pathologist, R. I. Hosp, 00-10, attending physician and consulting pathologist; 10-; consulting physician, Providence City Hosp; Pawtucket Mem. Hosp; Woonsocket Hosp; major, M. C, 18-19. Am. Physicians; Soc. Clin. Invest; Climat. Ass; Ass. Path. and Bact; Ass. Tuber. Infections with the Bacillus aerogenes capsulatus; home treatment of tuberculosis; serum treatment of cerebrospinal meningitis.
- Fulton, Prof. H(arry) R(ascoe)**, U. S. Department of Agriculture, Washington, D. C. *Botany*. University, Miss, Sept. 19, 80. A.B. Mississippi, 00; A.M, Missouri, 05; Harvard, 06. Plant pathologist, La. Exp. Sta, 06-08; asst. prof. bot, Pa. State, 08-10, assoc. prof, 10-12; prof. bot. and bacter, N. C. Col, 12-16; *pathologist, office fruit disease investigations, bur. plant indust*, U. S. Dept. Agr, 16- Assoc. ed, 'Phytopathol-

- ogy,' 14-16. A.A.; Bot. Soc.; Phytopath. Soc. (councilor, 14). Chemotropism of fungi; diseases of crop plants and citrus and subtropical fruits.
- Fulweiler, W(alter) H(erbert)**, 319 Arch St, Philadelphia, Pa. *Chemistry*. Philadelphia, Jan. 3, 80. B.S. Pennsylvania. 01. *Chem. engineer, United Gas Improvement Co*, 13- Chem. Soc.; Soc. Chem. Indust.; Illum. Eng. Soc.; Soc. Test. Mat.; Civil Eng. Physical constants of hydrocarbons; reaction between hydrogen sulphid and hydrated ferric oxide.
- Funchess, Prof. M(arion) J(acob)**, Alabama Polytechnic Institute, Auburn, Ala. *Agronomy*. Orangeburg, S. C., April 9, 84. B.S., Clemson, 08; M.S., Wisconsin, 11. *Prof. agron., Ala. Polytech*, 09- Soil fertility; decomposition of organic toxins in soils; solubility of manganese in acid soils; infertility in acid soils.
- Funk, Dr. Casimir**, 122 Hudson St, New York, N. Y. *Biochemistry*. Warsaw, Poland, 84. Ph.D., Berne, 00; Beit fellow, Lister Inst. London, 10-13, D.Sc., 13. Asst. to Prof. Abderhalden, Berlin, 07-10; head, chem. dept, cancer hosp, Research Inst, 13-15; chemist cancer research, med. col, Cornell, 15-16; *chemist, Calco Chem. Co*, 17; *H. A. Metz and Co*, 17- Chem. Soc.; Soc. Exp. Biol.; London Physiol. Soc.; London Biochem. Soc. Synthetic organic chemistry; nutrition; chemical and physiological properties of vitamins.
- Funke, Dr. John**, 1314 Hurt Building, Atlanta, Ga. *Pathology*. Hazleton, Pa., Aug. 20, 73. M.D., Jefferson Med. Col., 01. Demonstrator path, Jefferson Med. Col., 03-10; prof. path. and bacter., Emery, 10-19. Asst. pathologist, Jefferson Med. Col. Hosp. and Phila. Gen. Hosp., 03-10; pathologist, St. Joseph's Hosp., 04-05. Ass. Path. and Bact.; Soc. Bact.; Am. Med. Ass. Bacteriology; gall stones; otitis media; tumor of carotid body; acidosis; effect of ether on the liver during anesthesia.
- Funkhouser, Prof. William D(elbert)**, University of Kentucky, Lexington, Ky. *Entomology*. Rockport, Ind., March 13, 81. A.B., Wabash, 05; hon. fellow, Cornell, 13, A.M., 13, Ph.D., 16. Headmaster, high sch, Ithaca, N. Y., 07-15; principal, Cascadilla Sch., 15-18; *prof. zool. and head of dept., Kentucky*, 18- Mem. Cornell exped. to Okefinokee Swamp, 12. A.A.; Entom. Soc.; Ecol. Soc.; Ky. Acad.; N. Y. Entom. Soc.; Brooklyn Entom. Soc. Taxonomy of the family Membracidae.
- Furia, John J(oseph)**, New York University, New York, N. Y. *Physics*. White Plains, N. Y., Oct. 1, 91. A.B., Columbia, 16, A.M., 17. *Instr. math.*, Cooper Union, 15; *physics*, Manhattan Col., 16; *N. Y. Univ.*, 17-; *indust. engineer, Indust. Research and Eng. Ass.*, 17- A.A.; Physical Soc.; Elec. Eng.; Radio Eng.; Eng. Educ. Bubbles in liquids; surface tension; natural color and stereoscopic cinematography; high frequency circuit for measurement of temperature.
- Furman, Prof. F(ranklin) De R(onde)**, Stevens Institute, Hoboken, N. J. *Mechanical engineering*. Ridgely, Md., Aug. 30, 70. M.E., Stevens, 93. Instr. mech. drawing, Stevens, 93-99, asst. prof., 99-02, assoc. prof. mech. drawing and design, 02-04, prof., 04-07, mechanism and machine design, 07-18, *prof. and head, dept. machine design*, 18-, *dean, junior class*, 18- Mech. Eng.; Eng. Educ. Valves and valve gears; cam design; engine design; planetary gearing.
- Furman, Prof. N(athaniel) Howell**, 61 Wiggins St, Princeton, N. J. *Chemistry*. Lawrenceville, N. J., June 22, 92. B.S., Princeton, 13, A.M., 15, fellow, 17-18, Ph.D., 18. Asst. chem., Princeton, 13-17; instr., Stanford, 17-19; *asst. prof. anal. chem., Princeton*, 19- With C.W.S., 18. Chem. Soc. Electroanalysis; hydrofluoric acid in analysis; compounds of tin; salt hydrates.
- Furness, Prof. C(aroline) E(llen)**, Vassar College, Poughkeepsie, N. Y. *Astronomy*. Cleveland, Ohio, June 24, 69. A.B., Vassar, 91; Ph.D., Columbia, 00. Instr., high sch., West Winsted, Conn., 91-92; Columbus, Ohio, 92-94; *asst. observatory, Vassar*, 94-98, 99-03, *instr. astron.*, 03-11, *assoc. prof.*, 11-15, *prof.*, 15- Research asst., Yerkes Observatory, summer, 99; worker in astrophys. lab., Groningen, 08. A.A.; Astron. Soc.; Ass. Var. Star Observers. Reduction of astronomical photographs; telescopic observations of asteroids; reduction of photographs near North Pole; observations of variable stars; history of astronomy.
- Furness, Dr. W(illiam) H(enry)**, 3d, 1811 Walnut St, Philadelphia, Pa. *Ethnology*. Wallingford, Pa., Aug. 18, 66. A.B., Harvard, 88; M.D., Pennsylvania, 91. Sec'y and curator, Free Museum of Science and Arts, Pennsylvania, 04-06. Anthropol. Ass.; Folk-lore Soc.; Philos. Soc.; Oriental Soc.; Royal Geog. Soc.; Anthropol. Inst. Gt. Britain and Ireland. Geography; home life of Borneo head-hunters; folk-lore of Borneo; life in the Luchu Islands; the Veddahs of Ceylon; the Caroline Islands; mentality of anthropoid apes; the island of stone money.
- Fussell, Dr. M(ilton) Howard**, 421 Lyceum Ave, Philadelphia, Pa. *Medicine*. Chester Co., Pa., Nov. 24, 55. M.D., Pennsylvania, 84. Instr. clin. med., Pennsylvania, 96-02, lecturer, 98, *asst. prof. med.*, 02- Ed., 'Tyson's Practise of Med.' A.A.; Am. Physicians; Am. Med. Ass.; Phila. Col. Physicians. Tubercle bacilli in sputum; spontaneous pneumothorax; acute leukemia; differential diagnosis.
- Fussler, Dr. Karl H(artley)**, University of North Dakota, Grand Forks, N. Dak. *Physics*. Greencastle, Ind., Aug. 6, 87. A.B., Indiana, 09; Ph.D., Pennsylvania, 16. Asst. physics, Indiana, 08-09; instr., DePauw, 09-10; Pennsylvania, 10-20; *prof., North Dakota*, 20- Radio-physicist, Jefferson Hosp., 15. Physical Soc. Radioactivity.
- Futcher, Prof. T(homas) B(arnes)**, 1129 N. Calvert St, Baltimore, Md. *Medicine*. St. Thomas, Ont., Jan. 1, 71. M.B., Toronto, 93; Graz, 96; Strasbourg, 98. House surgeon, Toronto Gen. Hosp., 93-94; asst. res. physician and res. physician, *Hopkins Hosp.*, 94-01, *asst. visiting physician*, 01-, instr. and assoc. med. *Hopkins*, 96-01, *assoc. prof.*, 01- Am. Physicians; Am. Med. Ass. Internal medicine; metabolic diseases.
- Fyles, Rev. Thomas W(illiam)**, 31 Brewery St, Hull, Quebec, Can. *Zoology*. Enfield, Chase, England, June 1, 32. D.C.L., Univ. Bishop's Col,

Lennoxville, Que. Rector, Nelsonville, Que, 72-83; chaplain at Quebec for the Soc. Prom. Christian Knowledge, 83-08; *prof. biol.*, *Morrin Col., Que.*, 97- Can. Forestry Ass; Ont. Entom. Soc. (pres, 99-01); Que. Entom. Ass. (pres, 97-08); Que. Soc. Protect. Plants; fel. London Linnean Soc. Domestic insect pests; insects injurious to vegetation; insects as agents in the fertilization of plants; insects in relation to the fishing interests; forest insects; insect parasites; food habits of hymenopterous larvæ; the wasps and bugs of Quebec; life histories of *Cineis jutta* and other species; safeguards against insect and fungoid pests; the natural history of Quebec.

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Gaba, Prof. M(eyer) G(rupp), University of Nebraska, Lincoln, Nebr. *Mathematics*. Syracuse, N. Y., June 25, 84. B.S. Chicago, 07, M.S. 08, fellow, 13-14, Ph.D., 14. *Instr. math.*, Kansas, 08-10; Dartmouth, 10-12; Mo. Sch. of Mines, 12-13; Cornell, 15-18; *assoc. prof.*, Nebraska, 18-A.A.; Math. Soc.; Math. Ass.; Circolo Mat. di Palermo.

Gabrielson, Ira N(oel), Post Office Building, Portland, Oregon. *Biology*. Sioux Rapids, Iowa, Sept. 27, 89. A.B. Morningside, 12. Teacher nat. science, Marshalltown, Iowa, 12-15; *scientific asst. and asst. biologist*, U. S. Dept. Agr., 15- Mem. Ornith. Union; Cooper Ornith. Club; Wilson Ornith. Club; Ecol. Soc.; Iowa Acad. Distribution and economic importance of birds.

Gaehr, Prof. Paul F(rederick), Aurora, N. Y. *Experimental physics*. Thoune, Switzerland, May 15, 80. A.B. Cornell, 02, A.M. 05, Ph.D. 09. *Asst. physics*, Cornell, 01-03, *instr.*, 03-08; head, math. dept., Robert Col., Constantinople, 08-11; *prof. physics*, Wells, 11- Engineer, West. Elec. Co., summer, 18; acting prof., physics, S.A.T.C., Cornell, 18. A.A.; Physical Soc. Photometry; pyrometry with applications to measurements of alternating currents.

Gaessler, William G(eorge), Iowa Agricultural Experiment Station, Ames, Iowa. *Chemistry*. St. Louis, Mo., Dec. 15, 88. B.S. Ohio State, 11, M.S. 19. *Anal. asst.*, Iowa Exp. Sta., 11-12, *anal. chemist*, 12-13, *assoc. chemist*, 13-14, *asst. chief chem.*, 14-17, *acting chief*, 17- Abstractor, 'Chem. Abstracts,' 13- A.A.; Chem. Soc. (sec'y-treas., Ames sect., 15); Ass. Agr. Chem.; Pharmaceut. Ass.; Iowa Acad. An iodine addition product of coumarin; morphin; pasteurization of cream for butter making; forage plants; digestibility of sudan grass; water requirements and calcium balance of dairy cattle.

Gage, Prof. Geo(rge) Edward, Amherst, Mass. *Bacteriology*. Springfield, Mass., Dec. 30, 83. A.B. Clark Col., 06; A.M. Yale, 07, Ph.D. 09. *Asst. bacter. and hygiene*, Yale, 07-09; *assoc. biologist*, in charge avian diseases, Md. Exp. Sta., 09-10, *biologist*, 10-11; *asst. prof. animal path.*, Mass. Col., 11-13, *assoc. prof.*, 13-20, *prof.*, 20- *Physiol. chemist*, sodium benzoate investigation, U. S. Dept. Agr., 08; capt., Sanit. C., A.E.F., 18-19. Soc. Baet. Animal pathology; serology.

Gage, Dr. H(enry) Phelps, Corning Glass Works, Corning, N. Y. *Physics*. Ithaca, N. Y., Oct. 4, 86. A.B. Cornell, 08, A.M. 09, Ph.D. 11. *Asst. physics*, Cornell, 08-09; *physicist*, Corning Glass Works, 11- A.A.; Physical Soc.; Optical Soc.; Illum. Eng. Soc. Radiant efficiency of arc lamps; optic projection; types of signal lenses; optical properties of colored glasses.

Gage, Prof. O(tis) A(msden), Corning Glass Works, Corning, N. Y. *Physics*. Bellona, N. Y., Oct. 14, 77. Ph.B. Rochester, 99; Ph.D. Cornell, 10. *Asst. math.*, Rochester, 01-03; *instr. physics*, Cornell, 04-07; *asst. prof.*, Wisconsin, 07-17; *prof.*, Rutgers, 17-20; *technical representative*, Corning Glass Wks., 20- A.A.; Physical Soc. Discharge of electricity through gases; capillarity.

Gage, Prof. S(imon) H(enry), Cornell University, Ithaca, N. Y. **Histology, Embryology*. Maryland, N. Y., May 20, 51. B.S. Cornell, 77. *Asst. instr. vert. zool.*, Cornell, 78-81, *asst. prof.*, 81-89, *assoc. prof.*, 89-96, *prof. histol. and embryol.*, 96-08, *emer. prof.*, 08- Mem. advisory board, Wistar Inst; co-editor, 'Jour. of Anat.' Int. Cong. Arts and Science, St. Louis, 04 (chairman, sect. embryol.) A.A. (v. pres, 85, 92, 99); Soc. Nat.; Soc. Zool.; Ass. Anat.; Micros. Soc. (pres, 95, 06); *assoc. Am. Med. Ass.* Histology; embryology; life histories of animals; comparative histology and embryology, especially of domestic animals and of some characteristic American forms.

Gage, Stephen DeM(eritte), State Board of Health, Providence, R. I. *Sanitary engineering, Bacteriology*. Durham, N. H., Jan. 4, 74. B.S. Mass. Inst. Tech., 96. *Asst. bacteriologist*, Lawrence Exp. Sta., 96-97, *biologist and chief asst.*, 97-14; *chemist and sanit. engineer*, R. I. State Board of Health, 14- Fitzgerald medal, Boston Soc. Civil Eng., 18. Chem. Soc.; Pub. Health Ass.; New Eng. Water Works Ass.; Boston Soc. Civil Eng. Water purification and sewage disposal; chemistry and bacteriology of water and sewage; diagnostic chemistry.

Gager, Dr. C(harles) Stuart, Botanic Garden, Brooklyn, N. Y. **Botany*. Norwich, N. Y., Dec. 23, 72. A.B. Syracuse, 95, Sc.D., 20; Pd.M., N. Y. State Nor. Col., 97; Ph.D. Cornell, 02. *Lab. asst.*, Syracuse, 94-95; v. principal, Ives Sem., 95-96; *prof. biol. sciences and physiog.*, N. Y. State Nor. Col., 97-05; *director laboratories*, N. Y. Bot. Garden, 06-08; *prof. bot.*, Missouri, 08-10; *director*, Brooklyn Bot. Garden, 10- *Asst. bot.*, summer sch., Cornell, 01-02, *instr.*, 04; *collaborator*, 'Jour. Applied Micros,' 01-02; ed., 'Brooklyn Bot. Garden Record,' 12-; *business manager*, 'Am. Jour. Bot.,' 14-; *mem. editorial board*, 'Bot. Abstracts,' 18-; *business manager*, 'Ecology,' 20-; *lab. asst.*, N. Y. Bot. Garden, 04-05; *acting prof. bot.*, Rutgers, 05; *teacher*, summer sch., N. Y. Univ., 05, 06. A.A. (v. pres, G, 17); Bot. Soc.; Soc. Exp. Biol.; Soc. Biol. Chem.; Torrey Bot. Club (sec'y, 05-08); Mus. Ass.; N. Y. Acad. Development of pollinium and sperm cells in *Aselepias*; effects of radium rays on plants; physiology and experimental morphology; botanical education and administration.

Gahl, Dr. Rudolph, 804 Equitable Building, Denver, Colo. *Metallurgy*. Berlin, Germany, May

- 27, 75. Ph.D, Göttingen, 00. Electrochemist, Accumulatoren Fabrik, 00-04; Elec. Storage Battery Co, 04-05; custom assayer and chemist, 05-07; research engineer, Detroit Copper Co. of Ariz, 07-12; Copper Queen Consol. Mining Co, 12-13; metallurgist, Inspiration Consol. Copper Co, 14-18; consulting metallurgist, 18- Min. Eng; Electrochem. Soc; Min. Cong.
- Gaige, Frederick M(cMahon)**, University of Michigan, Ann Arbor, Mich. *Zoology*. Ann Arbor, July 3, 90. B.S, Michigan, 13. *Curator insects, museum of zool, Michigan, 14-, instr. zool, 16-* Taxonomy, ecology and zoogeography of Formicidae.
- Gaige, Mrs. Helen Thompson**, University of Michigan, Ann Arbor, Mich. *Zoology*. Bad Axe, Mich, Nov. 24, 89. A.B, Michigan, 09, A.M, 10. Asst. museum of zool, Michigan, 10-18, asst. curator reptiles and amphibians, 18- Soc. Ichthyol. and Herp; Mus. Ass; Mich. Acad. Geographical distribution, habits and life histories of amphibians.
- Gail, Dr. Floyd W(hitney)**, University of Idaho, Moscow, Idaho. *Botany*. Topeka, Kans, Oct. 16, 84. A.B, Nebraska, 11, A.M, 12; Denny fellow, Washington (Seattle), 19-20, Ph.D, 20. Teacher bot, high sch, Lincoln, Nebr, 12-13; instr, Idaho, 13-14, asst. prof, 14-16, assoc. prof, 16- Assoc. prof. bot, Puget Sound Marine Sta, summers, 18, 19, 20. A.A; Bot. Soc. Distribution of Fucus; photosynthesis of some red algae; some poisonous plants of Idaho; deep-sea illumination.
- Gaines, Richard H(eyward)**, New York Board of Water Supply, 147 Varick St, New York, N. Y. *Chemistry*. Mossingford, Va, Feb. 10, 62. Virginia, 83. Chief chemist in charge, Va. State Lab, Richmond, 88-99; chemist and examiner, Gas, Water and Light Dept, N. Y. City, 05; chief chemist, N. Y. Board Water Supply, 06- Asst. lab, Ledoux and Ricketts, New York. Chem. Soc; Electrochem. Soc; Soc. Chem. Indust; Soc. Test. Mat. Materials of construction; corrosion of iron and steel; gaseous compounds; bituminous materials; cement and concrete.
- Gaines, Prof. W(alter) L(ee)**, University of Illinois, Urbana, Ill. *Physiology*. Crete, Ill, March 17, 81. B.S, Illinois, 08; Ph.D, Chicago, 15. Instr, Illinois, 08-13; prof. milk production, 18- Milk production; inheritance in the cow.
- Gainey, Prof. P(ercy) L(eigh)**, State Agricultural College, Manhattan, Kans. *Bacteriology*. Fayetteville, N. C, March 9, 87. B.Agr, N. C. Col, 08, M.S, 10; fellow, Shaw Sch. of Bot, 10-11, A.M, Washington (St. Louis), 11. Asst. bacter, N. C. Exp. Sta, 08-10; instr. bot, Missouri, 11-14; asst. bacter, Kansas State, and soil bacteriologist, Exp. Sta, 14-15, instr, 15-17, asst. prof. 17-19, assoc. prof, 19- Soc. Bact; Kans. Acad. Soil bacteriology.
- Gale, Dr. Arthur Sullivan**, University of Rochester, Rochester, N. Y. *Mathematics*. Appleton, Wis, June 26, 77. A.B, Yale, 99, Ph.D, 01. Instr. math, Yale, 02-06; asst. prof, Rochester, 06-07, Fayerweather prof, 07- A.A; Math. Soc; Ass. Teachers Math. Middle States and Md; Math. Verein. Geometry.
- Gale, H(arlow)**, Avon House, 321, 14th Ave, S. E, Minneapolis, Minn. *Psychology*. Minneapolis, June 29, 62. A.B, Yale, 85; Minnesota, 85-87; Yale, 87-89; Cambridge, 89-90; Leipzig and Berlin, 90-94. Instr. psychol, Minnesota, 94-03. Education; music; development of the nervous system; mental development of children.
- Gale, Dr. Henry G(ordon)**, 5646 Kimbark Ave, Chicago, Ill. *Physics*. Aurora, Ill, Sept. 12. 74. A.B, Chicago, 96, fellow, 97-99, Ph.D, 99. Asst. physics, Chicago, 99-00, assoc, 00-02, instr, 02-07, asst. prof, 07-11, assoc. prof, 11-16, prof, 16-, dean, col. science, 12- Physicist, Mt. Wilson Solar Observatory, 06; research assoc, Carnegie Institution, 09-11; joint ed, 'Astrophys. Jour,' 12-; mem. Int. Commission Annual Table of Constants, 12-; capt, Inf, N. A, 17; major, Sig. C, 18, lieut. col, 19- A.A; Physical Soc; Astron. Soc. Spectroscopic investigations.
- Gale, Horace B(igelow)**, Natick, Mass. *Engineering*. Natick, Dec. 27, 61. B.S, Mass. Inst. Tech, 83. Prof. mech. end elec. eng, Washington (St. Louis), 86-91; Stanford, 91-92; consulting engineer for various firms, 92-07; chief engineer, Simplex Elec. Heating Co, Cambridge, 07-19. Mech. Eng; Elec. Eng; Boston Soc. Arts. Thermodynamics; transmission of power; submarine signalling; electric heating.
- Gale, Hoyt S(toddard)**, 3802 Joeelyn St, N. W, Washington, D. C. *Geology, Mining*. Cleveland, Ohio, Dec. 9, 76. A.B, Harvard, 00, B.S, 02. Asst. geologist, U. S. Geol. Surv, 02-10, geologist, 10-20, geologist in charge, non-metal. deposits, 12-20; consulting geologist, 20- Soc. Econ. Geol. (director); Min. Eng; Am. Geog. Soc; Wash. Acad; Wash. Geol. Soc. Ore and mineral deposits, particularly the non-metallic.
- Gallaudet, Dr. Bern B(udd)**, 105 E. 19th St, New York, N. Y. *Anatomy, Surgery*. New York, Feb. 11, 60. A.B, Trinity (Conn), 80, A.M, 83; M.D, Columbia, 84; Vienna, 86-87. Asst. demonstrator anat, Columbia, 87-91, demonstrator, 91-05, adj. prof, 05-, clin. lecturer surg, 91-97, instr, 97- Intern, N. Y. Hosp, 84-86; surgeon, Vanderbilt Clinic, 87-89; Bellevue Hosp, 89- Ass. Anat.
- Gallo, Prof. Joaquin**, National Astronomical Observatory, Tacubaya, Mex. *Astronomy*. Mexico City, Mex, Nov. 24, 82. Geod. E, Mexico, 08. Aid and asst, Nat. Astron. Observatory, 03-04, computer and astronomer, 04-14, acting director, 14-15, director, 15-, prof. math. and astron, Mexico, 12- Mem. eclipse exped. to Spain, 05; Mexico, 08. Mem. Astrographic Cong, Paris, 09. Astron. Soc; Soc. Astron. de Mex; Soc. Mex. de Geog. y Estadística. Catalogue of photographs.
- Galloway, Dr. B(everly) T(homas)**, U. S. Department of Agriculture, Washington, D. C. *Botany*. Millersburg, Mo, Oct. 16, 63. B.S, Missouri, 84, LL.D, 02. Asst. hort, Missouri, 84-87; asst. pathologist, U. S. Dept. Agr, 87-88, pathologist and chief, div. veg. path. and physiol, 88-01, chief, bur. plant indust, 01-13, asst. sec'y agr, 13-14; dean, N. Y. State Col. Agr, Cornell, 15-16; pathologist, bur. plant indust, U. S. Dept. Agr, 17- A.A. (sec'y, G, 93, 95); Bot. Soc. Plant physiology and pathology.

- Galloway, Dr. J(esse) J(ames)**, Columbia University, New York, N. Y. *Geology*. Cromwell, Ind, Aug. 23, 82. A.B., Indiana, 09, fellow, 10-13, A.M., 11, Ph.D., 13. Instr. geol., Indiana, 13-16; curator *paleont*, Columbia, 16-17, instr., 17-A.A.; Paleont. Soc.; Ind. Acad. Stratigraphy; paleontology; Ordovician stratigraphy and paleontology; Paleozoic Bryozoa; lithogenesis of sedimentary rocks.
- Galloway, Dr. Thomas W(alton)**, 347 Madison Ave, New York, N. Y. *Zoology, Education*. Columbia, Tenn, Nov. 2, 66. A.B., Cumberland, 87, A.M., 89, Ph.D., 92; A.M., Harvard, 90; hon. Litt.D., Missouri Valley, 14. Prof. nat. sciences, Bair Col. for Women, 87-89; asst. bot., Harvard, 89-91; prof. biol., Missouri Valley, 91-02, dean, 98-02; prof. biol., James Millikin, 02-15; Beloit, 15-19; *assoc. director educ. activities*, Am. Soc. Hygiene Ass., 20- A.A.; Soc. Zool.; Micros. Soc. (sec'y, 10-, ed, trans, 10-). Regeneration; budding; sex education.
- Galpin, Dr. S(idney) L(ongman)**, 630 Park Ave, Ames, Iowa. *Geology*. Jefferson, Ohio, Oct. 29, 86. A.B., Western Reserve, 07; A.M., Cornell, 10, Ph.D., 12. Asst. geol., Cornell, 07-10, instr., 10-12; asst. state geologist, Ga., 12-13; *assoc. prof. geol.*, Iowa State, 14- Junior geologist, U. S. Geol. Surv., 10; instr. in charge geol., summer sch., Oberlin, 11. Geol. Soc.; Min. and Metal. Eng.; Ass. Petrol. Geol.; Chem. Soc.; Ceramic Soc. Clays; feldspar; quartz; mica; petroleum; coal.
- Gamble, Prof. E(leanor) A(cheson) McC(ulloch)**, Wellesley, Mass. *Psychology*. Cincinnati, Ohio, March 2, 68. A.B., Wellesley, 89; Ph.D., Cornell, 98. Teacher Greek and psychol., Western Female Col., 89-90; Greek and Latin, Plattsburg Nor. Sch., 91-95; instr. *psychol.*, Wellesley, 98-03, *assoc. prof.*, 03-10, *prof.*, 10- Psychol. Ass. Smell intensities; memory for concrete impressions; memory; individual psychology.
- Gane, Dr. Henry S(tewart)**, R. F. D. 1, Santa Barbara, Calif. *Paleontology*. West Newton, Mass., May 30, 69. A.B., Amherst, 91; Ph.D., Hopkins, 95. *With U. S. Geol. Surv.* Geol. Soc.
- Gangloff, Dr. W(ilmer) C(harles)**, 462 Parkside Ave, Buffalo, N. Y. *Chemistry*. Sandusky, Ohio, May 19, 93. A.B., A.M., Ohio State, 15, fellow, 16-17, Ph.D., 17. Asst. chem., Ohio State, 13-16; asst. chemist, Ohio Exp. Sta., 16; *research chemist*, Nat. Aniline and Chem. Co., 17- Chem. Soc. Action of anhydrous aluminium chlorid upon unsaturated organic compounds; toxic gases; dyes; photographic and pharmaceutical products.
- Gann, Dr. John A(dams)**, Dow Chemical Company, Midland, Mich. *Chemistry*. Wooster, Ohio, Aug. 8, 89. B.S., Case, 11; M.S., Mass. Inst. Tech., 13; Ing. D., Braunschweig, 15; Ph.D., Göttingen, 16. Asst. chem., Mass. Inst. Tech., 11-13; chief chemist, Röhm and Haas Co., 16-18; *research chemist*, Dow Chem. Co., 18- A.A.; Chem. Soc.; Electrochem. Soc. Colloidal chemistry; metallography.
- Gano, Dr. Laura**, Thonotosassa, Fla. *Botany*. Ohio, March 4, 74. Ph.B., Earlham, 93; B.S., Chicago, 98, Ph.D., 12; M.S.A., Cornell, 06. Ecol. Soc. Agriculture; plant ecology.
- Ganong, Prof. W(illiam) F(rancis)**, Smith College, Northampton, Mass. **Botany*. St. John, N. B., Feb. 19, 64. B.A., New Brunswick, 84, M.A., 86, Ph.D. ad eundem, 93; A.B., Harvard, 87; Ph.D., Munich, 94. Asst. bot., Harvard, 87-89, instr., 89-93; *prof. and director, bot. garden*, Smith, 94- A.A.; Bot. Soc. (pres, 08); *cor. mem.* Royal Soc. Can. Plant morphology and physiology; natural history of New Brunswick; botanical education.
- Garbat, Dr. Abraham Leon**, 71 E. 91st St, New York, N. Y. *Medicine*. Warsaw, Poland, Aug. 3, 85. M.D., Cornell, 06. Intern., Lenox Hill Hosp., 06-09; asst. med. clinic, Berlin Univ. Hosp., 09-10; *bacteriologist and serologist*, Lenox Hill Hosp., 10-, *assoc. visiting physician*, 12- A.A.; Ass. Path. and Bact.; Ass. Immunol.; N. Y. Acad. Med. Internal medicine; bacteriology; immunity, diagnosis and therapy; typhoid fever; blood transfusion.
- Garber, Prof. R(alph) J(ohn)**, Morgantown, W. Va. *Agronomy*. Deer Creek, Ill., April 24, 90. B.S., Illinois, 12; M.S., Minnesota, 17. Teacher agr., high sch., 13-17; asst. prof. field crops, Minnesota, 17-18, plant breeding, 18-20; *assoc. prof. agron.*, West Virginia, 20- A.A.; Soc. Agron. Plant breeding; morphology of cereals.
- Gardiner, Prof. H(arry) Norman**, Northampton, Mass. **Philosophy*. Norwich, England, Nov. 6, 55. A.B., Amherst, 78, A.M., 85; Union Theol. Sem., 79-82, fellow, 82-84 (Göttingen, 82; Leipzig, 83-84; Heidelberg, 84). Instr. languages, physics and chem., Glens Falls Acad., 78-79; *philos.*, Smith, 84-88, *prof.*, 88- Instr. psychol., Amherst, 91-92. Philos. Ass. (sec'y, 02-04, pres, 07); Psychol. Ass.; Soc. Physical Research. Greek philosophy; philosophy of religion; psychology of the emotions.
- Gardner, Prof. Frank D(uane)**, State College, Pa. *Agriculture*. Gilman, Ill., Nov. 19, 64. B.S., Illinois, 91. Asst. agriculturist, Illinois, 91-95; soil expert, bur. soils, U. S. Dept. Agr., 95-01; director, P. R. Exp. Sta., 01-04; in charge soil management, bur. soils, U. S. Dept. Agr., 04-08; *head, dept. agron.*, Pa. State, 08- Soc. Agron.; Farm Econ. Ass. Soils; soil fertility; crop improvement; farm management.
- Gardner, Henry A(Ifred)**, 1910 S St, N. W., Washington, D. C. *Chemistry*. Pawtucket, R. I., Oct. 12, 82. Brown, 02; Pennsylvania, 03. Director, scientific sect, Paint Manufacturers Ass; *v. pres. and asst. director*, Inst. Indust. Research. Chemist at large, small arms div, ordnance dept, U.S.A. Chem. Soc.; Soc. Chem. Indust.; Electrochem. Soc.; Soc. Test. Mat.; N. Y. Chemists Club.
- Gardner, Dr. I(rvine) C(lifton)**, Reynolds, Ind. *Physics*. A.B., DePauw, 10; A.M., Harvard, 12, fellow, 14-15, Ph.D., 15, Cutting fellow, 15-16. Asst. physics, Harvard, 16-18; *mem. tech. staff, ordnance dept, U. S. A.*, 19- A.A.; Physical Soc.; Optical Soc. Vacuum spectroscopy; geometrical optics.
- Gardner, Dr. James H(enry)**, 626 Kennedy Building, Tulsa, Okla. *Geology*. Sonora, Ky., April 25, 83. B.S., Kentucky, 04, M.S., 06; Ph.D., George Washington, 10. Asst. geologist, Ky. Geol. Surv., 04-06; field asst., U. S. Geol. Surv.,

- 06-07, junior geologist, 08, asst. geologist, 09-10; Ky. Geol. Surv., 11-12; asst. geologist, Pa. Geol. Surv., 12; consulting geologist, 13-18; *pres.*, Gardner, Spencer and Co., 19- Wash. Geol. Soc. Kentucky clay deposits; coal classification in southwest Colorado and northwest New Mexico; Cretaceous and Tertiary geology of Ignacio folio, Colorado; the Torrejon and Puerco formations of New Mexico; oil resources of Kentucky; mid-continent oil field; oil fields of Texas and Louisiana.
- Gardner, Dr. Julia (Anna)**, Arts Club, 2017 I St., Washington, D. C. *Paleontology*. Chamberlain, S. Dak., 82. A.B. Bryn Mawr, 05; Ph.D., Hopkins, 11. Asst. paleont., Hopkins, 11-15; *paleontologist*, U. S. Geol. Surv., 20- Paleont. Soc. Tertiary Mollusca of Virginia and North Carolina; Cretaceous Mollusca of Maryland; Mollusca of Alum Bluff formation and Texas Eocene.
- Gardner, Dr. Leroy U(pton)**, 76½ Bloomingdale Ave., Saranac Lake, N. Y. *Pathology*. New Britain, Conn., Dec. 9, 88. A.B., Yale, 12, M.D., 14. Instr. path., Harvard Med. Sch., 16-17; asst. prof., Yale, 17; *pathologist*, Saranac Lab., 18- Ass. Path. and Bact. Experimental tuberculosis.
- Gardner, Dr. Max W(illiam)**, Purdue Agricultural Experimental Station, La Fayette, Ind. *Plant pathology*. Lansing, Mich., May 11, 90. B.S., Mich. Agr. Col., 12; M.S., Wisconsin, 15, Ph.D., 17. Instr. plant path., Michigan, 17-18; asst. pathologist, bur. plant indust., U. S. Dept. Agr., 18-19; *assoc. botanist*, Purdue Exp. Sta., 19- A.A.; Bot. Soc.; Phytopath. Soc.; Mich. Acad.; Ind. Acad. Chestnut blight; diseases of vegetables.
- Gardner, Dr. N(athaniel) L(yon)**, University of California, Berkeley, Calif. *Botany*. Keokuk, Iowa, Feb. 26, 64. B.S., Washington (Seattle), 00; M.S., California, 03, Ph.D., 06. Asst. bot., California, 00-06; head, dept. biol., Polytech. High Sch., Los Angeles, 06-09; acting asst. prof. bot., California, 09-10; head, dept. biol., Polytech. High Sch., Los Angeles, 10-13; *asst. prof. bot., California*, 13- Algae; Fucaceae of the Pacific Coast.
- Gardner, Prof. Thomas M(ooney)**, Corvallis, Oregon. *Electrical engineering*. Bedford, Ind., Aug. 22, 72. B.M.E., Purdue, 92, 92-93; M.M.E., Cornell, 96, 00-01, 02-04. Asst. elec. eng., Purdue, 92-93; *prof.*, Throop, 94-95; instr. exp. eng., Sibley Col., Cornell, 99-01; *prof.*, applied elec., Pratt Inst., 01-02; instr. mech. eng., Cornell, 02-04, asst. prof., 04-05; *elec. eng.*, Illinois, 05-07; *prof.*, Oregon Col., 07- Consultant for hydro-elec. power plants and interurban electric railways. Assoc. Elec. Eng.; Mech. Eng.; Franklin Inst.; West. Soc. Eng. Thermodynamics; power measuring instruments.
- Gardner, Prof. V(ictor) R(ay)**, Columbia, Mo. *Horticulture*. Ann Arbor, Mich., March 25, 85. B.S., Mich. Agr. Col., 05; M.S.A., Iowa State, 07. Instr. hort., Iowa State, 05-07; Macdonald, 07-08; asst. prof., Maine, 08-10, prof. and acting head, col. agr., 10-11; *prof. pomol.*, Oregon Col., 11-18; *hort.*, Missouri, 18-
- Gardner, Prof. Wright A(ustin)**, Alabama Polytechnic Institute, Auburn, Ala. *Botany*. Fenton, Mich., July 6, 78. B.S., Albion, 02; A.M., Michigan, 15; Ph.D., Chicago, 16. Prof. biol., Northeast. State Nor. Sch., Okla., 10-16; asst. prof. bot., Idaho, 16-17; *prof. bot. and plant physiol.*, Ala. Polytech., 17- A.A.; Phytopath. Soc. Plant physiology; soil toxins; physiology of sweet potatoes; light germination.
- Garman, Prof. Harrison**, 638 S. Limestone St., Lexington, Ky. *Biology*. Stephenson Co., Ill., Dec. 27, 58. Hopkins, 81-82. First asst., State Lab. Nat. Hist., Illinois, 83-89, asst. prof. zool., Illinois, 85-89; *entomologist and botanist*, Ky. Exp. Sta., 89-; *state entomologist*, Ky., 97-; *prof. entom.*, Kentucky, 17- Asst. state entomologist, Ill., 83-85; *prof. zool. and entom.*, Ky. State, 92-96; *assoc. ed.*, 'Agr. Science.' A.A.; Soc. Nat.; Soc. Zool.; Ass. Econ. Entom. (sec'y, pres); Forestry Ass.; Soc. Prom. Agr. Sci.; Phytopath. Soc.; Ass. Agr. Col. (chairman, entom. sect); Bot. Soc.; Ecol. Soc.; Ky. Acad.; St. Louis Acad. Economic entomology and botany; ecology; cave life.
- Garman, Dr. Philip**, Agricultural Experiment Station, New Haven, Conn. *Entomology*. Lexington, Ky., Sept. 25, 91. B.S., Kentucky, 13; M.S., Illinois, 14, Ph.D., 16. *Asst. entomologist*, Md. Exp. Sta., 16-19; *Conn. Exp. Sta.*, 19- A.A.; Ass. Econ. Entom.; Entom. Soc.; Wash. Entom. Soc. Zygoptera of Illinois; oriental peach moth.
- Garman, Samuel**, Museum of Comparative Zoology, Cambridge, Mass. *Zoology*. B.S., Harvard, 98, A.M., 99. Principal, Miss. Nor. Col.; *prof. nat. science*, Lake Forest; *asst. museum comp. zool.*, Harvard. For. mem. London Zool. Soc.; fel. Royal Geog. Soc.; cor. mem. Soc. zool. de France; Soc. Sci. du Chile. Ichthyology; herpetology.
- Garner, Prof. J(ames) B(ert)**, 5624 Woodmont St., Pittsburgh, Pa. *Chemistry*. Lebanon, Ind., Sept. 2, 70. B.S., Wabash, 93, M.S., 95; fellow, Chicago, 95-97, Ph.D., 97. Instr. chem., Wabash, 93-95; Bradley Polytech., 97-01; *prof.*, Wabash, 01-14; *chem. eng.*, Pittsburgh, and fellow, Mellon Inst., 14-; *director, chem. and eng. research*, Hope and allied natural gas companies, 15- A.A.; Chem. Soc. Charcoal as adsorbent and negative catalyst; natural gas.
- Garner, Dr. W(ightman) W(ells)**, U. S. Department of Agriculture, Washington, D. C. *Plant chemistry*. Timmonsville, S. C., July 15, 75. A.B., South Carolina, 96; Ph.D., Hopkins, 00. Instr. chem., Tufts, 00-03; asst. chemist, bur. chem., U. S. Dept. Agr., 03-05, *physiol. chemist*, bur. plant indust., 05-, in charge tobacco and plant nutrition investigations, 08- A.A.; Bot. Soc.; Chem. Soc.; Wash. Acad. Action of urea on aromatic sulphon chlorides; substitution processes in the fatty acids; chemistry and physiology of the tobacco plant; oil in plants; action of light and temperature on growth and development of plants; photoperiodism.
- Garretson, Prof. William V(an) N(est)**, Rutgers College, New Brunswick, N. J. *Mathematics*. Somerville, N. J. B.S., Rutgers, 02; M.S., Yale, 04, 09-10; Ph.D., Michigan, 16. Instr. math., Adelphi Acad., Brooklyn, 04-05; Michigan, 05-

- 17, prof, Pa. Mil. Col, 17-19; *asst. prof, Rutgers, 19-* Differential equations; solution of the linear, non-homogeneous differential equation for large values of the dependent variable; asymptotic solution.
- Garrett, A(lbert) O(sburn)**, 234 F St, Salt Lake City, Utah. *Botany*. Lawrence, Kans, Nov. 15, 70. A.B, Kansas, 94. Instr. science, high sch, Fort Scott, Kans, 95-02; bot. and physiog, *high sch, Salt Lake City, Utah*, 02-10, *head, dept. biol, 10-* A.A.; Bot. Soc; Ecol. Soc; Phytopath. Soc; Torrey Bot. Club; Kans. Acad; Utah Acad. (pres, 13). Systematic botany; parasitic fungi; rusts and smuts; distribution of fungi; systematics and life histories of the rusts and smuts of Utah.
- Garrett, Prof. W(illard) H(ayes)**, Baker University, Baldwin, Kans. *Mathematics, Astronomy*. Mendon, Ill, Nov. 20, 73. B.S, Illinois Col, 95; Chicago, summer, 97, 00-02, Yerkes Observatory, summer, 05; Harvard, 14-15. Instr. physics and math, Whipple Acad, Jacksonville, Ill, 95-98; *math. and astron*, Illinois Col, 98-00; *prof, Baker, 02-* Instr. math, Harvard, 14-15. Math. Soc; Math. Ass. (chairman, Kans. sect, 20-); Kans. Ass. Math. Teachers (pres, 04).
- Garrey, Prof. W(alter) E(ugene)**, Tulane University, New Orleans, La. *Physiology*. Reedsville, Wis, April 7, 73. B.S, Lawrence, 94; Berlin, 98; Ph.D, Chicago, 00; M.D, Rush Med. Col, 09. Instr. sciences, high sch, West Aurora, Ill, 96-98; *prof. physiol. and pharmacol*, Cooper Med. Col, 00-10; *assoc. physiol*, Washington (St. Louis), 10-12, *assoc. prof*, 12-16; *prof, Tulane, 16-* Instr. physiol, Woods Hole, 99-A.A.; Physiol. Soc; Soc. Biol. Chem. Comparative physiology; the tropisms; artificial parthenogenesis; effects of various saline solutions upon protoplasm; heart nerves; cardiac fibrillation; adaptation of salivary secretion to diet; absorption by muscles in saline solutions; the action of digitalis and strophanthus.
- Garrison, Dr. Fielding H(udson)**, Army Medical Museum, Washington, D. C. *Medical bibliography*. Washington, D. C, Nov. 5, 70. A.B, Hopkins, 90; M.D, Georgetown, 93. Asst. librarian, S. G. O, 89-12, principal asst. librarian, 12-17; *lieut. col, M.C, 18-* Assoc. ed, 'Index Medicus,' 03-11, ed, 12- A.A.; Am. Med. Ass; Royal Soc. Med. (hist. sect); Soc. française d'Hist. de Méd; Gesell. für Gesch. d. Med. und d. Naturwissenschaften. History of medicine.
- Garrison, Dr. S. C.**, Peabody College, Nashville, Tenn. *Psychology*. Lincolnton, N. C, Oct. 17, 87. B.S, Wake Forest, 10, A.B, 11, A.M, 13; Ph.D, Peabody, 19. Supt. schools, Lincolnton Co, N. C; principal, high sch, Crouse, N. C; *asst. prof. educ. psychol, Peabody Col. for Teachers, 19-* Capt, A. G. D. S. Soc. Philos. and Psychol; Tenn. Acad. Educational psychology; child study; educational tests; age norms.
- Garth, Prof. Thomas R(ussell)**, 310 West Ave, Austin, Texas. *Psychology*. Paducah, Ky, Dec. 24, 72. A.B, Denver, 09, A.M, 10; Ph.D, Columbia, 17. Principal schools, Breckenridge, Colo, 10-12; psychologist, N. Y. Post-Grad. Med. Sch, 13; *assoc. educ*, State Nor. Sch, Farmville, Va; *head, dept. educ*, W. Tex. State Nor. Col, 17-19; *adj. prof. psychol, Texas, 19-* Asst. in field work, Int. Health Commission, 12-13. A.A.; Psychol. Ass; S. Soc. Philos. and Psychol. Educational psychology; mental fatigue; work curves; riddle solution; racial differences in fatigue; the American Indian.
- Garver, Prof. M(adison) M(onroe)**, State College, Pa. *Physics, Chemistry*. Scotland, Pa, Nov. 12, 48. B.S, Cornell, 76. Instr. math, Cornell, 76-77, chem, 79-80, elec. eng, 84-93; *assoc. prof. physics, Pa. State, 93-* A.A. Periodic character of nervous action; osmotic pressure; theory of solutions; kinetic theory; molecular action; polymerization in liquids; liquid films.
- Garvin, John B(rewer)**, East Side High School, Denver, Colo. *Chemistry*. Morristown, N. Y, Aug. 3, 61. St. Lawrence, 82-84; B.S, Illinois, 86; Colo. Sch. Mines, 89-90. *Instr. chem, East Side High Sch, Denver, 92-*; *principal, Evening Vocational High Sch, 18-* Librarian and registrar, Colo. Sch. Mines, 90-92. A.A.
- Garvin, Dr. William (Creighton)**, Kings Park State Hospital, Kings Park, N. Y. *Psychiatry*. Philadelphia, Pa, Nov. 30, 73. M.D, Columbia, 03. *Med. supt, Kings Park State Hosp, 15-* Am. Med. Ass; Psychopath. Ass; Medico-Psychol. Ass. Alcoholic psychoses.
- Gary, L(ester) B(ennett)**, 31 Berkeley Place, Buffalo, N. Y. *Biology*. Lockport, N. Y, Sept. 21, 69. Ph.B, Hiram, 99; Western Reserve, 00-01. Teaching fellow, Missouri, 01-02; *head, dept. biol, Hutchinson-Cent. High Sch, Buffalo, N. Y, 03-* A.A.; N. Y. State Sci. Teachers Ass. Variation of the Trillium; the fresh water mussel.
- Gasser, Dr. Herbert S.**, Kingshighway and Euclid Ave, St. Louis, Mo. *Psychology*. Platteville, Wis, July 5, 88. A.B, Wisconsin, 10, A.M, 11; M.D, Hopkins, 15. Asst. psychol, Wisconsin, 11-12, instr, 12-13, pharmacol, 15-16; *physiol, Washington (St. Louis), 16-18*, *assoc*, 18-20, *assoc. prof*, 20- Physiol. Soc. Blood; shock.
- Gates, Dr. Arthur I(rving)**, Teachers College, Columbia University, New York, N. Y. *Psychology*. Red Wing, Minn, Sept. 22, 90. B.L, California, 14, A.M, 15; Ph.D, Columbia, 17. Lecturer *psychol, Teachers Col, Columbia, 17-18*, instr, 18-20, *asst. prof*, 20- A.A.; Psychol. Ass. Diurnal variations in efficiency; tests; memory; learning.
- Gates, Dr. Burton N(oble)**, 24 Charlotte St, Worcester, Mass. *Entomology*. Worcester, Dec. 19, 81. Cornell, 01-02; A.B, Clark, 05, A.M, 06, Ph.D, 09. Asst. biol, Clark, 06-07; collaborator, bur. entom, U. S. Dept. Agr, 07, expert apiculture, 07-10; special lecturer apiculture, Mass. Col, 06-10, *asst. prof. and later assoc. prof. beekeeping, and inspector apiculture, Mass. State Board Agr, 10-18*; *prof. Ont. Agr. Col, and apiarist, Province Ont, 18-19*. A.A.; Ass. Econ. Entom. Statistics; economy and behavior of bees and allied forms; life histories of insects.
- Gates, Prof. Cha(rles) B(alwin)**, 851 Oakland Ave, Milwaukee, Wis. *Chemistry*. Milwaukee, June 2, 81. Ph.B, Wisconsin, 03, Ph.M, 06, Ph.D, 10. Teacher science, high sch, Evansville, Wis, 03-05; *asst. instr. chem, Wisconsin, 06-09*; *instr. anal chem, Mich. Col. Mines, 10-14*; *prof. chem, State Nor. Sch, Milwaukee, 14-*

- Lecturer physics and chem, St. Mary's Hosp, Milwaukee. Chem. Soc. Phenomena in non-aqueous solutions.
- Gates, Prof. Fanny C(ook)**, 404 W. 115th St, New York, N. Y. *Physics, Mathematics*. Waterloo, Iowa, April 26, 72. A.B, Northwestern, 94, fellow, 94-95, A.M, 95; fellow, Bryn Mawr, 95-97; European fellow of Ass. Col. Alumnae at Göttingen and Zürich Polytech, 97-98; Chicago, summer, 99; McGill, 02-03; research student, Cavendish Lab, Cambridge, 05; Ph.D, Pennsylvania, 09. Head, dept. physics, Goucher, 98-11; prof. physics and dean of women, Grinnell, 11-16; dean of women, Illinois, 16-18. A.A; Physical Soc; Math. Soc. Radio-active bodies; effect of heat upon excited radio-activity; radio-active properties of certain chemical compounds; the conductivity of air due to sulphate of quinin.
- Gates, Prof. Frank C(aleb)**, Kansas Agricultural College, Manhattan, Kans. *Botany*. Chicago, Ill, Sept. 12, 87. A.B, Illinois, 10; Ph.D, Michigan, 12. Instr. bot, Univ. Philippines, 12-15; prof. biol, Carthage, 16-19; *asst. prof. bot, Kansas State, 19- With Mich. Biol. Surv, 11; instr. and asst. prof. bot, biol. sta, Michigan, summers, 15-, acting asst. prof. bot, Michigan, 19-; second lieu, Sanit. C, 18. A.A; Bot. Soc; Ecol. Soc; Mich. Acad; Ill. Acad. Plant ecology; revegetation of Taal Volcano; evaporation and plant succession; leaf movements.*
- Gates, Dr. Frederick L(amont)**, Rockefeller Institute, 66th St. and Ave. A, New York, N. Y. *Pathology*. Minneapolis, Minn, Dec. 17, 86. Chicago, 05-06; A.B, Yale, 09; M.D, Hopkins, 13. Fellow, *Rockefeller Inst, 13-14, asst. and later assoc, 14- A.A; Soc. Exp. Biol; Soc. Pharmacol. Electrolysis of hydrochloric acid; pharmacologic action of magnesium salts; bacteriology; meningococcus meningitis; collodion membranes; anaerobic methods.*
- Gates, Dr. Georgina Stickland**, Barnard College, Columbia University, New York, N. Y. *Psychology*. A.B, Columbia, 17, Ph.D, 19. *Asst. psychol, Barnard, Columbia, 18- Psychol. Ass. Experimental psychology; individual differences; practise; attention; mental set and shift.*
- Gates, Dr. R(eginald) R(uggles)**, King's College, London, England. *Botany, Cytology, Genetics*. Middleton, N. S, May 1, 82. B.A, Mt. Allison, 03, M.A, 04; B.S, McGill, 06; fellow, Chicago, 06-08, Ph.D, 08. Demonstrator biol, McGill, 05-06; asst. bot, Chicago, 08-09; experimenter, Mo. Bot. Gardens, 09-11; lecturer biol, St. Thomas' Hosp, London, 12-14; acting assoc. prof. zool, California, 15-16; *reader bot, London, 19- Asst. bot, Woods Hole, 08, 09; Huxley gold medal, Royal Col. Sci, London, 13. A.A; Soc. Nat; assoc. mem. Bot. Soc; cor. mem. N. S. Inst; London Linn. Soc; fel. Royal Hort. Soc; Genetical Soc; Ass. Econ. Biol. Heredity and evolution; eugenics.*
- Gates, Prof. W(illiam) H(azen)**, Louisiana State University, Baton Rouge, La. *Zoology*. Mahableshwar, India, May 11, 83. A.B, Williams, 06. Zoologist, Gulf Biol. Sta, La, 08-09; *prof. zool. and entom, Louisiana, 09- Zoologist, Mass. Fish and Game Commission. A.A. Parasitism.*
- Gauger, A(lfred) W(illiam)**, American Sheet and Tin Plate Co, Farrell, Pa. *Chemistry*. St. Paul, Minn, July 31, 92. A.B, Minnesota, 14; A.M, Princeton, 20. Asst. chem, Minnesota, 13-14, instr, summer, 14; night chemist, Great West. Sugar Co, 14-15; junior chemist, U. S. Bur. Mines, 15-17; capt, C.W.S, and director, army gas school, A.E.F, 18-19; *research assoc, Am. Sheet and Tin Plate Co, 20- A.A; Chem. Soc. Strata gas in the Cripple Creek mining district; explosive limits of hydrogen-oxygen and blast-furnace gas-air mixtures; catalytic hydrogenation.*
- Gault, Prof. R(obert) H(arvey)**, Northwestern University, Evanston, Ill. *Psychology, Criminology*. Ellsworth, Ohio, Nov. 3, 74. A.B, Cornell, 02; Clark, 02-03; Ph.D, Pennsylvania, 05. Prof. psychol. and educ, Washington (Md), 05-09; instr. *psychol, Northwestern, 09-11, asst. prof, 11-12, assoc. prof, 12-15, prof, 16- Wooster, summers, 08, 09; N. Y. Univ, summers, 13, 14; ed-in-chief, 'Jour. Criminal Law and Criminol,' 11-; director, criminol. investigation, City Council Committee on Crime, Chicago, 14; Trounstin Foundation, Cincinnati, Ohio, 20; mem. Chicago Crime Commission (exec. committee, 19-); Ill. Social Hygiene League (pres, 14-); Ill. Committee Social Legis. (pres, 18-20). A.A; Psychol. Ass; Inst. Criminal Law and Criminol. (exec. council, 11-); Ass. Clin. Criminol. (exec. council, 13-); Prison Ass. A history of investigations on reflex action from 1853-1902; causes of crime in Chicago; social unity; suggestion; teaching criminology in colleges and universities.*
- Gaumnitz, D(aniel) A**, South St. Paul, Minn. *Animal husbandry*. Gilmantown, Minn, March 1, 79. B.Agr, Minnesota, 04, M.S.(Agr), 05. Instr. dressing and curing meats, Minnesota, 99-01, asst. animal husbandry, 03-07, *asst. prof, 07; pres, Am. Serum Co. A.A. Meats and meat animals; nutrition in live stock; wool; hog cholera serum.*
- Gavett, G(eorge) Irving**, 1402 E. 75th St, Seattle, Wash. *Mathematics*. Sandstone, Mich, June 21, 68. B.S.(C.E), Michigan, 93; Stanford, 04-05; Cornell, 05-07. Prof. math, Fairmount, 99-04; instr. applied math, Stanford, 04-05; civil eng, Cornell, 05-07; instr. and later *asst. prof. math, Washington (Seattle), 07- Asst. surveyor, Alaskan Boundary Surv, summers, 08, 09. A.A; Math. Soc; Am. Geog. Soc; Statist. Ass. Theory of groups; statistics.*
- Gay, Prof. Frederick P(arker)**, 2347 Prospect St, Berkeley, Calif. **Pathology*. Boston, Mass, July 22, 74. A.B, Harvard, 97; Pasteur Inst, Paris, 00; M.D, Hopkins, 01; Pasteur Inst, Brussels, 03-06. Asst. demonstrator path, Pennsylvania, 01-03; bacteriologist, Danvers Insane Hosp, 06-07; *asst. path, Harvard Med. Sch, 07-09, instr, 09-10; prof, California, 10- Faculty research lecturer, California, 16. Major, M.C, 18. V. chairman, med. council, Nat. Research Council. A.A; Ass. Path. and Bact; Am. Physicians; Soc. Exp. Path; Soc. Exp. Biol; hon. mem. Phila. Path. Soc. Bacteriology; immunology.*
- Gaylord, H(arry) D(avis)**, 448 Audubon Road, Boston, Mass. *Mathematics*. Ashford, Conn,

- March 3, 74. B.S., Harvard, 07, A.M., 17. Instr. *math*, Throop, 98-03; asst., Harvard, 06-07, instr., Rindge Manual Training Sch., Cambridge, Mass., 07-08; asst. prof., Throop, 08-10; instr., Harvard, 10-16; Radcliffe, 11-15; *master*, *Brown and Nichols Sch.*, 11- Instr. *math*, Harvard Summer Sch., 07, 11-14. Int. Commission on Teaching Math., New England Ass. Teachers Math. (sec'y, 13-).
- Gaylord, Dr. Harvey R(ussell), 113 High St., Buffalo, N. Y. *Pathology*. Saginaw, Mich., Oct. 4, 72. M.D., Pennsylvania, 93. Volunteer asst. path., Path. Inst., Göttingen, 95-98; *director*, State Cancer Lab., Buffalo, 98-11; *State Inst. Study Malignant Diseases*, 11- Major, M. C., 18. Ass. Path. and Bact.; Soc. Exp. Biol.; Soc. Cancer Research (pres, 09, 17); Soc. Cancer Control; fel. Path. Gesell. Fibrinoid degeneration; etiology of cancer and allied processes; cancer immunity.
- Gear, H(arry) B(arnes), 10767 S. Seeley Ave., Chicago, Ill. *Electrical engineering*. Marietta, Ohio, March 6, 72. A.B., Marietta, 92; M.E., Cornell, 95. Gen. inspector, *Commonwealth Edison Co.*, 00-11, *engineer of distribution*, 11- Chanute medal, West. Soc. Eng., 10; Billings prize, Nat. Elec. Light Ass., 14. Elec. Eng.; Illum. Eng. Soc.; Nat. Elec. Light Ass.; West. Soc. Eng. Electrical distribution and economics; electric central station distribution.
- Gee, Prof. Wilson, University of South Carolina, Columbia, S. C. *Biology*. Union, S. C., Sept. 18, 88. B.S., Clemson, 08; A.M., South Carolina, 10; fellow, California, 12-13, Ph.D., 13. Asst. biol., South Carolina, 08-09; zool., Wisconsin, 09-11; asst. prof., Clemson, 11-12; prof. biol., South Carolina, 13-14; Emory, 14-17; asst. director agr. exten., Clemson, 17-19; *prof. rural social science*, South Carolina, 19- Soc. Zool.; Ass. Anat. Animal behavior; entomology; embryology.
- Geer, Dr. William C(hauncey), 630 Diagonal Road, Akron, Ohio. *Chemistry*. Ogdensburg, N. Y., June 17, 76. A.B., Cornell, 02, fellow, 03-04, Ph.D., 05. Instr. science, high sch., Nyack, N. Y., 98-99; asst. chem., Cornell, 02-03, instr., 04-06; expert wood distillation, U. S. Forest Service, 06-07; chief chemist, *B. F. Goodrich Co.*, 07-16, director development goods and processes, 16-18, second v. pres. in charge development, 18-20, v. pres., 20- A.A.; Chem. Soc.
- Geidel, Carl D., State Cannery Laboratory, Old Capitol, St. Paul, Minn. *Chemistry*. Brandon, Wis., Oct. 21, 88. B.S., Wisconsin, 11, M.S., 13. Asst. chemist and bacteriologist, Wis. State Lab. of Hygiene, 11-13; bacter. chemist, Wis. Dairy and Food Commission, 13-17; junior chemist, bur. chem., U. S. Dept. Agr., 17-19; *director*, Minn. Cannery Lab., 19-; *director of inspection*, Minn. dist. Nat. Cannery Ass., 19-; *bacteriologist*, Minn. Dairy and Food Commission, 19- Soc. Bact.; Chem. Soc.; Pub. Health Ass. Organic and food chemistry; food bacteriology; canning.
- Geiger, Dr. George A(ugustus), 43 Gaston St., West Orange, N. J. *Chemistry*. Orange, N. J., Aug. 24, 86. A.B., Harvard, 08; A.M., Columbia, 10, Ph.D., 11. Chemist, Am. Viscose Co., 12-13; research chemist, bur. chem., U. S. Dept. Agr., 13-17; *manager*, *Fries Bros. Chem. Works*, 17- Quinazolin group; quantitative method for benzoic acid and benzaldehyde.
- Geiger, Dr. Jacob Casson, U. S. Public Health Service, Washington, D. C. *Public health*. Alexandria, La., March 18, 85. A.B., Tulane, 05, Ph.M., 08, M.D., 12, D.P.H., 17. Bacteriologist and director, bur. laboratories, Calif. State Board of Health; *epidemiologist*, U. S. Pub. Health Service, 16- Pub. Health Ass.; Am. Med. Ass. Botulism; malaria.
- Geiser, Prof. Sam(uel) W(ood), Fayette, Iowa. *Zoology*. Independence, Iowa, June 11, 90. A.B., Upper Iowa, 14, A.M., 19; Iowa State, 16; Hopkins, 19-21; fellow, Iowa, 19. *Prof. biol. and geol.*, Guilford, 14-16; *biol.*, Upper Iowa, 17- Iowa Acad.; N. Dak. Acad.; N. C. Acad.; Conchol. Soc. of Gt. Britain and Ireland. Experimental and invertebrate zoology; fresh-water mussels; fresh-water algae; Spermatophyta.
- Geisler, Joseph F(rank), N. Y. Mercantile Exchange, Cor. Hudson and Harrison Sts., New York, N. Y. *Chemistry*. East Saginaw, Mich., March 20, 60. Ph.C., Michigan, 80, 80-83, Sc.D., 11. Asst. pharmacy and qual. chem. and to Prof. A. B. Prescott, Michigan, 80-83; chemist, Thurber, Wyland and Co., 83-87; *official chemist*, N. Y. Mercantile Exchange, 85- Chemist, N. Y. State Dept. Agr. and N. Y. State Dairy Commission, 85- Ebert prize, Am. Pharmaceut. Ass., 89. A.A.; Chem. Soc.; Soc. Chem. Indust.; Pharmaceut. Ass.; London Chem. Soc. Analytical methods; chemistry of foods.
- Geissler, Prof. L(udwig) R(einhold), Randolph-Macon Woman's College, Lynchburg, Va. *Psychology*. Leipzig, Germany, Sept. 22, 79. Teachers' Sem., Loebau, Saxony; Litt.B., Texas, 05; Ph.D., Cornell, 09. Asst. psychol., Cornell, 05-09, instr., 09-11; research psychologist, Nela Research Lab., 11-12; assoc. prof. *psychol.* and director, sch. educ., Georgia, 12-16; asst. prof., Clark Col., 16-20; *assoc. prof.*, Randolph-Macon Woman's Col., 20- Demonstrator exp. and applied psychol., Clark, 13-20; managing ed., 'Jour. Applied Psychol.', 17- A.A.; Psychol. Ass.; S. Soc. Philos. and Psychol. Attention; color vision; affection; expectation; child study; mental tests; consciousness.
- George, Prof. N(athan) R(ichard), Jr., Massachusetts Institute of Technology, Cambridge, Mass. *Mathematics*. Mendon, Mass., Dec. 6, 65. A.B., Harvard, 90, A.M., 91. Instr. *math*, Mass. Inst. Tech., 91-99, asst. prof., 99-13, *assoc. prof.*, 13- Eng. Educ.; Ass. Prof.
- George, Prof. R(ussell) D., University of Colorado, Boulder, Colo. *Geology, Petrology*. Claremont, Ont., May 5, 66. Woodstock (Can.), 84-85; B.A., McMaster, 97, M.A., 98; fellow, Chicago, 98-00. Master, Woodstock (Can.), 91-95, science master, 95-96; instr. geol., Iowa, 00-01, asst. prof., 01-02, *prof. petrol. and econ. geol.*, 02-03; *geol.*, Colorado, 03-; *state geologist*, Colo., 07- Asst., Ont. Bur. Mines, 98; U. S. Geol. Surv., 99; asst. geol., Chicago, summers, 00-02. A.A.; Geol. Soc.; Soc. Econ. Geol.; Min. Eng.; Colo. Sci. Soc. Mining and use of metals by ancient Egyptians; tungsten deposits of

Boulder County, Colo; geology of Hahn's Peak region of Colorado; topographic and geologic maps of Colorado; common rocks and minerals; oil shales.

George, Dr. W(esley) C(ritz), 718 Union Ave, Memphis, Tenn. *Zoology*. Yadkin Co, N. C, Aug. 20, 88. A.B, North Carolina, 11, A.M, 12, Ph.D, 17; Maule fellow, Princeton, 17-18. Instr. zool, North Carolina, 12-16; prof. biol, Guilford, 16-17; adj. prof. zool, Georgia, 19; *assoc. prof. histol. and embryol, Tennessee, 19*-Taxonomy of sponges; amphibian embryology.

Georgeson, Prof. C(harles) C(hristian), Sitka, Alaska. *Agriculture*. Langeland, Denmark, June 26, 51. B.S, Mich. Agr. Col, 78, M.S, 82. Prof. agr. and hort, Tex. Col, 80-83; agr, Col. of Agr, Tokyo, 86-89; Kansas State, 90-97; *special agent in charge Alaska investigations, U. S. Dept. Agr, 98*- Assoc. ed, 'Rural New Yorker,' 78-80; special agent dairy industry of Denmark, U. S. Dept. Agr, 93. A.A; Soc. Prom. Agr. Sci; Ass. Agr. Col; Royal Danish Agr. Soc. Agricultural crops; stock breeding; stock feeding; agricultural capabilities of Alaska.

Gephart, Dr. F(rank) C(urris), 205 Metropolitan Tower, New York, N. Y. *Chemistry*. Valley Falls, Kans, July 15, 84. A.B, Kansas, 06; Ph.D, Cornell, 16. Teaching fellow chem, Kansas, 06-07; expert chemist, Remsen Referee Board, 07-11; chemist, Russell Sage Inst. Path, 12-17; capt, Sanit. C, S. G. O, 17-19; chief, child feeding mission to Jugo-Slavia, Am. Relief Ad, 18-20; *consulting chemist, 20*- Order of St. Sava. A.A; Chem. Soc; Soc. Biol. Chem; Pub. Health Ass. Physiological chemistry; nutrition; metabolism; food economy.

Gerald, Prof. Herbert Franklin, Creighton University, Omaha, Nebr. *Pharmacology*. Turners Falls, Mass, Sept. 5, 81. Ph.G, Mass. Col. Pharmacy, 02; M.D, Tufts, 09. Pharmacist, 96-99, 02-04; instr. pharmacy, Mass. Col. Pharmacy, 04-09; intern, Worcester City Hosp, 10-11; practising physician, 11-12; prof. pharmacy, pharmacy dept, *Creighton, 12*-13; asst. prof. pharmacol. and mat. med. and instr. physiol, med. dept, 13-14, *assoc. prof, 14*-15, *prof. physiol, pharmacy dept, 12*-15, *path, bacter, histol. and physiol, dental dept, 15*- Lecturer mat. med, Lister Hosp, 14-17; physiol, St. Joseph's Hosp, 19. Pharmaceut. Ass. Bacteriology.

Gerhard, W(illiam) Paul, 311 Audubon Ave, New York, N. Y. *Civil and sanitary engineering*. Hamburg, Germany, July 30, 54. Italian Col, Alexandria, Egypt, 64; Tech. Univ, Karlsruhe, 71-75; hon. D.Eng, Darmstadt, 11. Asst. engineer on railroad work, Hamburg, 77; asst. engineer to pres, Board of Pub. Works, St. Louis, 77-79; with Capt. Jas. B. Eads, 79-80; Col. Geo. E. Waring, Jr, R. I, 81-83; chief engineer, Durham House Drainage Co, 83-85; *consulting engineer, 85*- Ed, 'Building,' 85-86; sanit. engineer on staff of N. Y. state architect, Albany, 92-99; brig. gen, Nat. Vol. Eng. Service. Mech. Eng; Pub. Health Ass; hon. cor. mem. Am. Inst. Archit. Sewerage and sewage disposal; house drainage; gas lighting and gas fitting; fire pro-

tection, especially of theatres and institutions; water supply; corrosion of steel and iron pipes.

Gericke, Prof. W(illiam) F(rederick), University of California, Berkeley, Calif. *Chemistry*. Fremont, Nebr, Aug. 30, 84. B.S.A, Iowa State, 12; M.S, California, 15; Ph.D, Hopkins, 21. Instr. soil chem. and bacter, *California, 12*-16, *asst. prof. soil chem, 16*- In service, Nat. Research Council, 18-19. A.A; Soc. Agron; Chem. Soc; Bot. Soc. Salt requirements and rest periods of plants; continuous crops; effect of toxic substances on plants.

Germann, Prof. Albert F(rederick) O(ttomar), Adelbert College, Cleveland, Ohio. *Physical chemistry*. Peru, Ind, Feb. 18, 86. A.B, Indiana, 09, A.M, 10; Wisconsin, 10; Sc.D, Geneva, 10-12; Berlin, 12. Teaching fellow chem, Indiana, 09; asst, Wisconsin, 09-10; instr, *Western Reserve, 13*-15, *asst. prof, 15*- A.A; Chem. Soc. (sec'y-treas, Cleveland sect, 15-); Soc. Suisse de Chim. Density, vapor tension and critical constants of various gases.

Germann, Dr. Frank E(rhart) E(mmanuel), 1045 14th St, Golden, Colo. *Physics, Chemistry*. Peru, Ind, Dec. 6, 87. Wisconsin, 10; A.B, Indiana, 11; Sc.D, Geneva, 14; fellow, Berlin, 12; Lausanne and Neuchâtel, 13. Research asst. and lecturer chem, Geneva, 12-13; instr. French, Indiana, 13-14; physics, Cornell, 14-18; Colo. Sch. Mines, 18-19; *prof. physical chem, Colorado, 19*- Research fellow, Carnegie Institution, 15- A.A; Physical Soc; Soc. de Physique. Gas apparatus; microanalysis of gases; absorption spectra of gases; vapor tension of oxygen; nitrosyl chlorid; atomic weights.

Germann, Dr. George B(althasar), 167 Rutland Road, Brooklyn, N. Y. *Psychology, Education*. Brooklyn, Feb. 27, 72. N. Y. Univ, 92-94; A.B, Columbia, 95, fellow, 98-99, Ph.D, 99. Teacher, pub. sch, Brooklyn, 89-91; asst. math, Columbia, 95-98, philos. and educ, 99-00, lecturer educ, 99-02, registrar, 00-02; principal, Pub. Sch. No. 77, Brooklyn, 02-17. A.A; Psychol. Ass. Fatigue in the school room; growth and control of motor habits; fluctuations in retentiveness among school children.

Gerould, Prof. John H(iram), Hanover, N. H. **Zoology*. Stoddard, N. H, Oct. 2, 68. Litt.B, Dartmouth, 90; A.B, Harvard, 92, A.M, 93, Ph.D, 95. Instr. nat. science, Burr and Burton Sem, Manchester, Vt, 90-91; *zool, Dartmouth, 94*-06, *asst. prof, 06*-15, *assoc. prof, 15*-18, *prof, 18*- A.A; Soc. Nat. (v. pres, 19); Soc. Zool. (sec'y-treas, 12); N. H. Acad; Austrian Entom. Soc. Genetics; morphology of holothurians; embryology of sipunculi; sipunculi of the eastern coast of North America; heredity and variation in butterflies and moths.

Gerry, Miss Eloise, 419 Sterling Place, Madison, Wis. *Forestry*. Boston, Mass, Jan. 12, 85. A.B, Radcliffe, 08, A.M, 09; fellow, Smith, 10, Wisconsin, 11-14. Expert, forest products lab, *Wisconsin, 10*-11, microscopist, 11-14, *lecturer forest products, 14*- A.A; Bot. Soc; Phytopath. Soc; Forestry Ass. Plant anatomy; bars of Sanio in the Coniferales; microscopical structure of woods; tyloses.

Gerster, Dr. Arpad G(eyza), 34 E. 75th St, New York, N. Y. *Surgery*. Kassa, Hungary, Dec.

- 22, 48. M.D., S.D., O.M., Vienna, 72. Prof. surg., N. Y. Polyclinic, 82-94; *surgeon, Lennox Hill Hosp.*, 78-; *Mt. Sinai Hosp.*, 79- Prof. clin. surg., Col. Physicians and Surg., Columbia, 10-14. Surg. Ass; fel. N. Y. Acad. Med; Gesell. Chirurg; cor. mem. Budapest Royal Med. Soc; Int. Surg. Ass. Aseptic and antiseptic surgery.
- Gesell, Prof. Arnold**, 185 Edwards St., New Haven, Conn. *Psychology*. Alma, Wis., June 21, 80. Ph.B., Wisconsin, 03, Ph.D., Clark, 06; M.D., Yale, 15. Principal, high sch., Chippewa Falls, Wis., 03-04; prof. psychol., State Nor. Sch., Los Angeles, Calif., 08-11; *prof. child hygiene and director, psycho-clinic, Yale*, 11- Assoc. director, summer sch. for special teachers, N. Y. Univ., 11-15; sch. psychologist, Conn. Board of Educ., 15-18. Psychol. Ass; Am. Med. Ass; Pub. Health Ass. Clinical psychology; education of exceptional children; mental surveys.
- Gesell, Prof. Robert**, University of California, Berkeley, Calif. **Physiology*. Alma, Wis., June 23, 86. A.B., Wisconsin, 10; M.D., Washington (St. Louis), 14. Asst. zool., Wisconsin, 09-10; *physiol.*, Washington (St. Louis), 10-12, instr., assoc. and assoc. prof., 12-19; *prof., California*, 19- Physiol. Soc; Soc. Exp. Biol. The relation of auricular systole to ventricular output; the relation of pulse pressure to renal secretion and to filtration; cardiodynamics; blood flow; electrical deflection of the submaxillary gland.
- Gester, G(eorge) C(lark)**, Standard Oil Building, San Francisco, Calif. *Geology*. Buffalo, N. Y., June 16, 84. B.S., California, 08. Asst. instr. miner. and geol., California, 08-09; *geologist*, S. P. R. R., 09-14; Standard Oil Co. of N. Y., 14-16; *Standard Oil Co. of Calif.*, 17- Mem. geol. exped. to Peru. Paleont. Soc; Min. Eng; Petrol. Inst; Calif. Acad. Oil geology in California.
- Getman, Dr. F(rederick) H(utton)**, 66 Glenbrook Road, Stamford, Conn. *Physical chemistry*. Oswego, N. Y., Feb. 9, 77. Rensselaer, 93-96; Virginia, 96-97; fellow, Hopkins, 02-03, Ph.D., 03, fellow by courtesy, 03-04. Instr. chem., high sch., Stamford, Conn., 97-01; lecturer physical chem., Col. City of N. Y.; lecturer physics, Columbia, 07-08; assoc. chem., Bryn Mavr., 09-15; *private research*, 15- Carnegie research asst. A.A.; Chem. Soc; Electrochem. Soc; Franklin Inst; fel. London Chem. Soc; Soc. de Chim. physique. Depression of the freezing-points of solutions of electrolytes; viscosity of solutions; refractive indices of solutions; electrode potentials.
- Geyelin, Dr. Henry Rawle**, Columbia University, New York, N. Y. *Medicine*. Villa Nova, Pa., May 12, 84. A.B., Pennsylvania, 06, M.D., 09. Fellow *med.*, Columbia, 12-13, instr., 14-15, *assoc.*, 17- Soc. Clin. Invest; Harvey Soc. Clinical metabolism; hyperthyroidism; diabetes; epilepsy.
- Gibbon, Dr. John H(eysham)**, 1608 Spruce St., Philadelphia, Pa. *Surgery*. Charlotte, N. C., March 16, 71. M.D., Jefferson Med. Col., 91. *Prof. surg., Jefferson Med. Col.*, 07- Surgeon, Pa. Hosp., 03- Fel. Surg. Ass; Am. Med. Ass; Phila. Col. Physicians; Phila. Acad. Surg.
- Gibbons, Prof. Vernetta L(ois)**, 1349 Main St., Buffalo, N. Y. *Chemistry*. Franklin, N. Y., Jan.
- 5, 74. B.S., Mt. Holyoke, 96, A.B., 99, fellow, 14-15; M.S., Chicago, 07; Cape of Good Hope, 08; fellow, Bryn Mavr., 11-12, 14-15, Ph.D., 14; fellow at Munich, 12-13. Teacher science, Barnardstown, Mass., 96-97; asst. *chem.*, Mt. Holyoke, 97-99, instr., 99-01; Wells, 02-04, assoc. prof., 04-06; *prof.*, Huguenot, S. Africa, 07-11; *Mülls*, 15-17, 19- Chemist, Nat. Aniline and Chem. Co., 18-19. A.A.; Chem. Soc. Potentials of metals in non-aqueous solutions of their salts; alcoholic solutions of cadmium salts.
- Gibbons, Dr. Willis A(lexander)**, 561 W. 58th St., New York, N. Y. *Chemistry*. Long Island City, N. Y., Nov. 1, 88. A.B., Wesleyan, 10, A.M., 11; Columbia, 13-14; Ph.D., Cornell, 16. Asst. chem., Cornell, 10-12; *chemist, U. S. Rubber Co.*, 12-17, 19- Capt. ordnance dept., 18-19; asst. mil. attaché, Am. Embassy, London, 17-18. Soc. Automotive Eng; Aero Club. Heat of dilution; addition compounds; aeronautic materials; vulcanization of rubber; loading high explosive shells.
- Gibbs, George**, Pennsylvania Station, New York, N. Y. *Mechanical engineering*. Chicago, Ill., April 19, 61. M.E., Stevens, 82. Mech. engineer, Chicago, Milwaukee and St. Paul R. R., 84-97; consulting engineer, The Baldwin Locomotive Works and Westinghouse Elec. and Mfg. Co., 97-02; Rapid Transit Subway Construction Co., N. Y., 01-05; chief engineer elec. traction and station construction, N. Y. Tunnel Lines and Terminal, Pa. R. R., 03-12; *consulting engineer, various railroad and industrial concerns in the United States and England*, 11- Chief elec. engineer, Long Island R. R.; W. Jersey and Seashore R. R., 06-; consulting engineer, Interborough Rapid Transit Co; Metropolitan Securities Co; first v. pres., Westinghouse, Church, Kerr and Co; mem. advisory committee on eng., Carnegie Institution; jury awards, transportation dept., Columbian Expos, 93. Trustee, Stevens; Presb. Hosp., New York; Woman's Hosp., New York. Reporter on elec. traction, Int. Eng. Cong., 10. A.A.; Civil Eng; Mech. Eng; Elec. Eng; Master Car Builders; Am. Ry. Ass. (chairman committee on elec. working); British Inst. Civil Eng.
- Gibbs, Dr. H(arry) D(rake)**, Jackson Laboratory, E. I. duPont de Nemours and Co., Wilmington, Del. **Chemistry*. Cincinnati, Ohio, March 10, 72. B.S., Cornell, 94; California, 04; Ph.D., Stanford, 13. Asst. prof. chem., Oregon Col., 01-03; research asst., Stanford, 04; chemist, San Francisco Board of Health, 04-07; food and drug chemist, Bur. Science, P. I., 07-14; assoc. prof. chem., Univ. Philippines, 11-14; asst. chief, eastern food and drug inspection dist. and in charge, color lab., bur. chem., U. S. Dept. Agr., 14-19; *research chemist, E. I. duPont de Nemours and Co.*, 19- Head, chem. sect., dept. science and research, Bur. Aircraft Production, 18; mem. div. chem. tech., Nat. Research Council, 18, div. indust. relations, 19. A.A.; Chem. Soc; Chem. Eng; N. Y. Chemists Club; Wash. Acad. Alcohol and sugar production from palm trees; sunlight reactions; tropical sunlight; dyes and intermediates; catalytic reaction.
- Gibbs, Prof. R(oswell) Clifton**, 221 Bryant Ave., Ithaca, N. Y. *Physics*. Hume, N. Y., July

- 1, 78. A.B., Cornell, 06, A.M., 08, Ph.D., 10. Instr. physics, Cornell, 06-12, asst. prof., 12-18, prof., 18- A.A.; Physical Soc. Spectroscopy; luminescence; absorption and fluorescence spectra.
- Gibbs, Prof. William M(erriott)**, University of Idaho, Moscow, Idaho. *Bacteriology*. Versailles, Mo., March 24, 92. B.S., Missouri, 15; M.S., Wisconsin, 16, fellow, 16, Ph.D., 19. Chemist, Wis. Geol. Surv., 17; lieut. Sanit. C., 18; prof. bacter. Idaho, and bacteriologist, *Exp. Sta.*, 19- A.A. Nitrifying bacteria.
- Gibson, Arthur**, Department of Agriculture, Ottawa, Can. *Entomology*. Toronto, Can., Dec. 23, 75. *Dominion entomologist*, Can. Dept. Agr. Ed., 'Can. Field Naturalist.' A.A.; Entom. Soc.; Ass. Econ. Entom.; Ont. Entom. Soc. (pres); Toronto Entom. Soc. (past pres); Ottawa Field-Nat. Club (ed); fel. London Entom. Soc. Life histories of Canadian Lepidoptera; forest insects, particularly basswood insects; injurious and beneficial field crop and other insects.
- Gibson, Edmund Harrison**, R. F. D. 1, Alexandria, Va. *Entomology*. Detroit, Mich., Jan. 15, 91. B.S., Mich. Agr. Col., 12, M. Hort., 19. *With bur. entom.*, U. S. Dept. Agr., 12- Custodian Hemiptera, U. S. Nat. Museum, 16- A.A.; Entom. Soc.; Ass. Econ. Entom.; Wash. Entom. Soc.; Wash. Biol. Soc. Hemiptera.
- Gibson, Prof. G(eorge) E(rnest)**, Gilman Hall, Berkeley, Calif. *Chemistry*. Edinburgh, Scotland, Nov. 9, 84. B.Sc., Edinburgh, 06, Vans Dunlop scholar, 06-09; Ph.D., Breslau, 11. Asst. chem., Edinburgh, 12-13; instr., California, 13-18, asst. prof., 20- Chem. Soc. Thermodynamics; physical chemistry.
- Gibson, Dr. K(asson) S(tanford)**, Bureau of Standards, Washington, D. C. *Physics*. Afton, N. Y., Jan. 7, 90. A.B., Cornell, 12, Ph.D., 16. Instr. physics, Cornell, 12-16; asst. physicist, *Bur. Standards*, 16-19, assoc. physicist, 19- Physical Soc.; Optical Soc. Spectrophotometry; absorption.
- Giddings, Prof. Franklin H(enry)**, Columbia University, New York, N. Y. *Sociology*. Sherman, Conn., March 23, 55. A.B., Union, 77, A.M., 89, hon. Ph.D., 97; LL.D., Oberlin, 00. Lecturer polit. science, Bryn Mawr, 88-89, assoc., 89-91, assoc. prof., 91-92, prof., 92-94; lecturer *sociol.*, Columbia, 91-94, prof., 94- Ed. writer, 'Springfield Republican,' 78; 'Springfield Union,' 84-88; mem. ed. board, 'Polit. Sci. Quarterly,' 94; mem. cent. council, Charity Organ. Soc., 94; Board of Educ., N. Y. City, 15-17; trustee, Union, 02-; Albany Med. Col. A.A.; Sociol. Soc. (pres, 10); Acad. Polit. and Social Sci. (v. pres, 90-, ed., 'Annals,' 90-94); Econ. Ass. (ed., 'Pub,' 91-93, first v. pres, 96); Nat. Inst. Arts and Letters; Anthropol. Ass.; Psychol. Ass.; Statist. Ass.; fel. Ethnol. Soc.; Phila. Acad.; Inst. Int. de Sociol. de Paris (v. pres, 01, pres, 13). Profit sharing; theory of interest; classification of social facts; statistical and historical studies of social causation, and the related concepts of evolution; pluristic behavior and group psychology.
- Giddings, Dr. N(ahum) J(ames)**, 36 University Driveway, Morgantown, W. Va. *Plant pathology*, *Bacteriology*. Ira, Vt., Nov. 13, 83. B.S., Vermont, 06, M.S., 09; Ph.D., Wisconsin, 18. Asst. botanist, Vt. Exp. Sta., 06-09; *bacteriologist and plant pathologist*, W. Va. Exp. Sta., 09-, prof. plant path., West Virginia, 19- A.A.; Phytopath. Soc.; Bot. Soc. Late blight of potato; bacterial rot of muskmelon; apple rust; effect of pressure on bacteria and enzymes.
- Gidley, J(ames) W(illiams)**, U. S. National Museum, Washington, D. C. *Vertebrate paleontology*. Winnesheik Co., Iowa, Jan. 7, 66. B.S., Princeton, 98, M.S., 01. Asst. vert. paleont., Am. Museum Nat. Hist., 92-94, 99-05; preparator and custodian fossil mammals, U. S. Nat. Museum, 05-12; asst. curator, 12- Paleont. Soc. (v. pres, 19); Soc. Mammal. (treas., 20); Wash. Biol. Soc. (treas., 09); Wash. Geol. Soc. Mammalian paleontology; stratigraphic geology; basal Eocene mammals; upper Cretaceous mammals; Pleistocene mammals.
- Gidley, Prof. William Francis**, West Lafayette, Ind. *Medicine*. Mich., 82. Ph.C., B.S., Michigan, 08. Dean pharmacy, Mercer, 09-12; prof. mat. med., Purdue, 12-18; asst. chief, scientific staff, E. R. Squibb and Sons, 18-19; prof. mat. med., Purdue, 19- Chem. Soc.; Pharmaceut. Ass.; Ass. Prof.; Ind. Acad. Physiological chemistry; urine; oral antiseptics.
- Gies, Prof. William J(ohn)**, 437 W. 59th St., New York, N. Y. **Biological chemistry*. Reisterstown, Md., Feb. 21, 72. B.S., Gettysburg, 93, M.S., 96; Ph.B., Yale, 94, Ph.D., 97; Berne, 99; Woods Hole, 01, 02. Lab. asst. zool., Yale, 95, physiol. chem., 94-96, asst. physiol. chem. and tutor physiol., 96-98; instr. physiol. chem., Columbia, 98-02, adj. prof., 02-05, prof., 05-07, *biol. chem.*, 07-, gen. chem., *Col. Physicians and Surg.*, 04-09, org. chem., 09-18, N. Y. *Col. Pharmacy*, 04-, *Teachers Col.*, 09- Trustee, Irving, 00-10; Gettysburg, 08-20; consulting chemist, N. Y. Bot. Garden, 02-, mem. board scientific directors, 11-; sec'y, faculty, *Col. Physicians and Surg.*, Columbia, 05-; path. chemist, Bellevue Hosp., 10-; director, Radium Inst. of Am., 10- Int. Cong. Applied Chem., London, 09. A.A. (sec'y, K., 05-09); Soc. Nat.; Chem. Soc.; Physiol. Soc.; Soc. Pharmacol.; Soc. Chem. Indust.; Soc. Physiol. Chem. (pres, 99-02); Soc. Exp. Biol. (sec'y, and ed., 'Proc,' 03-09, v. pres, 09-); Soc. Biol. Chem. (sec'y and ed., 'Proc,' 06-10); fel. N. Y. Acad.; Harvey Soc.; Torrey Bot. Club; Chem. Gesell. Constituents of animal tissue and fluids; toxicology and pharmacology; chemistry and physiology of plants; nutrition and metabolism; antitoxic action of ions; proteins; mucoids and albuminoids; enzymes; protagon; animal excretions; biochemical factors in disease; influence of various dietary conditions on physiological resistance; nutrition in health and disease; blood and lymph; cancer; saliva in its relation to dental caries; the composition and constitution of protoplasm.
- Giesy, Dr. P(aul) M(iller)**, Calco Chemical Co., Bound Brook, N. J. *Chemistry*. Cleveland, Ohio, Dec. 24, 90. A.B., Ohio State, 10, A.M., B.S., 12; Ph.D., Columbia, 20. Asst. chemist, bur. chem., U. S. Dept. Agr., 12-14; Procter and Gamble Co., 14-15; assoc. cancer research, Co-

- lumbia, 16-17, 19-20; *research chemist*, Grasse Chem. Co, 20; *Calco Chem. Co*, 20- Capt, U.S.A., 17-19. Chem. Soc. Organic chemistry; dyestuffs; placental hormone.
- Giffin, Dr. H(erbert) Z(iegler)**, Mayo Clinic, Rochester, Minn. *Medicine*. Kirkwood, N. J., Oct. 25, 78. B.S., Princeton, 00; M.D., Hopkins, 04. *Head, clin. sect. number 2, Mayo Clinic; assoc. prof. med, Minnesota*, 15- A.A.; assoc. Am. Physicians; Soc. Clin. Invest; Am. Med. Ass. Diseases of the blood, spleen and lymph glands.
- Gifford, Edward Winslow**, 1650 Vista St, Oakland, Calif. *Ethnology*. Oakland, Aug. 14, 87. Asst. and asst. curator ornith, Calif. Acad. Sciences, 04-12; asst. curator and later *assoc. curator, museum anthrop, California*, 12- Ethnol. Soc; Anthropol. Ass; Archeol. Inst; Calif. Acad. Archeology; anthropology; society and religion.
- Gifford, Dr. John (Clayton)**, Coconut Grove, Fla. *Forestry*. May's Landing, N. J., Feb. 8, 70. B.S., Swarthmore, 90; Ec.D., Munich, 99. Instr. econ. bot, Swarthmore, 90-94; forester, N. J. Geol. Surv., 95-96; asst. prof. forestry, Cornell, 00-03; *consulting forester*. Special agent, Bur. Forestry, 04; special lecturer trop. pomol, Cornell, 06; founder, 'The Forester,' 95, now 'Am. Forestry.' Forestry Ass; Soc. Foresters; Can. Forestry Ass; Swiss Forestry Ass. Tropical forestry and pomology.
- Gilbert, A(lfred) H(olley)**, 238 College St, Burlington, Vt. *Botany*. Dorset, Vt. B.S., Vermont, 04; M.S., Wisconsin, 13. Instr. bot, Kentucky, 07-09; asst. prof., 09-12, assoc. prof., 12-17; exten. pathologist, Vt. and path. inspector, fed. hort. board, U. S. Dept. Agr., 17-19; *potato inspection, Vt. Dept. Agr. and assoc. pathologist, Vt. Exp. Sta.*, 19- A.A.; Bot. Soc; Phytopath. Soc. Plant pathology; diseases of potato; mosaic and leaf roll.
- Gilbert, Dr. Arthur W(itter)**, 48 Stone Road, Belmont, Mass. *Agriculture*. West Brookfield, Mass., April 20, 82. B.S., Mass. Col. and Boston, 04; M.S.A., Cornell, 05, fellow, 08-09, Ph.D., 09. Instr. agr., Maine, 05-06, asst. prof. and supervisor agr. exten. courses, 06-07; asst. prof. plant breeding, Cornell, 09-17; with Boston Chamber of Commerce, 17-20; *state commissioner agr, Mass.*, 20- A.A.; Soc. Agron; Int. Ass. Bot. Mendelian inheritance in plants.
- Gilbert, Dr. C(harles) H(enry)**, Stanford University, Calif. *Zoology*. Rockford, Ill., Dec. 5, 59. B.S., Butler, 79; M.S., Indiana, 82, Ph.D., 83. Asst. nat. sciences and modern languages, Indiana, 80-84; *prof. nat. hist, Cincinnati*, 84-88; *zool, Indiana*, 88-91; *Stanford*, 91- Naturalist in charge investigations, 'Albatross,' 89, 90, 02, 04, 06; at frequent intervals asst. in charge field work, Bur. Fisheries. Wash. Acad; Wash. Biol. Soc. Systematic ichthyology; bathybial fishes of Hawaiian Islands and Japan; trout and salmon of western North America.
- Gilbert, Chester G(arfield)**, Munsey Building, Washington, D. C. *Geology*. Patchogue, N. Y., July 26, 81. Ph.B., Rochester, 05. Instr. geol., Lehigh, 08-11; asst. curator, applied geol., U. S. Nat. Museum, 11-13, curator, mineral technol., 13-19; *on staff, A. D. Little, Inc.*, 19-
- Meteorites; applied geology; mineral technology.
- Gilbert, Prof. E(dward) M(artinius)**, University of Wisconsin, Madison, Wis. *Botany*. Blair, Wis., Sept. 20, 75. Ph.B., Wisconsin, 07, Ph.D., 14. Prof. *biol, State Nor. Sch, Superior, Wis.*, 07-10; instr., *Wisconsin*, 10-11, asst. prof. and later *assoc. prof.*, 11- A.A.; fel. Bot. Soc; Phytopath. Soc; Wis. Acad; Bot. Gesell. Tremelineae; biologic forms of *Plowrightia morbosa*; yeasts; oogenesis and spermatogenesis of *Sphaeroplea*; *Vaucheria*; cytology of *Plowrightia morbosa* and of *Auricularia*; binucleated cells among lower Basidiomycetes; spore formation in *Saprolegnia*.
- Gilbert, Dr. Harvey N(icholas)**, Boulevard, La Salle, N. Y. *Chemistry*. Chambersburg, Pa., Aug. 22, 89. B.S., Pennsylvania Col., 10; Ph.D., Cornell, 15. Anal. chemist, E. I. duPont de Nemours and Co, 10-11; Pa. R. R. Co, 11; asst. instr. chem., Cornell, 11-14; chemist, A. D. Little, Inc., 14-15; *chief chemist, Niagara Electrochem. Co.*, 15- Chem. Soc; Electrochem. Soc; Buffalo Eng. Soc. Inorganic and physical chemistry; sodium peroxid.
- Gilbert, J(ames) Z(accheus)**, 3300 N. Griffin Ave, Los Angeles, Calif. *Biology, Paleontology*. North Manchester, Ind., Jan. 1, 66. Ph.B., McPherson, 94, Se.D., 19; A.M., Kansas, 95; hon. LL.D., Mt. Morris, 19. Teacher, pub. schools, Ind., 84-88; tutor, McPherson, 91-94; principal, high sch., Belleville, Kans., 95-97; head, science dept., Plattsburg, 98-00; pres., Botetourt Nor. Col., Va., 00-03; *instr. zool. and physiol, high sch, Los Angeles, Calif.*, 04- Lecturer biol., Southern California, 18- A.A.; Paleont. Soc; South. Calif. Acad; Physical Geog. Club of Calif. (pres, 05). Cretaceous turtles of Kansas; fossil whales of California; fossil fishes; Rancho La Brea fossils.
- Gilbert, Prof. Norman E(verett)**, Dartmouth College, Hanover, N. H. *Physics*. Middletown, Conn., Dec. 15, 74. A.B., Wesleyan, 95, A.M., 96; Ph.D., Hopkins, 01; Cambridge and Paris, 09-10. Instr. science, Cayuga Lake Mil. Acad., Aurora, N. Y., 96-97; math, Genesee Wesleyan Sem., Lima, N. Y., 97-98; prof. *physics*, Hobart, 01-03; asst. prof., *Dartmouth*, 03-16, assoc. prof., 16-18, *prof.*, 18- Mem. U. S. Naval Observatory eclipse exped. to N. C., 00; Sumatra, 01; Algeria, 05; temporary asst., astrophys. observatory, Smithsonian Inst., 02. A.A.; Physical Soc; Astron. Soc. Relations between ether, matter and electricity; magnetic effect of electrical convection; eclipse problems.
- Gilbert, W(illiam) W(illiams)**, U. S. Department of Agriculture, Washington, D. C. *Plant pathology*. Dorset, Vt., Sept. 17, 80. B.S.A., Vermont, 00, M.S., 09. Scientific asst., *bur. plant indust, U. S. Dept. Agr.*, 04-07; asst. plant pathologist, 07-10, *plant pathologist*, 10- A.A.; Bot. Soc; Phytopath. Soc; Wash. Bot. Soc. Plant breeding for resistance to disease in cotton, cowpeas and watermelons.
- Gilbertson, Dr. Albert N(icolay)**, Malden, Mass. *Anthropology, Psychology*. Ellsworth, Minn., Jan. 5, 85. A.B., Minnesota, 08, A.M., 09; fellow, Clark, 12-13. Ph.D., 13. Instr. psychol. and anthrop., Colorado, 09-10; psychol., Minnesota,

- 10-12, sociol. and anthrop, 13-15; lecturer anthrop, Clark, 16-17; *special study, Harvard*, 16-Inst. psychol. and child-study, Minneapolis Kindergarten Nor. Sch. and lecturer psychol. and pedag, Minneapolis Nor. Art. Sch, 11-12. A.A.; Anthropol. Ass. Primitive religion and ethics; Eskimo culture; folk-lore; child study; ethnic and social psychology; pre-Columbian relations of Norsemen and American aborigines; 'survivals' in the Christian cult.
- Gilchrist, Dr. T(homas) Caspar**, Professional Building, Baltimore, Md. *Dermatology*. England, 62. M.R.C.S, England, 87; L.M.S, London, 87; hon. M.D, Maryland, 07. *Clin. prof. dermat*, Hopkins, 98-; Maryland, 99- A.A.; Dermat. Ass. (pres, 08); Am. Med. Ass.; Md. Med. and Chirurg. Faculty; British Med. Ass.; hon. mem. Berlin Dermat. Gesell.; hon. mem. Ital. Dermat. Soc. Blastomyeetic dermatitis; etiology of acne vulgaris; pathology of experimental urticaria factitia; erysipeloid; X-ray dermatitis; porokeratosis; vaccine therapy as applied to cutaneous diseases; idiopathic sarcoma of skin; atrophy of fatty layer of skin.
- Gile, Philip L(indsey)**, 43 Briggs St, Melrose Highlands, Mass. *Chemistry*. Melrose, Mass., Sept. 5, 83. A.B, Harvard, 07. Asst. chemist, Mo. Exp. Sta, 07; P. R. Exp. Sta, 07-08, chemist, 08-18; *Am. Agr. Chem. Co*, 18- A.A.; Chem. Soc.; Soc. Agron. Soils; fertilizers; mineral nutrition and physiological chemistry of plants; chlorosis.
- Giles, Prof. Albert W(illiam)**, University, Va. *Geology*. Watkins, N. Y., Nov. 23, 85. A.B, Rochester, 09, M.S, 10; fellow, Northwestern, 12-13; Chicago, 15-16. Instr. *geol*, Allegheny, 11-12; prof. Kans. Wesleyan, 13-15; asst, Chicago, 15-16; adj. prof, Virginia, 16-20, *assoc. prof*, 20- Asst. geologist, Va. Geol. Surv, 17- A.A.; Meteorol. Soc.; Seismol. Soc.; Ass. Prof.; cor. mem. Rochester Acad. Glacial, stratigraphical, structural and economic geology.
- Gilkey, Dr. Helen M(argaret)**, Oregon Agricultural College, Corvallis, Oregon. *Botany*. Montecano, Wash, March 6, 86. B.S, Oregon Col, 07, M.S, 11; Ph.D, California, 15. Asst. *bot*, Oregon Col, 08-09, instr, 09-11; asst, California, 12, artist, 13-18; *asst. prof. bot. and curator herbarium, Oregon Col*, 18- A.A.; Bot. Soc; West. Soc. Nat; Calif. Bot. Soc. Hypogeous fungi of North America.
- Gill, Prof. A(dam) Capen**, Cornell University, Ithaca, N. Y. *Mineralogy, Petrography*. Chesterville, Maine, Aug. 22, 63. A.B, Amherst, 84; Hopkins, 86-89; Ph.D, Munich, 93. Prof. math, Park, 84-86; asst. prof. *miner. and petrog*, Cornell, 94-09, *prof*, 09- A.A.; Geol. Soc; Wash. Acad. Crystallography; petrography; Sierra Tlayacae in Mexico; chromite of Kenai Peninsula, Alaska.
- Gill, Prof. Augustus H(erman)**, Massachusetts Institute of Technology, Cambridge, Mass. **Chemistry*. Canton, Mass, Aug. 1, 64. B.S, Mass. Inst. Tech, 84; Ph.D, Leipzig, 90. Asst. *chem*, Mass. *Inst. Tech*, 84-87, instr, 90-94, asst. prof, 94-06, *assoc. prof*, 06-09, *prof*, 09- Water analyst, Mass. State Board of Health, 87-88. A.A.; Chem. Soc; Chem. Gesell. Fuel, gas and oil analysis; determination of nitrates in water and of methane and hydrogen by explosion; cholesterol in olive oil; nitrates in water; spontaneous combustion test of oils; analysis of varnishes; hydrocarbons from distilled grease oleins; palm oil in fats; automobile lubricating oils; analysis of gases; carotin in palm and other oils.
- Gill, Dr. Eugene E(dward)**, 5739 Maryland Ave, Chicago, Ill. *Chemistry*. Boring Md, Sept. 17, 75. Ph.B, Dickinson, 97, A.M, 98; Ph.D, Hopkins, 09. *Assoc. prof. chem*, Armour, 09- Chem. Soc. Osmotic pressure of cane sugar solutions at 5°.
- Gill, F(rederic) W(illiams)**, 108 W. Illinois St, Urbana, Ill. *Chemistry*. Conway, Ark, Feb. 2, 80. B.S, Illinois, 06, M.S, 10. Research asst. chem, Illinois, 06; chemist, The Matthes Lab. of Practical Research and Indust. Development, Chicago, 06-07; asst, lab. *physiol. chem*, Illinois, 07-10; research chemist, Gen. Elec. Co, 10-20; *pres*, Gill-Grindley Co, 20- Chem. Soc. Animal chemistry; methods of physiological chemistry; nutrition; tungsten filaments.
- Gill, John B(oyd)**, Monticello, Fla. *Entomology*. Philadelphia, Pa, Feb. 28, 88. B.S, Pa. State, 10. *Asst, bur. entom*, U. S. Dept. Agr, 10- A.A.; Entom. Soc; Ass. Econ. Entom; Wash. Entom. Soc. Deciduous fruit and nut insects.
- Gillespie, Prof. David C(linton)**, Cornell University, Ithaca, N. Y. *Mathematics*. Knob, Va, Dec. 13, 77. A.B, Virginia, 00; Ph.D, Göttingen, 06. Instr. *math*, Cornell, 06-11, *asst. prof*, 11- A.A.; Math. Soc; Math. Ass; Circolo Mat. di Palermo. Theory of functions of a real variable.
- Gillespie, Prof. L(ouis) J(ohn)**, Massachusetts Institute of Technology, Cambridge, Mass. *Chemistry*. Hillsboro Bridge, N. H, June 10, 86. Ph.B, Brown, 08, A.M, Ph.D, 11. Asst. physics, Brown, 10-11; instr. chem, R. I. Sch. Design, 10-11; fellow bacter, Rockefeller Inst, 11-13; bacteriologist, Board of Health, N. Y. City, 13; scientist, bur. soils, U. S. Dept. Agr, 13-15, biochemist, bur. plant indust, 15-19; prof. physical chem, Syracuse, 19-20; *asst. prof. physico-chem. research*, Mass. *Inst. Tech*, 20- A.A.; Chem. Soc; Soc. Baet; Wash. Acad. Biological and physical chemistry; chemical equilibria; gas metabolism of bacteria; pneumococci; Duclaux method for volatile acids; soil acidity.
- Gillespie, Dr. William**, Princeton University, Princeton, N. J. *Mathematics*. Hamilton, Can, Nov. 3, 70. B.A, Toronto, 93; fellow, Chicago, 93-97, Ph.D, 00. Instr. *math*, Princeton, 97-05, preceptor, 05-11, *prof*, 11- A.A.; Math. Soc.
- Gillett, Dr. Horace W**, 116 Irving Place, Ithaca, N. Y. *Metallurgy*. Steuben Co, N. Y, Dec. 12, 83. A.B, Cornell, 06, Ph.D, 10. Asst. chem, Cornell, 06-07; chemist, A. D. Little, Inc, 07-08; asst. chem, Cornell, 08-10; manager, research dept, Aluminum Castings Co, 10-12; *chief alloy chemist*, U. S. *Bur. Mines*, 12- Chem. Soc; Electrochem. Soc. (past v. pres); Min. Eng; British Inst. Metals. Electric furnaces; non-ferrous alloys; zirconium steel; phosphor-copper.

- Gillette, Prof. C(larence) P.**, Fort Collins, Colo. *Entomology, Zoology*. Lyons, Mich, April 7, 59. B.S. Mich. Agr. Col, 84, M.S., 87, Sc.D., 18. Asst. entom. and physiol. Mich. Agr. Col, 86-87; entomologist, Iowa Exp. Sta., 88-90; head, dept. zool. entom. and physiol. Colo. Agr. Col, 91-, director, Exp. Sta., 10- Expert entomologist, La. Purchase Expos, 04. A.A.; Ass. Econ. Entom.; Soc. Prom. Agr. Sci. Cynipidae; Typhlocybinae; economic entomology; Orthoptera of Colorado; long-tongued bees; Aphididae.
- Gillette, Halbert P(owers)**, 608 S. Dearborn St., Chicago, Ill. *Engineering*. Waverly, Iowa, Aug. 5, 69. E.M. Columbia, 92. Asst. to state engineer, N. Y., 96-98; consulting engineer, 98-03; assoc. ed., 'Eng. News', 03-04; consulting engineer and ed., 'Eng. and Contracting', 04- Civil Eng; Min. Eng; Eng. Educ. Engineering construction; rock excavation; earthwork; roads and pavements; efficiency of workmen and machines; chemistry; management and construction engineering.
- Gilliland, Dr. Samuel (Howard)**, Ambler, Pa. *Pathology*. Oak Hall Station, Pa, Dec. 10, 77. M.D., Pennsylvania, 04. Instr. bacter. Pennsylvania, 02-04; bacteriologist, *State Livestock Sanit. Board*, Pa, 02-06, exec. officer and sec'y, 06- A.A.; Ass. Path. and Bact; Vet. Med. Ass; Ass. Tuber; Am. Med. Ass; Phila. Path. Soc. Comparative pathology; tuberculosis.
- Gilman, Prof. A(lbert) F(ranklin)**, Carroll College, Waukesha, Wis. *Chemistry*. Hallowell, Maine, Sept. 9, 71. B.S. Amherst, 97, A.M., 01; Tennessee, 02; Harvard, 03; Chicago, 05, fellow, 06; England and Germany, 10; Ph.D., Denver, 13. Teacher science, State Nor. Sch., Farmington, Maine, 97-98; prof., Dow Acad., 98-99; prof. chem. and physics, Maryville, 00-06; chem., Ripon, 06-17; Huron, 17-18; Ill. Wesleyan, 18-20; Carroll, 20- A.A.; Chem. Soc; Wis. Acad. Food of mountain families of East Tennessee; chlorin content of drinking water of Ripon, Wis. and vicinity; indicators for acids and alkalis; oxycellulose.
- Gilman, Benjamin I(ves)**, Museum of Fine Arts, Boston, Mass. *Psychology*. New York, N. Y., Feb. 19, 52. A.B., Williams, 72; fellow, Hopkins, 81-82, hon. A.M., 02; Berlin, 82-83; Harvard, 83-85; Paris and Italy, 85-88. Lecturer, Princeton, Columbia and Harvard, 90-91; instr. psychol., Clark, 92-93; sec'y, *Museum of Fine Arts, Boston*, 93- Psychol. Ass; Mus. Ass. (pres, 14). The theory of dimensional manifolds; song in the music of the Pueblo Indians; psychology of feeling and art; purposes and methods of museums of fine art; philosophy of popular sovereignty; structure of the universe.
- Gilman, Prof. Henry**, Ames, Iowa. *Chemistry*. Boston, Mass, May 9, 93. B.S., Harvard, 15, A.M., 17, Ph.D., 18. Asst. chem., Harvard, 14-17, instr., 18-19; assoc., Illinois, 19; assoc. prof. org. chem., Iowa State, 19- Chem. Soc. Organic chemistry.
- Gilman, Dr. Joseph C(harles)**, Ames, Iowa. *Plant pathology*. Hastings, Nebr, March 23, 90. B.S.A., Wisconsin, 12, M.S., 14; fellow, N. Y. Bot. Garden, 13; Lackland fellow, Mo. Bot. Garden, 14; Ph.D., Washington (St. Louis), 15. Asst. plant path., Wisconsin, 12-13; prof. biol., Ripon, 15-17; asst. plant pathologist, Iowa Exp. Sta., 17- Phytopath. Soc; Bot. Soc. Attack of Fusarium on cabbage.
- Gilmore, Charles W(hitney)**, U. S. National Museum, Washington, D. C. *Paleontology*. Pavilion, N. Y., March 11, 74. B.S., Wyoming, 01. Collector, dept. vert. paleont., Carnegie Museum, 01-04; preparator, sect. vert. paleont., U. S. Nat. Museum, 04-07, custodian, 07-11, asst. curator fossil reptiles, 11-18, assoc. curator, 18- Paleont. Soc; Wash. Geol. Soc; Wash. Biol. Soc. Natural science; Mesozoic reptiles.
- Gilmore, Prof. John W(ashington)**, University of California, Berkeley, Calif. *Agronomy, Botany*. White Co, Ark, May 9, 72. B.S.A., Cornell, 98, M.S.A., 06. Asst. supt., Agr. Sch., Wuchang, China, 98-00; fiber expert, Bur. Agr., P. I., 00-02; asst. prof. agron., Cornell, 02-07; prof., Pa. State, 07-08; pres., Col. of Hawaii, 08-13; head, dept. agron., California, 13- Gold medal, La. Purchase Expos, 04; medal and diploma, distinguished services, Panama-Pacific Expos, 15. A.A. Quality in potatoes; root crops in New York; timothy; fibers and fiber plants of the Philippines; sugar and dry matter content of pineapples; recurrence of characters in corn and wheat; influence of soil temperature on production.
- Gilmore, Dr. Melvin R(andolph)**, Bismarek, N. Dak. *Ethnozoology, Ethnogeography*. Valley, Nebr, March 11, 68. A.B., Conter, 04; A.M., Nebraska, 09, Ph.D., 14. Prof. biol., Cotner, 05-11; curator, museum, Nebr. State Hist. Soc, 11-16; *State Hist. Soc. of N. Dak.*, 16- A.A.; Anthropol. Ass; Soc. Mammal; Ass. Mus; Nebr. Acad. Ethnobotany and ethnogeography of the Great Plains; aboriginal agriculture of the Great Plains and the Missouri River region; uses of plants by Indians; geographical influences on human culture; agency of aboriginal tribes in distribution of cultivated and wild plants.
- Gilmore, Prof. Ralph J(ohn)**, Colorado College, Colorado Springs, Colo. *Zoology*. Williamsport, Pa, Dec. 18, 85. A.B., Lehigh, 07, A.M., 10; Ph.D., Cornell, 14. Instr. biol., Lehigh, 07-10; asst., Cornell, 10-11, instr. zool., 11-12; acting prof. biol., Western Reserve, 12-13, prof., Huron, 14-20; Colo. Col., 20- A.A.; S. Dak. Acad. (sec'y, 15-19). Skeletal variation in Amphibia; life history of Sphaeriidae; ecology and morphology of fresh water clams.
- Gilpin, Dr. J(oseph) Elliott**, Stony Run Lane, Baltimore, Md. *Chemistry*. Baltimore, Nov. 21, 66. A.B., Hopkins, 89, Ph.D., 92. Instr. chem., Hopkins, 92-95, assoc., 95-11, assoc. prof., 11-13; collegiate prof., 13- Chem. Soc. Action of chlorid of phosphorus on amids; fractionation of crude petroleum by capillary diffusion.
- Gilroy, Miss H(elen) T(urnbull)**, Bryn Mawr College, Bryn Mawr, Pa. *Physics*. Philadelphia, Pa, May 9, 87. A.B., Bryn Mawr, 09, A.M., 12; Chicago, 20-21. Asst. physics, Bryn Mawr, 10-11; instr., Mount Holyoke, 12-14; demonstrator, Bryn Mawr, 14-15; instr., Vassar, 17-20. Assoc. Physical Soc. Refractive indices of solutions of the cadmium halids; secondary radiation.

- Giltner, Prof. Ward**, 340 Oak Hill Ave, East Lansing, Mich. *Bacteriology*. Ithaca, N. Y., April 5, 82. D.V.M., Cornell, 06; M.S., Ala. Polytech, 08. Instr. and asst. vet., Ala. Exp. Sta., 06-08; research asst. *bacter*, Mich. Agr. Col. and Exp. Sta., 08-12, *prof*, 12- State veterinarian, Mich., 11-13. A.A.; Soc. Bact.; Ass. Path. and Bact.; Pub. Health Ass.; Vet. Med. Ass.; U. S. Live Stock Sanit. Ass.; Mich. Acad. (pres). Hygiene; glanders; hog cholera; infectious abortion of cattle.
- Gingrich, Prof. C(urvin) H(enry)**, Carleton College, Northfield, Minn. *Astronomy*. York, Pa., Nov. 20, 80. A.B., Dickinson, 03, A.M., 05; Ph.D., Chicago, 12. Instr. math, Baker, 07-09; Carleton, 09-12, *prof. astron. and math*, 12-, acting dean, 14-15, dean, 15-17; asst. to pres, 17-19. Asst. ed, 'Popular Astron.' 10-12, assoc. ed, 12- Astron. Soc.; Math. Ass. Micrometric measures of comet positions; stellar photometry; celestial photography; magnitudes of comparison stars in certain of the Hagen fields.
- Girty, Dr. George H(erbert)**, U. S. Geological Survey, Washington, D. C. **Paleontology*. Cleveland, Ohio, Dec. 30, 69. A.B., Yale, 92, Ph.D., 94. *Paleontologist*, U. S. Geol. Surv., 95- A.A.; Wash. Geol. Soc. Carboniferous invertebrate paleontology of United States.
- Githens, Dr. Thomas S(totesbury)**, H. K. Mulford Co, Philadelphia, Pa. *Physiology, Pharmacology*. Philadelphia, Pa., July 29, 78. M.D., Pennsylvania, 99. Assoc. physiol. and pharmacol., Rockefeller Inst, 10-19; with H. K. Mulford Co, 19- Am. Med. Ass.; Pharmacol. Soc.; Pharmacut. Ass.; Soc. Exp. Biol.; Physiol. Soc.; Harvey Soc. Anesthesia in strychnin poisoning; relative effects of ether and chloroform on circulation and respiration; influence of cardecotomy and of decerebration on action of convulsant drugs on frogs.
- Given, Guy C**, 544 Main St, Stamford, Conn. *Chemistry*. Auburn, Maine, May 2, 87. B.S., N. Mex. Col 06; M.S., Pa. State, 10; Ph.D., Göttingen, 14. Asst. chemist, Pa. State, 07-10, asst. prof. chem, 10-15, assoc. prof, 15-17; research chemist, *Atlas Powder Co*, 17-19, *director*, *Stamford Exp. Lab*, 19- A.A.; Chem. Soc.; Electrochem. Soc. Industrial chemistry; bacteriology.
- Givens, Prof. Maurice H(ope)**, Western Pennsylvania Hospital, Pittsburgh, Pa. *Physiological chemistry*. Pittsburg, Ky, Dec. 9, 88. Ph.B., Yale, 09, Ph.D., 17. Instr. biochem, med. col, Cornell, 09-14; asst. biochemist, U. S. Pub. Health Service, 14-16; asst. physiol. chem, Sheffield Sci. Sch, Yale, 16-17, asst. and Seessel research fellow, 17-18; asst. prof. biochem, Rochester, 18-19; *biochemist*, *West. Pa. Hosp*, 19- Special investigator food drying, bur. chem, U. S. Dept. Agr, 18-19. Physiol. Soc.; Soc. Biol. Chem.; Soc. Exp. Biol. Purin metabolism; metabolism and gastric studies of pellagra; calcium and magnesium metabolism; dried foods; the antiscorbutic vitamin.
- Givler, Prof. R(obert) C(henault)**, 46 Hampden Hall, Cambridge, Mass. *Psychology*. Ft. Scott, Kans, Dec. 1, 84. A.B., Hamline, 06; A.M., Harvard, 13, Walker fellow, 13-14, Ph.D., 14. Instr. psychol, Washington (Seattle), 14-17; Harvard, 18-19; *asst. prof. philos*, Tufts, 19- Psycho-physiological effects of speech elements in poetry; applications of behaviorism to ethics, philosophy and logic.
- Gladding, Thomas S(tantial)**, 95-97 Front St, New York, N. Y. *Chemistry*. Mecklenburg, Va, Jan. 18, 53. A.B., Brown, 75, A.M., 76. Instr. math. and science, Conn. Literary Inst, 75-77; Worcester Acad, 77-78; *chemist*, N. Y. Produce Exchange, 83- Chem. Soc.; Soc. Chem. Indust; British Soc. Pub. Analysts. Analytic chemistry; phosphoric acid; potash; nitrogen; boracic acid; oils, fats and resins.
- Gladson, Dean W(illiam) N(athan)**, Fayetteville, Ark. *Engineering*. Corning, Iowa, Feb. 22, 66. B.M.E., Iowa State, 88, E.E., 11; Ph.D., McLennorsville, 06. Erecting engineer, Thomson-Houston Co, 88-90; with Westinghouse Elec. and Mfg. Co, 90-92; asst. prof. *elec. eng*, Ohio State, 92-93; *prof*, Arkansas, 94-, *v. pres. and dean, eng*, 13- Elec. Eng.; Electrochem. Soc.; Eng. Educ. Water power of Arkansas rivers.
- Gladwin, Fred E(imer)**, Vineyard Laboratory, Fredonia, N. Y. *Horticulture*. New York Mills, N. Y., Sept. 3, 77. B.S., Rochester, 04. Head, dept. biol, high sch, Dallas, Tex, 04-07; hort. inspector, Tex. Dept. Agr, 05-07; N. Y. Dept. Agr, 07-09; *assoc. horticulturist*, N. Y. Exp. Sta, Fredonia, 09- Lecturer bot, Baylor, 05-07. Soc. Hort. Sci. Pomology; viticulture.
- Glaser, Charles (Gottfried Adolph Georg)**, 15-17 S. Gay St, Baltimore, Md. *Chemistry*. Wiesbaden, Germany, May 15, 55. Fresenius Chem. Lab, 72-73. Managing chemist, Dambmann Bros. Co, 82-91; gen. manager, Am. Phos. Chem. Co, 91-92; *chemist*, *Pub. Lab*, Baltimore, 93- A.A.; Chem. Soc.; Brewers' Chem. Soc. Analytical and technical chemistry; monazite and the estimation of thoria; the double salts of nicotin and cadmium; terpenes; synthesis of camphor; radioactivity.
- Glaser, Prof. Otto C(harles)**, Amherst College, Amherst, Mass. **Biology*. Wiesbaden, Germany, Oct. 13, 80. A.B., Hopkins, 00, fellow, 03-05, Ph.D., 04. Asst. U. S. Fisheries and N. C. Geol. Surv, 01-02; marine biologist, Gulf Biol. Sta, La, 03; demonstrator 'embryol, comp. anat. and biol, Col. Physicians and Surg, Baltimore, 01-03; instr. zool, Michigan, 05-08, asst. prof, 08-14, junior and later assoc. prof, 14-18; *prof. biol*, Amherst, 18- Instr. biol, Woods Hole, 05-07. A.A.; Soc. Nat.; Soc. Zool; Physiol. Soc.; Soc. Exp. Biol. Embryology; general physiology; physiology of development; developmental energetics; mechanics of differentiation, especially of the nervous system; fertilization; egg secretions; auto-parthenogenesis.
- Glaser, Dr. R(udolf) W(illiam)**, Rockefeller Institute for Medical Research, Princeton, N. J. *Pathology*. Catonsville, Md, 88. A.B., Michigan, 11; Sc.D., Harvard, 14. Asst. entom, Harvard, 11-13; entomologist, bur. entom, U. S. Dept. Agr, 12-20; with *Rockefeller Inst*, Princeton, N. J, 20- Asst. biologist, Md. Shell Fish Commission, summers, 09, 10. A.A.; Entom. Soc.; Cambridge Entom. Club. Physiology, pathology and bacteriology of insects.

- Glasgow, Dr. Robert Douglass**, University of Illinois, Urbana, Ill. *Entomology*. Tennessee, Ill., April 3, 79. A.B., Illinois, 08, fellow, 11-12, Ph.D., 13. Asst. zool., Illinois, summer, 09, entom., 09-11, instr., 13- A.A.; Entom. Soc.; Ecol. Soc.; Ill. Acad. Physiology and ecology of insects.
- Glashan, Dr. J(ohn Stuart) C(adenhead)**, 68 Somerset St, W, Ottawa, Can. *Mathematics*. Ellon, Scotland, Jan. 23, 44. Private study; LL.D., Toronto. First asst, provincial model sch., Toronto, 64-67; inspector, pub. schools, Middlesex, Can, 71-76; Ottawa, 76-10. Mem. cent. committee of examiners for Ont., 76-86; headquarters board of examiners, Royal Mil. Col., Can, 90-95; board of civil service examiners, Dominion of Can, 93-09. Math. Soc.; fel. Royal Soc. Can. The theorems of Taylor, Lagrange and Cayley; quintic and cyclotomic equations; septic equations; matricular analysis of the concomitants of quantics; alternate numbers as geometric indices; the embodiment in actual numbers of the Kummer ideals in the quadratic realm.
- Glasoe, Prof. P(aul) M(aurice)**, Northfield, Minn. *Chemistry*. Spring Grove, Minn., Aug. 24, 73. A.B., Minnesota, 97, fellow, M.S., 98, Ph.D., 02. Asst. chem., Minnesota, 95-97, instr., 98-01; chem. and physics, St. Olaf, 01-02, prof., 03-07; pres, Spokane, 07-10; prof. chem, St. Olaf, 10-16; pres, Augustana, 16-18; *prof. chem. and v. pres, St. Olaf*, 18- Chem. Soc. Derivatives of camphor oxim; brown cheese.
- Glattfeld, Prof. J(ohn) W(illiam) E(dward)**, University of Chicago, Chicago, Ill. *Chemistry*. Quincy, Ill., April 19, 83. B.S., Dartmouth, 07, M.S., 10; Ph.D., Chicago, 13. Instr. *chem.*, Dartmouth, 09-10; *Chicago*, 13-18, *asst. prof.*, 19- Research assoc., desert lab, Carnegie Institution, 20. Chem. Soc. Oxidation of sugars; saccharinic acids.
- Glazier, Prof. Harriet E(udora)**, University of California, Southern Branch, Los Angeles, Calif. *Mathematics*. Haverhill, N. H., March 3, 70. A.B., Mt. Holyoke, 96; A.M., Chicago, 08. Instr. *math.*, Mt. Holyoke, 96-97; Western Col., 97-98, asst. prof., 98-01, prof., 01-20; *asst. prof., southern branch, California*, 20- Math. Ass.; Math. Soc. Curves generated by the focus of an ellipse and an hyperbola as they roll without sliding upon a straight line.
- Gleason, Dr. H(enry) A(ilan)**, New York Botanical Garden, Bronx Park, New York, N. Y. *Botany*. Dalton City, Ill., Jan. 2, 82. B.S., Illinois, 01, A.M., 04; fellow, Ohio State, 04-05; Ph.D., Columbia, 06. Curator, herbarium, Illinois, 00-04, asst. bot., 01-03, instr., 03-04, 06-09, assoc., 09-10; asst. prof., Michigan, 10-16, assoc. prof., 16-19; first asst, N. Y. *Bot. Garden*, 19, asst. director, 20- Director, biol. sta., Michigan, 13-15, director, bot. gardens and arboretum, 15-19. A.A.; Bot. Soc.; Ecol. Soc.; Torrey Bot. Club; Ass. Geog. Phytogeography; plant ecology; systematic botany.
- Gleason, Dr. Josephine M(ixer)**, Vassar College, Poughkeepsie, N. Y. *Psychology*. North Adams, Mass., Oct. 92. A.B., Vassar, 14; fellow, Cornell, 17, Ph.D., 18. Asst. *psychol.*, Vassar, 14-16; instr., Cornell, 18; *Vassar*, 18- Psychol. Ass.
- Glenn, Dr. L(eonidas) C(halmers)**, Vanderbilt University, Nashville, Tenn. *Geology*. Crowders Creek, N. C., Sept. 9, 71. A.B., South Carolina, 91; Ph.D., Hopkins, 99. Adj. prof. geol. and biol., South Carolina, 99-00; *geol., Vanderbilt*, 00-03, *prof.*, 03-; Peabody Col. for Teachers, 14. Asst. geologist, U. S. Geol. Surv., 00-08; assoc. geologist, Tenn. Geol. Surv.; special work, N. Y. Md. and N. C. Geol. Surveys; coal work, Ky. Geol. Surv.; geologist, Sinclair Oil Co., 16-17; special agent oil and gas valuation, U. S. Int. Revenue, 18-19; geologist Red River boundary dispute, U. S. Dept. Justice, 19. A.A.; Geol. Soc.; Min. Eng.; Wash. Geol. Soc.; Tenn. Acad. Miocene paleontology; Devonian and Carboniferous stratigraphy; oil and gas in western New York; physiographic geology; initial stream development; bibliography of North and South Carolina geology; cartography of North and South Carolina; Appalachian coal field geology; denudation and erosion in southern Appalachians.
- Glenn, Prof. Oliver E(dmunds)**, 127 McKinley Ave., Lansdowne, Pa. *Mathematics*. Moorefield, Ind., Oct. 3, 78. A.B., Indiana, 02, A.M., 03; fellow, Pennsylvania, 03-05, Ph.D., 05. Prof. *math.*, Drury, 05-06; instr., *Pennsylvania*, 06-10, asst. prof., 10-14, *prof.*, 14- Assoc. ed., 'Am. Math. Monthly,' 05-06. A.A.; Math. Soc. (councilor, 14-17); Math. Ass. Theory of invariants and of relativity of motion; group theory; factorable forms.
- Glenn, Prof. P(ressley) A(dams)**, 1001 W. University Ave, Urbana, Ill. *Entomology*. Westmoreland Co., Pa., July 9, 67. A.B., Campbell, 92; Kansas, 98; hon. A.M., Highland, 01. Prof. math. and science, Highland, 98-07; asst. prof. entom., Kansas, 07-11; entomologist, Ill. Dept. Agr., 11-17, *chief inspector, div. plant indust.*, 17- A.A. Climatic conditions in relation to Toxoptera graminum and Lysiphlebus tritici; forms of Toxoptera graminum; sexual forms in aphids; artificial introduction of Sporotrichum globuliferum; life history and development of codling moth.
- Glomset, Dr. Daniel Johnson**, 1300 46th St, Des Moines, Iowa. *Medicine*. Norway, Dec. 12, 81. B.S., Chicago, 09, M.D., Rush Med. Col., 11. Instr. histol., Northwestern, 09; prof. path, Drake, 11-13; research fellow, German Univ., Prague, 14; pathologist, Des Moines, Iowa, 15-16. Lieut. capt. and later major, M.R.C., A.E.F., 17-19. Ass. Path. and Bact.; Soc. Bact.; Ass. Cancer Research; Iowa Acad. Pathology; bacteriology.
- Glover, Dr. James W(aterman)**, Ann Arbor, Mich. *Mathematics, Actuarial science*. Clio, Mich., July 24, 68. B.L., Michigan, 92; A.B., Harvard, 93, Morgan fellow, 92-94, A.M., 94, Ph.D., 95. Junior instr. math., Michigan, 95-99, senior instr., 99-03, asst. prof. math. and lecturer insurance, 03-06, junior prof. *math. and insurance*, 06-11, *prof.*, 11- Consulting actuary, Wis. Legislative Insurance Investigation Committee, 06; Committee on Banks and Insurance, 07; expert special agent, U. S. Census, 10-; collaborator, office pub. roads, U. S. Dept. Agr., 13-19. A.A.; Math. Soc.; Am. Inst. Actuaries; Statist. Ass.; Verein Versicherungswissenschaft. Theory of groups;

- partial differential equations; asymptotes; valuation of insurance reserves; graduation of mortality tables and reduction of vital statistics of twelfth U. S. census; monetary cost of tuberculosis.
- Gloyer, W(alter) O(scar)**, 106 Lyceum St. Geneva, N. Y. *Plant pathology*. Milwaukee, Wis., Jan. 29, 85. A.B., Wisconsin, 09, A.M., 10. Asst. botanist, Ohio Exp. Sta., 10-12; *assoc. botanist*, N. Y. Exp. Sta., Geneva, 12- Phytopath. Soc.
- Glueck, Dr. Bernard**, 105 East 22d St, New York, N. Y. *Psychiatry*. Poland, Oct. 3, 83. M.D., Georgetown, 09; Munich and Berlin, 11. Mem. staff, Govt. Hosp. for Insane, 09-16; mental examiner of immigrants, Port of N. Y., 13; *director*, psychiat. clinic, Sing Sing Prison, 15-18; *mental hygiene dept.*, N. Y. Sch. Social Work, 18- Assoc. neur. Columbia. Am. Med. Ass.; Psychol. Ass.; Psychopath. Ass.; Ass. Clin. Criminol. (pres, 18); Inst. Criminal Law and Criminol.; Am. Prison Ass. Psychopathology of crime.
- Goddard, A(rthur) L(aurence)**, Charles Gordon, Inc, Madison, Wis. *Engineering*. Bloomfield, N. J., Sept. 21, 70. B.S., Wisconsin, 96. Chief draftsman, shop supt. and manager, various companies, 99-09; asst. prof. mech. practise and supt. shops, Wisconsin, 09; *sales engineer*, Charles Gordon, Inc, 20- Mech. Eng.; Eng. Educ. Burning of heavy hydrocarbon liquids; heat treatment of steel; bearing metal alloys.
- Goddard, Prof. Henry H(erbert)**, 1638 Granville St, Columbus, Ohio. **Psychology*. Vassalboro, Maine, Aug. 14, 66. A.B., Haverford, 87, A.M., 89; Ph.D., Clark, 99. Prof. psychol. and pedag., State Nor. Sch., West Chester, Pa., 99-06; *director*, psychol. research, Training Sch., Vineland, N. J., 06-18; *Ohio Bur. Juvenile Research*, 18- Acting prof. psychol., Haverford, 00-01; asst. and lecturer, Clark Summer Sch., 97, 98, 03; lecturer psychol. mental defectives, N. Y. Univ., 08-16. A.A.; Psychol. Ass.; Ass. Study Feeble-Minded; Health League; Sch. Hygiene Ass.; Soc. Belge de Pédotech. The psychology of faith cures; growth and heredity of feeble-minded children; psychology of delinquency; causes and consequences of feeble-mindedness; training of defective children; human efficiency and levels of intelligence.
- Goddard, Dr. Henry Newell**, 316 Central St, Chippewa Falls, Wis. *Agriculture*. Winnebago, Ill., Oct. 30, 67. Ph.B., Michigan, 93, Ph.D., 11. Teacher science, State Nor. Sch., Oshkosh, Wis., 93-06; prof. biol., Carroll, 06-09; head, dept. biol., State Nor. Sch., Superior, Wis., 11-13; supervisor, high schools and special supervisor agr., State Dept. Pub. Instr., Wis., 13-20; *supt. schools*, Chippewa Falls, Wis., 20- Cent. Ass. Sci. and Math. Teachers. Vocational agriculture; secondary education; fungi of the soil.
- Goddard, Dr. P(liny) E(arle)**, American Museum of Natural History, New York, N. Y. **Ethnology*. Lewiston, Maine, Aug. 24, 69. A.B., Earlham, 92, A.M., 96; Ph.D., California, 04. Asst. anthrop., California, 01-02, instr., 02-07, asst. prof., 07-09; assoc. curator, Am. Museum Nat. Hist., 09-14, *curator*, 14- A.A.; Anthropol. Ass. (ed, 16-, treas, 19); Folk-lore Soc. Athapasean linguistic stock; linguistics of Apache Indians.
- Goddard, Dr. Robert H(utchings)**, 5 Bishop Ave., Worcester, Mass. **Physics*. Worcester, Oct. 5, 82. B.S., Worcester, 08; hon. fellow, Clark, 10-11, A.M., 10, Ph.D., 11. Instr. physics, Worcester, 09-11; Princeton, 12-13; instr. and hon. fellow, Clark, 14-15, asst. prof., 15-19, *prof.*, 19- A.A.; Physical Soc. Electrical conduction of powders; crystal rectifiers; mechanical force on dielectrics in a magnetic field; interference colors in clouds; balancing of aeroplanes; production of gases by electrical discharges in vacuum tubes; method for researches at very high altitudes.
- Godfrey, Geo(rge) H.**, U. S. Department of Agriculture, Washington, D. C. *Botany*. Madison, Kans., Oct. 28, 88. B.S., Wash. State, 13; M.S., Iowa State, 17. Asst. *plant path.*, Oregon Exp. Station, 13-14; scientific asst., *bur. plant indust.*, U. S. Dept. Agr., 14-16, 18, asst. pathologist, 19-20, *pathologist*, 20- A.A.; Phytopath. Soc.; Wash. Bot. Soc. Rice and castor bean diseases.
- Goding, Dr. F(rederic) W(ebster)**, American Consulate General, Guayaquil, Ecuador. *Entomology*. Hyde Park, Mass., May 9, 58. M.D., Northwestern, 82; Ph.D., Bethel, 90. Special asst. to state entomologist, Ill., 85. Lecturer nat. science, London Col.; Young Men's Ass., Newcastle, N. S. W. A.A.; Ass. Econ. Entom.; Linnean Soc. N. S. W.; fel. Royal Anthropol. Soc. Australia; Polynesian Soc. Biology; medicine; law; economic entomology; Cicadidae and Cercopidae; Membracidae; anthropology.
- Goetsch, Dr. Emil**, Long Island College Hospital, Brooklyn, N. Y. *Anatomy, Physiology*. Davenport, Iowa, Jan. 23, 83. B.S., Chicago, 03, fellow, 04-05, Ph.D., 06; M.D., Hopkins, 09. Asst. anat., Chicago, 06-07, assoc., 07-08; research asst. exp. therapist, Chicago, 08-09; asst. surg., in charge Hunterian lab, Hopkins, 09-10, asst. res. surgeon, Hopkins, Hosp., 10-12; asst. *surg.*, Harvard Med. Sch. and res. surgeon, Peter Bent Brigham Hosp., 12-15; assoc., Hopkins, 15-18, assoc. prof., 18-19; *prof.*, L. I. Col. Hosp., 19- Soc. Internal Secretions (sec'y, 17, 18); Col. Surg.; Ass. Anat. Gastro-enterostomy; surgery of the ductless glands; abdominal surgery.
- Goldbaum, Dr. Jacob S(amuel)**, Fels and Co, Philadelphia, Pa. *Electrochemistry*. New York, N. Y., Nov. 26, 87. B.S., Pennsylvania, 08, Ph.D., 10. Instr. electrochem., Pennsylvania, 08-11; *research chemist*, Fels and Co, 11- A.A.; Chem. Soc. (councilor, 14-); Electrochem. Soc.; Franklin Inst. Atomic weights; electrochemical analysis.
- Goldberg, Prof. S(amuel) A(lexander)**, 324 Mitchell St, Ithaca, N. Y. *Pathology*. Russia, Dec. 12, 83. D.V.M., Cornell, 14, A.M., 16, Ph.D., 17. Asst. *Cornell*, 13-15, instr., 15-17, *asst. prof.*, 17- Ass. Path. and Bact.; Vet. Med. Ass. Comparative pathology and bacteriology; inflammation of joints; melanosis; epithelial tumors in domestic animals; fermenting properties of certain bacteria; spavin.
- Goldberger, Dr. Joseph**, 3462 Macomb St. N. W., Washington, D. C. **Medicine*. Austria-Hungary, July 16, 74. M.D., Bellevue Med. Col., 95. *Commissioned med. officer*, U. S. Pub. Health Service, 99-, *director*, field investigations of pellagra, 14- Cutter lecturer, Harvard, 15. Ass.

- Path. and Bact; Pub. Health Ass; Am. Med. Ass. Yellow fever; measles; typhus fever; trematode parasites; pellagra.
- Goldenweiser, Dr. A(lexander) A**, 550 Riverside Drive, New York, N. Y. *Anthropology*. Kiev, Russia, Jan. 29, 80. Diploma, Gymnasium, Kiev, 00; A.B., Columbia, 02, A.M., 04, Ph.D., 10. Asst. lecturer and later instr. *anthrop*, Columbia, 10-19; *instr. New Sch. for Social Research*, 19-; *lecturer, Rand Sch. Social Science*, 14- Investigator, Can. Geol. Surv., 12- A.A.; *Anthrop. Ass*; *Ethnol. Soc*; *Folk-lore Soc.* Religion; social organization; methodology of the social sciences.
- Goldfarb, Prof. A(braham) J**, College of the City of New York, New York, N. Y. **Zoology*. London, England, March 13, 81. B.S., Col. City of N. Y., 00; Ph.D., Columbia, 10. Instr. zool., Boys' High Sch., Brooklyn, N. Y., 09-10; tutor biol., *Col. City of N. Y.*, 10-11, instr. nat. hist., 11-13, *asst. prof. biol.*, 13- Mem. Carnegie Institution exped. to P. R. A.A.; *Soc. Nat*; *Soc. Zool*; *Soc. Exp. Biol*; *Marine Biol. Ass.* Experimental zoology; embryology; physiology.
- Goldman, E(dward) A(lphonso)**, U. S. Department of Agriculture, Washington, D. C. *Zoology*. Mount Carroll, Ill., July 7, 73. Pub. schools. Field naturalist, *biol. surv.*, *U. S. Dept. Agr.*, 92-17, *asst. biologist, in charge div. biol. invest.*, 19- Biol. explor. in Calif., New Mex., Ariz. and Mex. Major, *Sanit. C.*, 18-19. A.A.; *Ecol. Soc*; *Soc. Mammal*; *Soc. Ichthyol. and Herp*; mem. *Ornith. Union*; *Wash. Biol. Soc*; *Cooper Ornith. Club*. Revision of the woodrats of the genus *Neotoma*; revision of the spiny pocket mice; rice rats of North America; mammals of Panama.
- Goldman, Dr. Marcus I(saac)**, U. S. Geological Survey, Washington, D. C. *Geology*. New York, N. Y., Jan. 11, 81. B.S., Harvard, 02; E.M., Columbia, 05; fellow, Hopkins, 12-13, Ph.D., 13. Asst. geologist, *U. S. Geol. Surv.*, 07-09, *assoc. geologist*, 14- A.A.; *Geol. Soc*; *Wash. Geol. Soc.* Petrology of sedimentary rocks.
- Goldmark, Henry**, 103 Park Ave., New York, N. Y. *Civil engineering*. New York, June 15, 57. A.B., Harvard, 78; Polytech., Hanover, 78-80. Civil engineer, 80-06; designing engineer, Panama Canal, 06-14. Rowland prize, Civil Eng. Civil Eng; *Soc. Test. Mat*; *West. Soc. Eng*; *Can. Civil Eng*; *British Inst. Civil Eng.* Hydroelectric plants; steel bridges; ship canals.
- Goldring, Miss Winifred**, Slingerlands, N. Y. *Paleontology*. Kenwood, N. Y., Feb. 1, 88. A.B., Wellesley, 09, A.M., 12; Harvard, 10-11; Columbia, summer, 13. Asst. geol. and geog., Wellesley, 09-12, instr., 12-14; expert, *N. Y. State Museum*, 14-15, *asst. paleont.*, 15- A.A.; *Paleont. Soc.* Fresh-water conditions in the Pleistocene of the Champlain basin.
- Goldsborough, Prof. Francis C**, University of Buffalo, Buffalo, N. Y. *Medicine*. Baltimore, Md., Sept. 13, 77. B.S., Princeton, 99; M.D., Hopkins, 03. Instr. and later *assoc. obstet.*, Hopkins, 04-10; *prof.*, Buffalo, 10- Obstetrics and gynecology; toxemia of pregnancy; blood pressure in pregnancy; involution and the position of the uterus.
- Goldsborough, Prof. W(inder) E(lwell)**, 5 E. 42nd St., New York, N. Y. *Electrical engineering*. Baltimore, Md., Oct. 10, 71. M.E., Cornell, 92. Adj. prof. elec. eng., Arkansas, 93; prof., Purdue, 94-05; v. pres., Denver Res. Irrigation Co., 07-10; G. M. Laramie Water Co., 10-13; gen. manager, New Home Sewing Machine Co., 18-20, *consulting engineer*, 20- Chief, dept. elec., La. Purchase Expos., 04; with J. G. White and Co., 05. Knight Order of the Crown, Italy. Int. Elec. Cong., St. Louis, 04 (v. pres.). Elec. Eng. (v. pres); Eng. Educ.; Mech. Eng.; Electrochem. Soc; British Inst. Elec. Eng. Electromagnetic phenomena.
- Goldschmidt, Dr. S(amuel) A(nthony)**, 11 Broadway, New York, N. Y. *Chemistry*. New York, N. Y., Sept. 17, 48. A.B., Col. City of N. Y., 68, A.M., 79; E.M., Columbia, 71; Ph.D., Emory, 75. *Chairman, Columbia Chem. Works*, 80- A.A.; *Chem. Soc*; *fel. London Chem. Soc.*
- Goldsmith, Dr. Alfred N(orton)**, 43 Fifth Ave., New York, N. Y. *Radio engineering*. New York, Sept. 15, 87. B.S., Col. City of N. Y., 07, fellow, 07-10; Ph.D., Columbia, 11. Tutor physics, *Col. City of N. Y.*, 10-11, instr., 11-15, *asst. prof.*, 15-19, *assoc. prof. elec. eng.*, 19- Consulting radio expert, U. S. Dept. Justice, 12; consulting radio engineer, Atlantic Communication Co., 14-; consulting engineer, Gen. Elec. Co., 15-17; director research, Marconi Wireless Telegraph Co. of Am., 17-19; director research dept., Radio Corp. of Am., 19- Fel. Elec. Eng; *Physical Soc*; *fel. Radio Eng.* (director, 12-, ed., 'Proc.', 12-, chairman committee on standardization, 14, sec'y, 18). Radio telegraphy; radio telephony; photophysics; transmission of canal rays through thin partitions; precision measurements in radio engineering.
- Goldsmith, Dr. E(dward)**, 658 N. Tenth St., Philadelphia, Pa. *Chemistry*. Hamburg, Germany, March 25, 33. Ph.D. Chief chemist, Powers and Weightman, 66-04. A.A.; *Franklin Inst*; *Phila. Acad*; *Camden Astron. Soc.* Mineralogical and therapeutical chemistry.
- Goldthwait, Prof. J(ames) Walter**, Dartmouth College, Hanover, N. H. *Geology, Physiography*. Lynn, Mass., March 22, 80. A.B., Harvard, 02, A.M., 03, Ph.D., 06. Instr. *geol.*, Northwestern, 04-06, *asst. prof.*, 06-08; *asst. prof. and head, dept. geol. and miner.*, Dartmouth, 08- A.A.; *Geol. Soc*; *Ass. Geog*; *Am. Acad.* Hurricane fault in southwestern Utah; upwarped shorelines of Lakes Algonquin and other extinct lakes of the Laurentian system; raised sea beaches and Champlain clays of southern Quebec; surface geology of northern New Hampshire.
- Goldthwait, Dr. Joel E(rnest)**, 372 Marlborough St., Boston, Mass. *Surgery*. Marblehead, Mass., June 18, 66. B.S., Mass. Col., 85; M.D., Harvard, 90. Prof. hygiene and physical educ., Smith; chief, orthop. service, Mass. Gen. Hosp; *asst. instr. and later assoc. orthoped.*, Harvard Med. Sch., 02-; *pres. of corp.*, Robert Brigham Hosp. Surgeon, Carney Hosp. and Children's Hosp. Orthop. Ass; *Am. Med. Ass*; *British Orthop. Ass.* Orthopedic surgery; structure of the human body; chronic bone and joint diseases.
- Goldthwaite, Dr. N(ellie) E(ster)**, Adams, Mass. *Chemistry*. Jamestown, N. Y. B.S., Mich-

- igan, 94; fellow, Chicago, 94-97, Ph.D, 04. Head, dept. chem, Mt. Holyoke, 97-05; assoc. physiol. chem, Rockefeller Inst, 06-08; asst. prof, dept. household science, Illinois, 08-15; head, dept. home econ, N. H. Col, 15-16; *assoc. prof, Colo. Agr. Col, 19-* In the Orient, 16-19. A.A.; Chem. Soc. Substituted benzhydrol derivatives and bromcyanacetic ether; chemistry and physics of jelly making; the cooking quality of potatoes.
- Gomberg, Prof. Moses**, 725 Oxford Road, Ann Arbor, Mich. **Chemistry*. Elizabetgrad, Russia, Feb. 8, 66. B.S, Michigan, 90, M.S, 92, Sc.D, 94; Munich, 96-97; Heidelberg, 97. Instr. chem, Michigan, 93-96, 97-99, asst. prof. org. chem, 99-02, junior prof, 02-04, *prof, 04-* Major, ordnance dept, 18; Nichols medal, Chem. Soc, 14. Nat. Acad; A.A; Chem. Soc; Franklin Inst; Philos. Soc. Trivalent carbon and free radicals; quino-carbonium salts; tautomerism in triphenylmethane series; ethylene chlorhydrin.
- Gonnerman, Prof. Harrison Frederick**, University of Illinois, Urbana, Ill. *Engineering*. Dixon, Ill, Aug. 24, 85. B.S, Illinois, 08, M.S, 13. Asst. eng. exp. sta, Illinois, 08-10, instr. eng, 10-14, first asst, 14-17, research assoc, 17-18, *research asst. prof. theoret. and applied mech, 18-* Test. engineer, Emergency Fleet Corp, summer, 18. Soc. Test. Mat; Concrete Inst. Materials of construction; concrete.
- Gonzalez, Dr. Jesus (y Sioco)**, P. O. Box 715, Manila, P. I. *Medicine*. Apalit, P. I, 85. A.B, San Juan de Letran, Manila, 02; M.D, Rush Med. Col, 09. Asst. prof. *pediat, Univ. Philippines*. A.A; Am. Med. Ass; Col. Medicofarmaceut. de Filipinas.
- Gooch, Prof. F(rank) A(ustin)**, Yale University, New Haven, Conn. **Chemistry*. Watertown, Mass, May 2, 52. A.B, Harvard, 72, A.M, Ph.D, 77; Vienna, 75-76; hon. A.M, Yale, 87. Expert special agent of U. S. Geol. Surv, tenth census, 79-81; chemist, North. Transcont. Surv, 81-84; U. S. Geol. Surv, 84-86; *prof. chem. and director, Kent Chem. Lab, Yale, 85-18, emer. prof, 18-* Nat. Acad; A.A; Chem. Soc; Philos. Soc; Am. Acad; N. Y. Acad. Analytical methods.
- Good, Prof. E(dwinn) S(tanton)**, University of Kentucky, Lexington, Ky. *Animal husbandry*. Clarence Center, N. Y, March 16, 71. B.S, Mich. Agr. Col, 03; European study, 05; M.S, Illinois, 06. Instr. and investigator *animal husbandry*, Illinois, 03-06; *head of dept, Ky. Exp. Sta, 06-, prof. Kentucky, 12-* A.A; Soc. Animal Production; Ass. S. Agr. Workers; Ky. Acad. Infectious abortion in cows and mares; live stock feeding.
- Goodale, Prof. George Lincoln**, 5 Berkeley St, Cambridge, Mass. **Botany*. Saco, Maine, Aug. 3, 39. A.B, Amherst, 60, hon. A.M, 66, LL.D, 90; M.D, Harvard, 63; hon. A.M, Bowdoin, 69, LL.D, 94; LL.D, Princeton, 96. Prof. mat. med. and nat. science, Bowdoin, 69-72; *instr, bot, Harvard, 72-73*; asst. prof, 73-78, *prof, 78-09, emer. prof, 09-* Assoc. ed, 'Am. Jour. Sci,' 88-Int. Cong. Bot, Brussels, 10. Nat. Acad; A.A. (v. pres, 89, pres, 90); Bot. Soc; Soc. Nat; Ass. Anat; Physiol. Soc; Philos. Soc; Am. Acad; hon. fel. N. Y. Acad; hon. fel. Royal Soc.
- New Zealand. Economic botany; improvement of useful plants and their products; improvement in quality and increase in yield of products of industrial plants, especially at the Harvard Experiment Station in Cuba.
- Goodale, Dr. H(ubert) D(ana)**, Massachusetts Agricultural College, Amherst, Mass. **Zoology*. Troy, N. H, June 5, 79. A.B, Trinity (Conn), 03, A.M, 04; fellow, Columbia, 05-06, Ph.D, 13. Res. investigator, sta. for exp. evolution, Carnegie Institution, 11-13; *research biologist poultry husbandry, Mass. Exp. Sta, 13-* A.A; Soc. Zool; Poultry Ass. Embryology; genetics; inheritance in domestic fowl.
- Goodale, Dr. J(oseph) L(incoln)**, 258 Beacon St, Boston, Mass. *Laryngology*. Saco, Maine, Jan. 22, 68. A.B, Harvard, 89, A.M, M.D, 93. Asst. physician diseases of the throat, Mass. Gen. Hosp, 94-08; *instr. laryngol, Harvard, 08-* A.A; Laryngol. Ass; Am. Med. Ass; Col. Surg. Diseases of nose and throat; pathology of the lymphoid tissue of the throat; infections entering the system through the nose and throat; anaphylaxis.
- Goodale, Prof. Stephen L(incoln)**, 1156 Murrayhill Ave, Pittsburgh, Pa. *Metallurgy*. Saco, Maine, Aug. 31, 75. A.B, Colo. Col, 99, A.M, 09; E.M, Colo. Sch. Mines, 04. Consulting mining engineer; *prof. metal, Pittsburgh, 09-* A.A; Min. Eng; Electrochem. Soc; West. Pa. Eng. Soc. Mining.
- Goode, Prof. J(ohn) Paul**, University of Chicago, Chicago, Ill. *Geography*. Stewartville, Minn, Nov. 21, 62. B.S, Minnesota, 89; Harvard, 94; fellow, Chicago, 96-97; Ph.D, Pennsylvania, 01. Prof. nat. science, State Nor. Sch, Moorhead, Minn, 89-98; physical science and geog, East. Ill. State Nor. Sch, 99-01; *instr. geog, Pennsylvania, 01-03*; *asst. prof, Chicago, 03-10*, *assoc. prof, 10-17, prof, 17-* Instr. physiog. and meteorol, Chicago, summers, 97-00, 02, co-editor, 'Jour. of Geog,' 01-04; expert econ. geog, Chicago Harbor Commission, 08; gov't escort with the hon. commercial commissioners of Japan in Am. tour, 09; lecturer for Philippine Govt, 11. A.A. (gen. sec'y, 08); Ass. Geog. (v. pres, 16); Cent. Ass. Sci. and Math. Teachers; Ill. Acad; Chicago Geog. Soc. (pres, 04-06, director, 04-); Phila. Geog. Soc. (director, 01-03). Economic geography; cartography; commercial parts; geographic influence in the Great War; geographical education; maps for schools.
- Goodell, Geo(rge) A(rthur)**, Kentucky Color and Chemical Co, 34th St. and Tyler Ave, Louisville, Ky. *Chemistry*. Westminster, Vt, Sept. 16, 71. A.B, Amherst, 94; A.M, Columbia, 98. Principal, Deerfield Acad, Mass, 95-97; asst. chem, Barnard, Columbia, 98-00, tutor, Col. Physicians and Surg, 00-04; *instr, Wellesley, 04-10*; color chemist, Henry Wood's Sons Co, 06-10, supt, 10-12; dry color dept, Sherwin Williams Co, 12-20; *sec'y and gen. supt, Ky. Color and Chem. Co, 20-* Chem. Soc. Volumetric determination of lead; household chemistry.
- Goodenough, Prof. G(eorge) A(lfred)**, 309 S. Lincoln Ave, Urbana, Ill. *Mechanical engineering*. Davison, Mich, May 3, 68. B.S, Mich. Agr. Col, 91; M.E, Illinois, 00. Instr. meech, Mich.

- Agr. Col, 91-93; mech. eng, *Illinois*, 95-97, asst. prof, 99-05, assoc. prof, 05-10, *prof. thermodynamics*, 10- Eng. Educ; Mech. Eng. Stresses in oval links; properties of saturated and superheated vapors; gaseous explosions.
- Goodman, Dr. Edward H(arris)**, 248 S. 21st St, Philadelphia, Pa. *Medicine*. Philadelphia, April 4, 79. M.D., Pennsylvania, 02; Berlin, Prague, Munich, Strasbourg, 04-06. Asst. instr. med, *Pennsylvania*, 08-10, instr, 10-12, *assoc*, 12- Chairman, Pa. Sci. Committee, 09. A.A.; Am. Med. Ass; Gastro-Enterol. Ass; Climat. Ass; Phila. Path. Soc. (curator, 08, sec'y, 09-11); Phila. Col. Physicians. Clinical medicine; pathology; physiological chemistry.
- Goodpasture, Prof. E(mest William)**, 112 Winthrop Road, Brookline, Mass. *Pathology*. Clarks-ville, Tenn, Oct. 17, 86. A.B, Vanderbilt, 07; M.D, Hopkins, 12. Rockefeller fellow *path*, Hopkins, 12-13, instr, 13-15; Harvard Med. Sch, 15-18, *asst. prof*, *Harvard*, 19- Acting res. patholo- gist, Hopkins Hosp, 13-15; res. pathologist, Peter Bent Brigham Hosp, 15-18; lieut, U.S.N.R.F, M.C, 17-19. Ass. Path. and Bact; Ass. Cancer Research. Relation of senescence to tumors; hemorrhagic pancreatitis; fibrinogen; influenza.
- Goodrich, Dr. H(ubert) B(aker)**, Wesleyan Uni- versity, Middletown, Conn. *Biology*. Salem, Mass, Sept. 11, 87. B.S, Amherst, 09; A.M, Columbia, 14, Ph.D, 16; fellow, Princeton, 14- 15. Asst. biol, Amherst, 09-11; zool, Columbia, 12-14; instr. biol, Union, 15-16; *zool*, *Wesleyan*, 16-17, *assoc. prof*, 17- Instr. embryol, Woods Hole, 18-; Amherst exped. to Maine Coast, 09. A.A; Soc. Zool. Cytology; embryology; micro- dissection.
- Goodridge, Dr. Frederic G(rosvener)**, Pomfret Center, Conn. *Physiological chemistry*. New York, N. Y, 75. A.B, Harvard, 97; M.D, Col- umbia, 01, Ph.D, 14. Asst. instr. and later *assoc. physiol. chem*, *Columbia*, 12- Peary exped, 97. A.A; Chem. Soc; Am. Med. Ass; Harvey Soc; N. Y. Acad. Med. Uricolysis and suboxidation; biological studies of mereaptan and sulphur.
- Goodspeed, Dr. Arthur W(illis)**, University of Pennsylvania, Philadelphia, Pa. **Physics*. Hop- kinton, N. H, Aug. 8, 60. A.B, Harvard, 84; Ph.D, Pennsylvania, 89. Asst. *physics*, *Penn- sylvania*, 84-85, instr, 85-89, asst. prof, 89-04, *prof*, 04- Mem. jury awards, Nat. Export Expos, 99. A.A; Physical Soc; Philos. Soc. (sec'y, 00-); Am. Röntgen Ray Soc. (v. pres, 01, pres, 02); N. H. Antiq. Soc. (v. pres, 96- 16, pres, 16); London Soc. Arts. Röntgen rays and their applications; constants of the induc- tion coil; radioactivity.
- Goodspeed, Dr. T(homas) H(arper)**, University of California, Berkeley, Calif. *Botany*. Spring- field, Mass, May 17, 87. A.B, Brown, 09; Ph.D, California, 12. Asst. *bot*, *California*, 09-12, instr, 12-15, asst. prof, 15-20, *assoc. prof*, 20- A.A; Soc. Nat; Bot. Soc; West. Soc. Nat. Genetics; vegetable histology and cytology.
- Goodwin, Prof. H(arry) M(anley)**, Massachusetts Institute of Technology, Cambridge, Mass. **Physics, Electrochemistry*. Boston, Mass, April 18, 70. B.S, Mass. Inst. Tech, 90; Ph.D, Leip- zig, 94. Asst. physics, *Mass. Inst. Tech*, 90-92, instr, 92-97, asst. prof, 97-03, assoc. prof, 03- 06, *prof. physics and electrochem. and in charge, dept. electrochem*, 06- A.A; Physical Soc; Electrochem. Soc; Astron. Soc; Am. Acad. Physical and electrochemical studies on the voltaic cell; viscosity of mercury vapor; vapor pressure determinations of certain ether solu- tions; electric conductivity of dilute acid solu- tions; dielectric constants of liquid ammonia; Billitzer's method of absolute potential mea- surements; electrical conductivity and viscosity of fused salts; specific heat and latent heat of fusion of inorganic salts; electrical properties of inorganic salts at high temperatures.
- Goodwin, Prof. L(eo) F(rank)**, Queen's Univer- sity, Kingston, Ont, Can. *Chemistry*. A.C.G.I, London, 98; Leipzig, 01; London, 03; Ph.D, Heidelberg, 03. Demonstrator chem, Univ. Col, London, 03-05; chief Carnegie research asst. to Prof. Chas. Baskerville, 05-06; tutor chem, Col. City of N. Y, 06-07, instr. and head, div. physical chem, 07-09; asst. prof. physical and indust. chem, *Queen's (Can)*, 09-13, assoc. prof, 12-14, *prof. ind. chem. and chem. eng*, 13- Major, C.E.F, 14-16. A.A; Chem. Soc; Soc. Chem. Indust; Electrochem. Soc; British Ass; fel. London Chem. Soc; fel. Inst. Chem. Gt. Britain and Ireland. Reduction products of piperonal- dazin; melting point determinations at low tem- peratures; specific and latent heats of ice and other substances; catalytic production of ke- tones; radioactivity of metallic thorium; oxida- tion of sulphur dioxide.
- Goodwin, Prof. W(illiam) L(awton)**, Queen's University, Kingston, Ont. *Chemistry*. Baie Verte, N. B, 56. Mt. Allison Col, 76-77, LL.D, 19; Gilchrist scholar, Edinburgh, 77-80, B.S, 81, Sc.D, 82; Heidelberg, 80-81; B.S, London, 82. Asst. to Sir Wm. Ramsay, 81-82; prof, chem, Mt. Allison, 82-83; *Queen's (Can)*, 83- 93, director, sch. mining, 93-19, dean, faculty of sciences, 11-19, retired, 19. A.A; Chem. Soc; Electrochem. Soc; Soc. Chem. Indust. (chair- man); fel. Royal Soc. Can. (pres, sect. III); Can. Min. Inst. (v. pres). Properties of solu- tions; analysis of corundum; vanadium in titaniferous iron ores.
- Goodwin, W(illiam) N(elson), Jr**, Waverly Park, Newark, N. J. *Electrical engineering*. Phila- delphia, Pa, Oct. 10, 76. B.S, Pennsylvania, 97, E.E, 08. Designer, Pa. Iron Works Co, 97-98; engineer, lab, *Weston Elec. Instrument Co*, 98- 06, *chief elec. engineer, in charge research lab*, 06- A.A; Elec. Eng; assoc. Physical Soc; assoc. Radio. Eng. Instruments for precision measurements of alternating and direct current phenomena.
- Gordin, Prof. H(arry) M(ann)**, 31 W. Lake St, Chicago, Ill. *Chemistry*. Russia, Aug. 16, 54. Pharmacist, Moscow; Ph.D, Berne, 97. With mfg. laboratories, 97-02; *prof. chem, sch. pharmacy, Northwestern*, 02-, *dental sch*, 07- A.A; Chem. Soc; Pharmaceut. Ass; Chem. Gesell. Chemistry of alkaloids and bitter prin- ciples; drug assaying; calycanthin; marrubini; alkaloids of yellow parilla; philosophy.

- Gordinier, Dr. H(ermon) C(amp)**, 89 Fourth St, Troy, N. Y. *Medicine*. Troy, May 21, 64. M.D., Albany Med. Col, 86; Prague, 89-90; hon. A.M., Williams. Instr. physical diagnosis, *Albany Med. Col.*, 89-95, *prof. anat. of the nervous system and physiol.*, 95-15, *practise of med.*, 15- Physician, Samaritan and Cambridge Hospitals and Protestant Orphan Asylum, Troy. A.A.; Am. Physicians; Neur. Ass; Therapeut. Soc; Am. Med. Ass. Neurology; neuropathology.
- Gordon, Dr. Alfred**, 1812 Spruce St, Philadelphia, Pa. *Neurology*. Paris, France, 73. A.M., M.D., Paris, 95. Assoc. nervous and mental diseases and neuropath. Jefferson Med. Col, 98-09; *neurologist, various hospitals*, 00- Neur. Ass; Medico-Psychol. Ass; Phila. Acad; for. cor. Soc. medico-psychol. de Paris. Psychiatry; aphasia; mental disorders due to traumata.
- Gordon, Prof. C(harles) H(enry)**, University of Tennessee, Knoxville, Tenn. *Geology, Petrography*. Caledonia, N. Y, May 10, 57. B.S., Albion, 86, M.S., 90; Ph.D., Chicago, 95; Heidelberg, 97-98. Teacher, pub. schools, Keokuk, Iowa, 87-90; instr. nat. hist, acad, Northwestern, 90-93; supt. schools, Beloit, Wis, 95-97; Lincoln, Nebr, 99-03; lecturer sch. management, Nebraska, 00-03, geol. and petrog, 01-03; acting prof. geol. Washington (Seattle), 03-04; prof. geol. and miner, N. Mex. Sch. Mines, 04-05; asst. geologist, U. S. Geol. Surv, 05-12; *prof. geol. and miner, Tennessee*, 07- Asst. Mo. Geol. Surv, 90-92; Iowa Geol. Surv, 93-95; Mich. Geol. Surv, 98-99; assoc. state geologist, Tenn. Geol. Surv, 10-13; chief, mines and minerals dept, Appalachian Expos, Knoxville, 10, Nat. Conserv. Expos, 13. A.A; Geol. Soc; Tenn. Acad. (pres, 12). Geology and underground waters of northern Texas; geology and mineral resources of Tennessee; ore deposits of west central New Mexico.
- Gordon, Prof. Clarence E(verett)**, Amherst, Mass. *Geology, Zoology*. Clinton, Mass, Feb. 15, 76. B.S., Mass. Col, 01; Boston, 03; A.M., Columbia, 05, Ph.D., 11. Asst. prof. zool. and geol, Mass. Col, 06-10, head of dept, 10- Asst. geologist, N. Y. State Geol. Surv, summers, 08, 09, 12; field geologist, Vt. Geol. Surv, 11-14, 18-20. A.A; Geol. Soc; Paleont. Soc. Early Paleozoic corals; areal and structural geology within the Taconic region of New York and Vermont; agricultural geology.
- Gordon, Prof. C(larence) McCheyne**, Lafayette College, Easton, Pa. *Physics*. Fannettsburg, Pa, April 14, 70. A.B., Princeton, 91, fellow, 91-92, A.M., 93; Ph.D., Göttingen, 97. Asst. physics, Williams, 93-94, instr. physics and math, 94-95; asst. physical chem, Harvard, 97-08; *prof. physics*, Cent. Univ. of Ky, 98-09; *Lafayette*, 09- A.A; Physical Soc; Optical Soc; Electrochem. Soc. Polarization capacity; electromotive forces of fused salt cells; capacity and resistance of aluminum anode films; passivity of iron; theory of passive state of metals; resistance of dry cells.
- Gordon, Dr. G(eorge) B(yron)**, University Museum, Philadelphia, Pa. *Archeology*. P. E. Isl, Aug. 4, 70. A.B., Harvard, 94, Sc.D., 02. Leader, Harvard exped. to Cent. Am, 93-00; curator ethnol, Pennsylvania, 04-10, director, univ. museum, 10- Anthrop. Ass. Archeology of Central America; history of the arts.
- Gordon, Prof. H(ugh) B(yron)**, Leeds and Northrup Co, Philadelphia, Pa. *Chemistry*. Near Georgetown, Ohio, March 23, 82. A.B., Miami, 08; M.S., Illinois, 10, Ph.D., 12. With bur. chem, U. S. Dept. Agr, 12-13; instr. chem, Oklahoma, 13; asst. prof, Tex. Col, 13-15, assoc. prof, 15-17; asst. prof, Rutgers, 17-19; *research chemist*, U. S. Test. Cond. Co, 19-20; *Leeds and Northrup Co*, 20- Chem. Soc. Measurements of vapor pressure lowering of solutions; effect of light on cottonseed oil and on dyes.
- Gordon, Dr. Kate**, Carnegie Institute of Technology, Pittsburgh, Pa. *Psychology*. Oshkosh, Wis, Feb. 18, 78. Ph.B., Chicago, 00, Ph.D., 03; Col. Alumnae fellow, 03-04. Instr. philos, Mt. Holyoke, 04-05, assoc. prof. psychol, 05-06; instr. educ. psychol, Teachers Col, Columbia, 06-07; assoc. prof. educ, Bryn Mawr, 12-16; asst. prof. psychol. and educ, Carnegie Inst. Tech, 16-19, *assoc. prof.*, 19- Psychologist, children's dept, Calif. State Board of Control, 18-19. Psychol. Ass; Philos. Ass; Gesell. für Exp. Psychol. Memory and attention; affective memory; color vision of the peripheral retina; esthetics of color; memory for music; mental tests on children.
- Gordon, Prof. Neil E(bridge)**, College Park, Md. *Physical chemistry*. Spafford, N. Y, Oct. 7, 86. Ph.B., Syracuse, 11, A.M., 12; Ph.D., Hopkins, 17. Asst. prof. inorg. chem, Goucher, 17-19; *prof. physical chem, Maryland*, 19- A.A; Chem. Soc. Infinite solubilities; dehydrating agents; adsorption.
- Gore, H(erbert) C(harles)**, U. S. Department of Agriculture, Washington, D. C. *Chemistry*. New York, N. Y, June 19, 77. B.S., Michigan, 99; fellow, Ohio State, 99-00, M.S., 01. Asst. chem, Ohio State, 00-01; teacher science, high sch, Freeport, Ill, 01-02; scientific asst. and later chemist in charge fruit and vegetable utilization lab, bur. chem, U. S. Dept. Agr, 02- Chem. Soc; Wash. Bot. Soc. Biological and plant chemistry; chemistry; physiology and technology of fruits.
- Gore, Prof. James H(oward)**, 2210 R St, N. W, Washington, D. C. *Mathematics, Geodesy*. Gore, Va, Sept. 18, 56. Richmond, 74-77, LL.D., 11; B.S., George Washington, 77, Ph.D., 88, LL.D., 16, Litt.D., 18; Leyden, Berlin and Brussels, 94, 98. Tutor math, *George Washington*, 77-80, asst. prof, 80-82, prof, 82-02, head prof, 02-09, *emer. prof.*, 18- Astronomer, U. S. Geol. Surv; civilian expert, U. S. Coast and Geod. Surv; pres, jury, Columbian Expos, 93; Paris Expos, 00; commissioner gen. expositions of Antwerp, Amsterdam, Liège and Brussels. Grand Cross, Order of Leopold; Grand officer, Crown of Roumania and Crown of Siam; Mérite agricole; Officer, Order of Wasa, White Elephant, Légion d'honneur, Isabella of Spain and Mérite civil; Chevalier Orange and Nassau; Grand Cross, Crown of Belgium. Metrol. Soc. (sec'y); Wash. Acad; Wash. Philos. Soc; Dutch Acad; Imp. Russian Geog. Soc. Compilation of mathematical factors and formulas.

- Gore, John K(insey)**, 59 High St, Orange, N. J. *Mathematics, Actuarial science.* Newark, N. J., Feb. 3, 64. A.B., Columbia, 83, A.M., 86. Instr. math. and physics, Woodbridge Sch., N. Y., 84-91; mathematician, *Prudential Ins. Co.*, 94, asst. actuary, 95-97, actuary, 97-, director, 07-, v. pres., 12- Math. Soc.; Actuarial Soc. (past pres).
- Gorham, Prof. F(rederic) P(ole)**, 151 Meeting St, Providence, R. I. *Biology.* Providence, April 29, 71. A.B., Brown, 93, A.M., 94. Instr. biol., *Brown*, 93-00, asst. prof., 00-01, assoc. prof., 01-13, *prof. bacter*, 13- Bacteriologist, Providence Health Dept; bacteriologist and biologist, R. I. Shellfish Commission; sec'y, trustees, R. I. State Sanatorium. A.A.; Soc. Nat.; Soc. Bact. (sec'y and treas., 04, v. pres., 06, pres., 07); Ass. Path. and Bact.; Entom. Soc.; Pub. Health Ass. (chairman, lab. sect.); Wash. Acad.; Boston Soc. Med. Sci. Crustacean embryology; phosphorescent bacteria; diphtheria bacillus; diseases of fishes; oysters and sewage.
- Gortner, Prof. Ross Aiken**, University Farm, St. Paul, Minn. *Chemistry.* Near O'Neill, Nebr., March 20, 85. B.S., Nebr. Wesleyan, 07; M.A., Toronto, 08; fellow, Columbia, 08-09, Ph.D., 09. Research asst. agr. chem., Nebraska, 06-07; asst. chem., Toronto, 07-08; res. investigator biol. chem., sta. for exp. evolution, Carnegie Institution, 09-14; assoc. prof. soil chem., *Minnesota*, 14-16, *agr. biochem*, 16-17, *prof. and chief of div, Exp. Sta.*, 17- Asst. ed., 'Biochem. Bul.' A.A.; Soc. Nat.; Chem. Soc. (ed., 'Abstracts,' chairman, div. biol., 19); Soc. Exp. Biol.; N. Y. Chemists Club; Columbia Biochem. Ass. (hon. v. pres., 11); fel. London Chem. Soc.; Soc. chim. de France. Nitroso compounds; formation and chemistry of animal pigments (melanin); chemistry of embryonic growth; physico-chemical properties of vegetable saps; soil analysis; organic constituents of the soil; colloids; proteins.
- Gorton, Prof. F(rederick) R(ussell)**, State Normal College, Ypsilanti, Mich. *Physics.* Waterloo, Mich., Sept. 16, 71. Ph.B., Mich. State Nor. Sch., 99; B.S., Michigan, 00, A.M., 01; Ph.D., Berlin, 05. Instr. *physics, Mich. State Nor. Col.*, 92-03, asst. prof., 05-08, assoc. prof., 08-11, prof., 11-16, *head of dept.*, 16- A.A. Minimum potential of electrical discharge from points; point discharge.
- Gorton, Dr. W(illiam) S(tuart)**, Western Electric Co., 463 West St, New York, N. Y. *Physics.* Baltimore, Md., March 28, 89. A.B., Hopkins, 08, A.M., 10, fellow, 10-11, 13-14, Ph.D., 14. Instr. elec. eng., Mass. Inst. Tech., 11-13; physicist, Brady Inst., Hopkins Hosp., 14-17; assoc. physicist, Bur. Standards, 17-20; *research physicist, West. Elec. Co.*, 20- Physical Soc. High voltage corona in air; X-rays; voltage transformers.
- Gosline, Dr. H(arold) I(nman)**, State Hospital for Mental Diseases, Howard, R. I. *Pathology.* West Newton, Mass., July 2, 88. A.B., Harvard, 09, M.D., 14. Intern, Psychopathic Hosp., Boston, 14; asst. physician, Danvers State Hosp., 14-15; *asst. neuropath, Harvard Med. Sch.*, 14-; *pathologist, Worcester State Hosp.*, 15- A.A.; Psychopath. Ass.; Medico-Psychol. Ass.; Am. Med. Ass. Dementia praecox; tuberculosis.
- Goss, Dr. B(yron) C(assius)**, Nela Park, Cleveland, Ohio. *Physical chemistry.* Rochester, Ind., March 27, 90. A.B., Wabash, 12; Ph.D., Princeton, 16; Columbia, 16. Instr. chem., Princeton, 13-17; *tech. asst. exp. eng. dept. nat. elec. lamp works, Gen. Elec. Co.*, 19- Chemist, bur. chem., U. S. Dept. Agr., summer, 14, consulting chemist, 16-17; lieut. col., C.W.S., 17-19. Chem. Soc.; Electrochem. Soc. Colloid chemistry; light production at low temperatures; solution of tin by canned foods.
- Goss, Prof. W(illiam) F(reeman) M(yrick)**, 61 Broadway, New York, N. Y. *Steam engineering.* Barnstable, Mass., Oct. 7, 59. Certificate, Mass. Inst. Tech., 79; hon. M.S., Wabash, 88; D.Eng., Illinois, 04. Instr. mech. arts, Purdue, 79-83, prof. practical meech., 83-89, exp. eng., 89-07, director, eng. lab., 99-07, dean, sch. of eng., 00-07; dean, col. eng. and director, sch. railway eng. and administration, Illinois, 07-17, director, eng. exp. sta., 09-17; *pres, Ry. Car Manufacturers Ass.*, 17- Chief engineer, Chicago Ass. of Commerce Committee, 13-16. Mem. jury awards, Columbian Expos, 93; exec. committee, Nat. Advisory Board of Fuels and Struct. Materials, 06-; mem. Eng. Foundation. A.A.; Mech. Eng. (past pres); Elec. Eng.; Eng. Educ.; West. Soc. Eng.; Western Railway Club; Master Car Builders; Ill. Acad.; Ill. Soc. Eng. and Surv.; Int. Ass. Test. Mat. Economic performance of locomotives; high pressures in locomotive service; superheated steam in locomotive service; car-axles; friction brakes; front-end arrangement of locomotives; fuel briquets in locomotive service; power transmission by friction wheels; graphite as a lubricant.
- Gossard, Prof. H(arry) A(rthur)**, Ohio Agricultural Experiment Station, Wooster, Ohio. *Entomology.* Ames, Iowa, Feb. 7, 68. B.S., Iowa State, 89, M.S., 92. Asst. entom., Iowa Exp. Sta., 90-93; instr. science, high schools and academies, 93-99; entomologist, Fla. Exp. Sta., and prof. zool., entom. and geol., Florida, 99-04; *entomologist, Ohio Exp. Sta.*, 04-; *non-res. prof. entom, Ohio State*, 17- A.A.; Ass. Econ. Entom.; Entom. Soc.; Nut-Growers Ass.; Iowa Acad. Economic entomology.
- Gossard, Prof. H(arry) C(linton)**, Candler Building, Atlanta, Ga. *Mathematics.* Helena, Ohio, March 13, 84. B.S., Ohio Northern, 07; fellow, Hopkins, 12-13, Ph.D., 13. Instr. math., Oklahoma, 13-14, asst. prof., 14-16; instr., U. S. Naval Acad., 17-18; asst. prof., Oklahoma, 18; *southern student field sec'y, int. committee, Y. M. C. A.* A.A.; Math. Soc. Geometry; teaching of secondary mathematics.
- Gotthelf, Dr. August H(enry)**, Hastings-on-Hudson, N. Y. *Chemistry.* New York, N. Y., Sept. 7, 76. B.S., Columbia, 97, A.M., 98, Ph.D., 00. Chemist, U. S. Pharmacopœia Revision Committee on Inorganics, 02-05; *research chemist, Schieffelin and Co.*, 05-07; *with Dr. Leo H. Bakeland*, 08-; *Gen. Bakelite Co.*, 10- Chem. Soc.; Soc. Chem. Indust.; Chem. Gesell. Action of nitrils on organic acids; condensation products of phenols and formaldehyde; bakelite.
- Gottschalk, Prof. V(ictor) H(ugo)**, 6039 Woodlawn Ave, Chicago, Ill. *Chemistry, Physics.* St. Louis, Mo., May 19, 78. B.S., Missouri, 98,

- M.S., 00; Harvard, summer, 00; Chicago, summers, 01, 08, Ph.D., 17; Cornell, 01-02. Asst. U. S. Assay Office, Kansas City, Mo, 98; chem. dept., Marion-Sims Med. Col, 99; asst. chem., Missouri, 99-00, instr., 00-01, prof. and head of dept., 01-18; *director research, Am. Cotton Oil and Assoc. Companies*, 18- A.A.; Chem. Soc.; Electrochem. Soc.; Physical Soc.; West. Soc. Eng. Determination of aluminum; oxides of tungsten; vapor composition; action of Mg and Ca salts on soap solution; theory of balance; technical volumetric methods in general; oxidation of natural sulphids; ionization by alpha rays; catalysis and colloid chemistry in the vegetable oil industry.
- Gould, Prof. Charles N(ewton)**, 1218 Colcord Building, Oklahoma City, Okla. *Geology, Engineering*. Lower Salem, Ohio, July 22, 68. B.S., Southwest. Col, 99; A.M., Nebraska, 00, Ph.D., 06. Instr. geol., Oklahoma, 00-03, prof. geol. and miner., 03-11; res. hydrographer, U. S. Geol. Surv., 02-05; director, Okla. Geol. Surv., 08-11; *consulting geologist*, 11- Chairman, Okla. Conservation Commission, 07-11. A.A.; Geol. Soc.; Min. Eng.; Min. Cong. (v. pres); Paleont. Soc.; Inst. Petrol. Technol.; Ass. Petrol. Geol.; Min. and Metal. Eng.; Okla. Acad. (pres, 12); Royal Soc. Arts. Water, oil, gas and coal resources of Oklahoma and adjacent states.
- Gould, Dr. George M(ilbry)**, 215 Atlantic Ave., Atlantic City, N. J. *Biology, Ophthalmology*. Auburn, Maine, Nov. 8, 48. A.B., A.M., Ohio Wesleyan, 73; M.D., Jefferson Med. Col, 88. *Practising ophthalmologist*, 88- Ed., 'Am. Med.', 'Biographic Clinics,' medical dictionaries, year-books, text-books, etc. A.A.; Ophthal. Soc.; Phila. Col. Physicians. Medical ophthalmology, philology and biology; psychology.
- Gould, Dr. Harley N(athan)**, West Springfield, Pa. *Anatomy*. West Springfield, Oct. 17, 87. A.B., Allegheny, 10; A.M., Princeton, 14, Ph.D., 16. Instr. zool., California, 16-17; asst. prof. anat., West Virginia, 17-18; Pittsburgh, 18-19; *prof. biol., Wake Forest*, 20- Ass. Anat. Germ cells; sex determination.
- Gould, H(arrie) P(erley)**, U. S. Department of Agriculture, Washington, D. C. *Pomology*. North Bridgton, Maine, Sept. 6, 71. B.S., Maine, 93; M.S.A., Cornell, 97. Asst. horticulturist, Maine Exp. Sta., 93-96; asst., Cornell Exp. Sta., 97; N. Y. State inspector of nurseries, 98; asst. entomologist and horticulturist, Md. State Dept. Hort. and Exp. Sta., 99-01; asst. pomologist, U. S. Dept. Agr., 01-07, *pomologist*, 07- Mem. jury awards, La. Purchase Expos., 04. A.A.; Soc. Hort. Sci.; Pomol. Soc.; Wash. Bot. Soc. Fruit production in the United States.
- Gould, Ralph A(mos)**, 216 Pine St., San Francisco, Calif. *Chemistry*. Ortonville, Mich., March 7, 76. B.S., California, 97. Chemist, U. S. Navy Yard, Mare Isl., Calif., 99-04; chief, food and drug inspection lab, bur. chem., U. S. Dept. Agr., San Francisco, 05-12; *mem. firm, Gould and Ash*, 12- See'y, Selby Smelter Commission, 13-14. A.A.; Chem. Soc. (pres, Calif. sect., 11, counselor, 09, 15); Chem. Eng. Utilization of wastes; process improvement and process control; organic technology.
- Gourley, Prof. J(oseph) H(arvey)**, Morgantown, W. Va. *Horticulture*. Homer City, Pa., July 1, 83. B.S., Ohio State, 08, M.S., 15. Asst. horticulturist, Ohio Exp. Sta., 08-10, asst. prof. hort., Ohio State, 10-12; prof., N. H. Col., and v. director, Exp. Sta., 12. State supervisor, war gardens, N. H., 18. Ed. hort., 'Bot. Abstracts.' A.A.; Soc. Hort. Sci.; Pomol. Soc. (v. pres, N. H. sect.). Fertilization in orchards; flower-bud formation.
- Gowdy, Prof. R(obert) C(lyde)**, University of Cincinnati, Cincinnati, Ohio. *Physics*. Springfield, Ohio, March 10, 86. A.B., Cincinnati, 06, Hanna fellow, 06-09, A.M., 07, Ph.D., 09, Cambridge, England, 10; Col. de France, 11. Instr. *physics*, Lehigh, 12-13; *Cincinnati*, 13-15, asst. prof., 15-18, assoc. prof., 18-20, *prof.*, 20- A.A.; assoc. Physical Soc.; Soc. de Physique. Electric waves; ionization; X-rays.
- Grabau, Dr. A(madeus) W(illiam)**, University of Peking, Peking, China. **Paleontology, Stratigraphy*. Cedarburgh, Wis., Jan. 9, 70. B.S., Mass. Inst. Tech., 96; M.S., Harvard, 98, fellow, 98-99, Sc.D., 00. Student asst. paleont., Mass. Inst. Tech., 92-96, instr. paleont. and asst. geol., 96-97; instr. geol., Rensselaer, 99-00, prof., 00-01; lecturer paleont., Columbia, 01-02, adj. prof., 02-05, *prof.*, 05-19; *geol., Univ. Peking and mem. Chinese Geol. Surv.*, 20- Guide and lecturer, Museum of Boston Soc. Nat. Hist., 92-00; lecturer geol., Tufts, 00-01. Seventh Int. Zool. Cong. (see'y, sect. paleozool.). A.A.; Geol. Soc.; Paleont. Soc.; Wash. Acad.; fel. N. Y. Acad. (v. pres, sect. geol. and miner., 06-07); Paleont. Gesell. Salt, oil and gas geology; applied stratigraphy; North American fossils; geology of non-metallic mineral deposits other than silicates; succession of faunas in middle Devonian of United States; phylogeny of invertebrates, chiefly Gastropoda; Hamilton faunas of Michigan.
- Grabner, Prof. M(ylon) E(arl)**, Morningside College, Sioux City, Iowa. *Mathematics, Physics*. Mt. Eaton, Ohio, July 25, 80. A.B., Heidelberg (Ohio), 01, A.M., 04; fellow, Chicago, 17-18. Instr. math., Heidelberg (Ohio), 03-05, *prof. physics*, 05-19; *Morningside*, 19- A.A.; Math. Soc.; Physical Soc.; fel. Iowa Acad.; Circolo Mat. di Palermo. Mathematical theory of projectiles; cyclidal surfaces; non-analytical functions in mathematics and physics.
- Gradle, Dr. H(arry) S(earls)**, 22 E. Washington St., Chicago, Ill. *Ophthalmology*. Chicago, 83. A.B., Michigan, 06; M.D., Rush Med. Col, 08; Vienna, Prague, London, 09-10. *Prof. ophthal.*, Chicago Eye and Ear Col, 12-15; *Post-Grad. Med. Sch., Chicago*, 15- A.A.; Am. Med. Ass.; Acad. Ophthal. and Oto-Laryngol.; Heidelberg Ophthal. Gesell. Blood condition in sympathetic ophthalmia; the blind spot.
- Graenicher, Dr. S(igmund)**, Larkins, Fla. *Zoology*. Natchez, Miss., April 29, 55. Ph.D., Bâle, 84; M.D., Munich, 88. Entom. Soc.; Wis. Nat. Hist. Soc. Animal behavior; pollination of flowers by insects; life history of bees and their parasites.
- Graff, Prof. Paul W(eidemeyer)**, 325 Daly Ave., Missoula, Mont. *Botany*. Indianapolis, Ind., Oct. 10, 80. B.S., Conn. Col., 07; A.M., Columbia, 16. Austin teaching fellow, Harvard, 07-

- 09; asst. bot, Kansas State, and plant pathologist, Exp. Sta, 09-11; mycologist, Bur. Science, P. I, 11-14; instr. bot, Montana, 16-18, asst. prof, 18- A.A.; Bot. Soc; Phytopath. Soc. Cryptogamic botany; mycology.
- Graham, Prof. Evarts A(mbrose)**, Washington University School of Medicine, St. Louis, Mo. *Surgery*. Chicago, Ill, March 19, 83. A.B, Princeton, 04; M.D, Rush Med. Col, 07, fellow, 07-09, Chicago. Intern, Presb. Hosp, Chicago, 07-08; asst. surg, Rush Med. Col, 10-14, instr, 14-19; prof, Washington (St. Louis), 19- Surgeon-in-chief, Barnes Hosp. and St. Louis Children's Hosp; major, M. C. A.A; Ass. Path. and Bact; Col. Surg; Surg. Ass; Soc. Clin. Invest; Am. Med. Ass. Experimental surgery; effects of anesthetics on the body; liver infections; mechanics of the thorax.
- Graham, Mrs. Evarts Ambrose, (Dr. Helen Tredway)**, 4906 Argyle Ave, St. Louis, Mo. *Chemistry*. Dubuque, Iowa, July 21, 90. A.B, Bryn Mawr, 11, A.M, 12; Göttingen, 12-13; Ph.D, Chicago, 15. Asst. pharmacol, Hopkins, 18. Chem. Soc.
- Graham, Dr. G(eorge) S(ellers)**, Albany Hospital, Albany, N. Y. *Pathology*. Camden, N. J, 79. B.L, Dartmouth, 02, M.D, 05, A.M, 13. Path. intern, Boston City Hosp, 05-06; instr. path. and bacter, med. sch, Dartmouth, 05-10, asst. prof. bacter, 10-13; prof. path, grad. sch. med, Alabama, 13-14; first asst, Boston City Hosp, 14-15, second asst. pathologist, 15-16; pathologist and director, lab, Vancouver (B. C.) Hosp, 16-17; prof. path, Albany Med. Col, 17- Asst. bacteriologist, N. H. State Board of Health, 07-13. Ass. Path. and Bact; Am. Med. Ass. Fat embolism; primary carcinoma of appendix; ovarian pregnancy; toxic lesions of adrenal; staining technique for marrow cells and leucocytes; hemic basophil; experimental syphilis in rabbit; toxic changes in leucocytic granules.
- Graham, Prof. H(arrington) B(idwell)**, 210 Post St, San Francisco, Calif. *Medicine*. Santa Barbara, Calif, April 9, 74. B.S, California, 96, M.D, 99. *Assoc. clin. prof. surg, Stanford*, 13- A.A; Am. Med. Ass; Laryngol. Rhinol. and Otol. Soc; Acad. Ophthalm. and Otolaryngol. Otolology; rhinology; laryngology.
- Graham, James C(handler)**, Andover, Mass. *Geology, Chemistry*. Brooklyn, N. Y, June 14, 68. B.S, Wesleyan, 90, 90-93. *Instr. chem, Phillips Acad*, 93- Asst, U. S. Geol. Surv, 90-91. A.A; Chem. Soc. Sand transportation; artificial geysers.
- Graham, Prof. John Y(oung)**, University, Ala. *Biology*. Montgomery, N. Y, Dec. 31, 69. B.S, Princeton, 92, M.S, 94; Ph.D, Munich, 97. *Prof. biol, Alabama*, 97- A.A; Soc. Zool; Boston Soc. Nat. Hist. Trichina spiralis.
- Graham, Dr. Margaret A(lexander)**, 47 Kensington Ave, Jersey City, N. J. *Botany*. Jersey City, Sept. 23, 76. A.B, Cornell, 08, A.M, 09, Ph.D, 12. Substitute, Randolph-Macon Woman's Col, 09-10; instr. bot, Teachers Col, Columbia, 12-14; Hunter, 14- A.A; Bot. Soc; Torrey Bot. Club. Cytology of the liverworts.
- Graham, Miss Minnie A(imira)**, 225 W. 69th St, New York, N. Y. *Chemistry*. Lockport, N. Y, Sept. 17, 75. A.B, Mt. Holyoke, 00, fellow at Michigan, 05-06, A.M, Michigan, 06; fellow, Bryn Mawr, 06-07, 10-11, fellow by courtesy, 11-12, Ph.D, 12. Instr. chem, Mt. Holyoke, 02-05; prof, Lake Erie, 07-10, 12-13; acting prof, Wells, 13-15; instr, Wellesley, 15-17; abstractor and librarian, research dept, Gen. Chem. Co, 17-20; instr. chem, Hunter, 20- Chem. Soc. Inorganic and physical chemistry.
- Graham, R(ichard) P(ercival) D(evereux)**, McGill University, Montreal, Can. *Geology*. Co. Kildare, Ireland, June 14, 80. B.A, Oxford; M.Sc, McGill. *Asst. prof. miner, McGill*. Miner. Soc; fel. Royal Soc. Can; Miner. Soc. Gt. Britain and Ireland. Mineralogy; crystallography; economic geology.
- Graham, W(illiam) J(oseph)**, 629 W. 115th St, New York, N. Y. *Life insurance*. Jefferson Co, Ky, Sept. 23, 76. Xavier (Ky); St. Francis Xavier (N. Y). Actuary, Sun Life Ins. Co. of Am, 95-02; Metropolitan Life Ins. Co, 02-05; in charge of examination, N. Y. Life Ins. Co, 05-06; v. pres, actuary and director, Northwest. Nat. Life Ins. Co, 06-11; west. supt, Equitable Life Assurance Soc. of the U. S, 11-12, supt, departments of group insurance, monthly premium and home purchase, New York, 12- Consulting actuary Am. Sch. of Insurance; Int. Cong. Arts and Sciences, St. Louis, 04; Int. Cong. Math, Heidelberg, 04; Int. Cong. Actuaries, Berlin, 06; Int. Cong. Med. Directors, Berlin, 06. A.A; Math. Soc; Statist. Ass; fel. Actuarial Soc; Casualty, Actuarial and Statist. Soc; Circolo Mat. di Palermo.
- Graham, Dr. W(illiam) P(ratt)**, 1205 Harrison St, Syracuse, N. Y. *Physics, Electrical engineering*. Oswego, N. Y, Nov. 24, 71. B.S, Syracuse, 93; Ph.D, Berlin, 97; Darmstadt Polytech, 97-98. Assoc. prof. elec. eng, Sgracuse, 98-01, prof, 01-, dean, col. applied science, 11- Astron. Soc; Math. Gesell. Distribution of potential in vacuum tubes; nature of the electric spark.
- Granger, Walter**, American Museum of Natural History, New York, N. Y. *Vertebrate paleontology*. Middletown Springs, Vt, Nov. 7, 72. High sch, Rutland, Vt. Asst, dept. taxid, Am. Museum Nat. Hist, 90-96, dept. vert. paleont, 96-09, asst. curator, 09-11, assoc. curator, 11- Geol. Soc; Soc. Mammal; Paleont. Soc; assoc. mem. Ornith. Union; N. Y. Linnean Soc. (sec'y, 97-04, v. pres, 04-06, 19). Vertebrate paleontology; Eocene stratigraphy and fauna.
- Grant, Prof. Elmer D(aniel)**, 330 College Ave, Richmond, Ind. *Mathematics, Physics*. Delhi, N. Y, Feb. 25, 73. A.B, Colgate, 95; A.M, Chicago, 97, Ph.D, 16. Instr. math, Lewis Inst, 96-99; math. and physics, Mich. Col. Mines, 00-04, asst. prof, 04-20; head, dept. math, Earlham, 20- Math. Ass.
- Grant, Prof. U(lysses) S(herman)**, Evanston, Ill. **Geology*. Moline, Ill, Feb. 14, 67. B.S, Minnesota, 88; Ph.D, Hopkins, 93. Asst. state geologist, Minn, 93-99; instr. geol, Minnesota, 97-98; prof. geol. and curator, museum, Northwestern, 99-, acting dean, col. liberal arts, 07-08, 16-19. Assoc. ed, 'Am. Geologist,' 97-05; geologist, Wis. Geol. and Nat. Hist. Surv, 99-07; U. S. Geol. Surv, 04-; consulting geologist,

- Ill. Geol. Surv, 05- A.A. (v. pres, E, 15); Geol. Soc. Petrographic and economic geology of the iron and copper districts of the Lake Superior region and the lead and zinc district of Wisconsin and Illinois; ore deposits of Prince William Sound and Kenai peninsula, Alaska; glaciers of Alaska; gas in Illinois; iron ores in Wyoming; gold in Oregon.
- Grantham, Prof. A(rthur) E(liott)**, Virginia-Carolina Chemical Co, Richmond, Va. *Agronomy*. Ladoga, Ind, June 1, 77. A.B, Indiana, 03; B.S.A, Missouri, 05. Instr. *agron*, Missouri, and asst. agronomist, Exp. Sta, 05-07; prof, Del. Col. and agronomist, Exp. Sta, 07-19; *director, agr. service bur, Virginia-Carolina Chem. Co*, 19- A.A.; Soc. Agron; Bot. Soc; Farm Econ. Ass. Agricultural botany.
- Grantham, Dr. G(uy) E(verett)**, College Station, Tex. *Physics*. Ladoga, Ind, Feb. 1, 86. A.B, Indiana, 09, A.M, 13; Ph.D, Cornell, 20. Instr. *physics*, Purdue, 09-15; Cornell, 15-17; *assoc. prof, Tex. Col*, 20- Capt. Sig. C, 17-19. A.A; Physical Soc. Infra-red absorption spectra of glasses and alkali hydroxids.
- Granville, Dr. W(illiam Anthony)**, Gettysburg, Pa. *Mathematics*. White Rock, Minn, Dec. 16, 63. Ph.B, Yale, 93, Ph.D, 97; LL.D, Lafayette, 11. Instr. math, Sheffield Sci. Sch, Yale, 93-10; *pres, Pennsylvania Col*, 10- A.A; Math. Soc. Group theory; designed polar coordinate plotting paper; differential and integral calculus; trigonometry; logarithmic tables; elementary analysis.
- Grasty, Dr. J(ohn) S(harshall)**, Charlottesville, Va. *Geology, Mineralogy*. Versailles, Ky, March 15, 80. A.B, Hopkins, 02, Ph.D, 08; Mass. Inst. Tech, 03; B.S, Washington and Lee, 04. Asst. U. S. Geol. Surv, 05; Md. Geol. Surv, 07; adj. prof. geol. and miner, *Virginia*, 08-16, *assoc. prof, geol*, 16- Asst. state geologist, Va. Geol. Surv, 08; petroleum geologist and director various mining companies. A.A; Geol. Soc; Min. and Metal. Eng; Min. Eng. Limestone and cement materials of Maryland; iron and coal in the southern states; origin, structure and occurrence of Virginia slates and associated rocks; petroleum geology in Texas and Louisiana; potash-bearing iron ores.
- Graton, Prof. L(ouis) C(aryl)**, Cambridge, Mass. **Geology*. Parma, N. Y, June 10, 80. B.S, Cornell, 00, fellow, 02-03; McGill, 00-02. Demonstrator, McGill, 00-02; geologist, Ont. Crown Lands Exploring Exped, 02; U. S. Geol. Surv, 03-09; sec'y, Copper Producers' Ass, 09-14, Commission for War Service, 18; asst. prof. *mining geol, Harvard*, 10-12, *prof, 12-* Expert mine valuation, U. S. Revenue Bur, 19-20. Min. and Metal. Eng; Min. and Metal. Soc; Geol. Soc; Am. Acad; Wash. Acad; Wash. Geol. Soc. Mining geology; copper deposition; secondary enrichment.
- Graustein, Dr. W(illiam) C(aspar)**, Harvard University, Cambridge, Mass. **Mathematics*. Cambridge, Nov. 15, 88. A.B, Harvard, 10, A.M, 11, traveling fellow, at Bonn, 11-13, Ph.D, 13. Instr. *math*, Harvard, 13-14, instr, Rice Inst, 14-16, asst. prof, 16-18; lecturer, *Harvard*, 19, *asst. prof, 19-* Math. Soc; Math. Ass; Circolo Mat. di Palermo. Geometry.
- Gravatt, G(eorge) Flippo**, U. S. Department of Agriculture, Washington, D. C. *Plant pathology*. Roanoke, Va, April 27, 91. B.S, Va. Polytech, 11, M.S, 12. *Govt. work on chestnut blight, Va*, 12- Phytopath. Soc; Forestry Ass; Wash. Bot. Soc. Plant breeding; chestnut blight; white pine blister.
- Grave, Prof. B(enjamin) H(arrison)**, Wabash College, Crawfordsville, Ind. *Zoology*. Monrovia, Ind, 78. B.S, Earlham, 03; M.S, Carleton, 06; fellow, Hopkins, 09-10, Ph.D, 10. Instr. biol, Carleton, 04-06; asst. prof, Earlham, 08-09; *prof. zool*, Wyoming, 10-13; biol, Knox, 13-17; *zool, Wabash*, 20- A.A; Soc. Zool. Lamelli-branchiata; Mollusca; anatomy, physiology and embryology of Pinna seminuda; recent changes of Wyoming fauna; life history of Zeugophora scutellarius; embryology and breeding habits of Chiton; the ootocyst of the Pinnidae.
- Grave, Prof. Caswell**, Washington University, St. Louis, Mo. **Zoology*. Monrovia, Ind, Jan. 24, 70. B.S, Earlham, 95; Ph.D, Hopkins, 99, A. T. Bruce fellow, 99-01. Temporary asst, U. S. Fish Commission, 99-00; asst. *zool*, Hopkins, 01-02, *assoc*, 02-06, *assoc. prof*, 06-19; *prof. and head of dept, Washington (St. Louis)*, 19- Instr. invert. zool, Woods Hole, 01, instr. in charge, 12-19, mem. board of trustees, 20; director, U. S. Fisheries Lab, Beaufort, N. C, 02-06; prof. biol, Goucher, 06; shell-fish commissioner, Md, 06-12. Capt. C. W. S, 18. A.A; Soc. Nat; Soc. Zool. (sec'y-treas, 13-18, v. pres, 19). Embryology of echinoderms; experimental oyster culture; structure and activities of compound ascidians.
- Graves, Prof. Arthur H(armount)**, 35 Autumn St, New Haven, Conn. *Botany*. New Haven, Jan. 22, 79. A.B, Yale, 00, Ph.D, 07; London, 14-15. Asst. bot, Sheffield Sci. Sch. and forest sch, Yale, 02-04, instr. forest bot, forest sch, 04-06, bot, Yale, 06-09, asst. prof, 09-14; *assoc. prof. biol, Conn. Col. for Women*, 16-17; *pathologist and collaborator, office investigations in forest path, U. S. Dept. Agr*, 18- Collaborator, lab. forest path, bur. plant indust, U* S. Dept. Agr, 09-10. A.A; Bot. Soc; Phytopath. Soc; New Eng. Bot. Soc; Conn. Bot. Soc. Morphology and physiology of fungi; diseases of North American forest trees; disease resistance in the American chestnut.
- Graves, Dr. G(ordon) H(arrowood)**, Purdue University, La Fayette, Ind. *Mathematics*. Logansport, Ind, July 10, 84. B.S, Earlham, 05; A.B, Haverford, 06; A.M, Columbia, 09, Ph.D, 14. Instr. *math*, George Sch, Bucks Co, Pa, 06-08; Columbia, 11-15; *Purdue*, 15-20, *asst. prof*, 20- Math. Soc; Math. Ass. Algebraic curves.
- Graves, Prof. Henry S(olon)**, 1731 H St, N. W, Washington, D. C. *Forestry*. Marietta, Ohio, May 3, 71. A.B, Yale, 92, hon. A.M, 01; Harvard, 94-95, hon. A.M, 11; Munich, 95-96. Asst. chief, div. forestry, U. S. Dept. Agr, 98-00; prof. forestry and director, forest sch, Yale, 00-10; chief forester, U. S. Forest Service, 10-20; *consulting forester*, 20- Lieut. col, corps engineers, A.E.F; mem. govt. div, Nat. Research Council; mem. Nat. Conservation Commission. A.A; Soc. Foresters; Am. Geog. Soc; Conn. Acad; Wash. Acad; hon. mem. British and Scot-

- tish Arbor Societies. White pine; forest mensuration.
- Graves, Dr. Stuart**, 101 W. Chestnut St, Louisville, Ky. *Pathology*. Boonville, N. Y., Feb. 6, 79. M.D., Syracuse, 11. Path. intern, R. I. Hosp, 11-12; intern and first asst. path, Boston City Hosp, 12-14; *prof. path. and bacter. med. dept.*, Louisville, 14-; *dental dept.*, 18- Pathologist, Louisville City Hosp, 14-; acting asst. surgeon, U. S. Pub. Health Service, 18-19. Asst. Path. and Bact; Ass. Immunol; Int. Ass. Med. Mus; Am. Med. Ass. Bacteriology; serology.
- Graves, Dr. William P(hillips)**, 244 Marlborough St, Boston, Mass. *Gynecology*. Andover, Mass, June 29, 70. A.B., Yale, 91; M.D., Harvard, 99; Mass. Gen. Hosp, 00. Surgeon-in-chief, Free Hosp. for Women, Brookline, Mass, 11; *prof. gynec.*, *Harvard Med. Sch.*, 11- Am. Med. Ass; Gynec. Soc; Cancer Research Soc; Col. Surg.
- Graves, Dr. W(illiam) W(ashington)**, 5136 Enright Ave, St. Louis, Mo. *Neurology*. La Grange, Ky, 65. M.D., 88; Heidelberg, Berlin and Vienna, 01-04. Instr. *St. Louis*, 05-08, asst. prof, 08-13, assoc. prof, 13-14, *prof. nervous and mental diseases and chairman of dept.*, 14- A.A.; Neur. Ass; Am. Med. Ass; St. Louis Neur. Soc. (pres, 19). The shoulder girdle; comparative osteology; heritable variations; experimental syphilis.
- Gray, Prof. Alexander**, Cornell University, Ithaca, N. Y. *Electrical engineering*. Edinburgh, Scotland, March 9, 82. B.S., Edinburgh, 04; M.S., McGill, 17. Mechanic, 96-02; elec. designer, 05-10; asst. prof. elec. eng, McGill, 10-15; *head, elec. eng. dept.*, Cornell, 15- Potts gold medal, Franklin Inst. A.A.; Elec. Eng. Electrical machinery.
- Gray, Dr. Arthur W(ellington)**, 312 S. Walnut St, Milford, Del. *Physics*. Brooklyn, N. Y., Feb. 19, 75. A.B., California, 96, Whiting fellow, 02-04; Ph.D., Berlin, 04. Asst. physics, California, 97-99; teacher math, Wilmerding Sch. Indust. Arts, San Francisco, 00; science and math, high sch, Merced Co, Calif, 00-02; research asst. to Prof. H. Kamerlingh Onnes, Leiden, 04-05; instr. physics, California, 05-09; asst. physicist, Bur. Standards, 09-16; *director physical research*, *The L. D. Caulk Co.*, 16- A.A.; Physical Soc; Min. and Metal. Eng; Wash. Philos. Soc; Wash. Acad; Soc. de Physique. Ozonization by silent electrical discharge; thermal expansivity over wide temperature ranges; temperature uniformity in electric furnace; micrometer microscopes; dental amalgams.
- Gray, Dr. C(larence) T(ruman)**, 3202 West Ave, Austin, Tex. *Psychology*. Russell, Kans, Nov. 22, 77. A.B., Indiana, 04; A.M., Chicago, 11, Ph.D., 16. Instr. *educ. psychol.*, *Tezas*, 11-15, *adj. prof.*, 15- Research instr. educ. psychol, Chicago, 16-17. A.A.; Psychol. Ass; Soc. Col. Teachers Educ. Educational and experimental psychology.
- Gray, Dr. Ethan A(llen)**, 2733 N. Clark St, Chicago, Ill. *Medicine*. Chicago, Dec. 18, 64. M.D., Rush Med. Col, 87; Berlin; Vienna. *Asst. prof. med.*, *Northwestern*. Med. supt, Chicago
- Fresh Air Hosp, 09- Am. Med. Ass; Ass. Tuberc. Tuberculosis.
- Gray, Dr. Frank**, Western Electric Co, New York, N. Y. *Physics*. Alpine, Ind, Sept. 13, 87. B.S., Purdue, 11; M.S., Wisconsin, 13, Ph.D., 16. Asst. and instr. chem, Wisconsin, 11-18; *research physicist*, *West. Elec. Co.*, 19- Research worker, U. S. N. Exp. Sta, 18-19. Physical Soc. Optical activity.
- Gray, G(eorge) Francis**, National Aniline and Chemical Co, 21 Burling Slip, New York, N. Y. *Electrical engineering*. Wheelersburg, Ohio, May 24, 87. M.E. (E.E), Ohio State, 09; Pittsburgh, 17. Student engineer, Gen. Elec. Co, 09-10, research worker and asst. director, protective apparatus lab, 10-16; engineer, Standard Aniline Co, 16; fellow, Mellon Inst, 16-17; *engineer*, *Nat. Aniline and Chem. Co.*, 19- Capt, Sig. C, 17-19. Physics; electrophysics; thermal insulation; radio telegraphy and telephony; chemical manufacture; laboratory design; industrial research organization.
- Gray, Dr. Harold F(arnsworth)**, State Capitol, Santa Fe, N. Mex. *Public health*. San Francisco, Calif, June 29, 85. B.S., California, 07, M.S., 12, Grad.P.H., 15. Health officer, Palo Alto, Calif, 13-16; asst. health officer, San Jose, 16-17; state dist. health officer, Calif. State Board of Health, 17-19; *chief, div. sanit. eng. and sanit.*, *N. Mex. State Dept. Health*, 19- A.A.; Pub. Health Ass; Civil Eng. Malaria control.
- Gray, Harry LeB(erton)**, 38 Albemarle St, Rochester, N. Y. *Chemistry*. Springfield, Mass, June 11, 76. Ph.B., Yale, 99. Chemist, *Eastman Kodak Co.*, 99-01, *supt.*, film dept, 01-04, *org. research*, 14- Chem. Soc. (chairman, Rochester sect, 17, councilor, 19); Soc. Chem. Indust.
- Gray, T(homas) T(arvin)**, 961-975 Frelinghuysen Ave, Newark, N. J. *Chemistry*. Franklin, Pa, Aug. 29, 81. Columbia, 07-08. Chemist, various companies, 99-03; chief chemist, Tide Water Oil Co, 03-15; *consulting engineer*, 15- A.A.; Chem. Soc. (asst. ed, 'Abstracts', mem. committee on indust. terms); Soc. Test. Mat. (mem. committee on lubrication and lubricants); Int. Ass. Test. Mat; Royal Soc. Arts. Viscosity of oil mixtures; petroleum and its products.
- Gray, Dr. William Scott**, College of Education, University of Chicago, Chicago, Ill. *Education*. Coatsburg, Ill, June 5, 85. B.S., Chicago, 13; A.M., Columbia, 14; Ph. D., Chicago, 16. Principal, training sch, Ill. State Nor. Univ, 10-12; instr. educ, *Chicago*, 15-17, asst. prof, 17-18, *assoc. prof.*, 18-, asst. dean, *col. educ.*, 16-17, *dean*, 18- A.A. Elementary school reading.
- Graybill, Dr. H(arry) W(ebster)**, Rockefeller Institute, Princeton, N. J. *Zoology*. Hamilton Co, Nebr, June 18, 75. B.S., Nebraska, 00, A.M., 02; D.V.M., George Washington, 11. Teacher biol, high sch, 02-05; zoologist, bur. animal indust, U. S. Dept. Agr, 05-14; *prof. zool.*, and parasitology, George Washington, 11-14; animal pathologist and veterinarian, Am. Smelting and Ref. Co, 14-15; *dept. animal path.*, *Rockefeller Inst.*, 16- A.A.; Vet. Med. Ass; Wash. Biol. Soc. Animal parasites; ticks.

- Greathouse, Dr. L(ucien) H(elm)**, Atmospheric Nitrogen Corporation, Laurel Hill, L. I., N. Y. *Chemistry*. Louisville, Ky, June 21, 91. A.B., Michigan, 11, B.Ch.E, 12, fellow, 16-17, Ph.D, 17. Asst. inorg. analysis, Michigan, 11-15; scientist, bur. soils, U. S. Dept. Agr, 15-18; asst. chemist, fixed nitrogen research lab, nitrate div, ordnance dept, U.S.A., 19-20; *research chemist, Atmospheric Nitrogen Corp*, 20- Lieut, C.W.S., A.E.F., 18-19. Chem. Soc. Physical chemistry; chemical engineering; periodates and periodic acid in analysis; electrical oxidation of ammonia.
- Greaves, Prof. J(oseph) E(ames)**, Utah Agricultural College, Logan, Utah. *Biochemistry*. Logan, Nov. 2, 80. B.S., Utah Col, 04; M.S., Illinois, 08; Thompson fellow, California, 10-11, Ph.D, 11. Asst. chemist, *Utah Exp. Sta*, 04-08; assoc. chemist, 08-09; *chemist and bacteriologist*, 14-, in charge, dept. chem, *Utah Col*, 08-09, asst. prof. chem, 08-11, assoc. prof, 11-12; *prof. physiol. chem. and bacter*, 12- Consulting ed, 'Soil Science,' 18- A.A.; Chem. Soc; Soc. Bact. Milling qualities of wheat; nitric nitrogen in irrigated soil; gliadin in flour; effect of soluble salts on insoluble phosphates; soil bacteria; crop rotation; azofication; arsenic in soil; fertilizers.
- Greeley, W(illiam) B(uckhout)**, Forest Service, Washington, D. C. *Forestry*. Oswego, N. Y., Sept. 6, 79. B.L, California; M.F., Yale. With U. S. Forest Service, 04-17, asst. forester, 19-20, *chief forester*, 20- Lieut. col, corps engineers, A.E.F., 17-19. Soc. Foresters (pres, 15). Forestry in the United States; forest using industries.
- Greely, Gen. A(dolphus) W(ashington)**, U. S. A., 1914 G St, Washington, D. C. *Meteorology, Electricity*. Newburyport, Mass, March 27, 44. High schools. All grades, Sig. C, U. S. Weather Service, 70-91; *maj. gen.* 06- Polar exploration. Gold medals, Royal Geog. Soc. and French Geog. Soc. Philos. Soc; mem. Inst. Colonial Int. American weather; meteorology and electricity as applied to war.
- Green, Dr. Charles M(ontraville)**, 78 Marlborough St, Boston, Mass. *Obstetrics*. Medford, Mass, Dec. 18, 50. A.B., Harvard, 74, M.D., 77; Vienna, 79. Asst. obstet, *Harvard Med. Sch*, 83-86, instr, 86-94, asst. prof, 94-04, assoc. prof. obstet. and clin. gynce, 04-07, prof. obstet, 07-11, *obstet. and gynce*, 11-15, *emer. prof*, 15- Sec'y, faculty of med, Harvard, 97-07, acting dean, 07-08; senior surgeon, Boston City Hosp; visiting physician, Boston Lying-in Hosp. Fel. Gynec. Soc; Col. Surg; Mass. Med. Soc. (v. pres, 99); Boston Obstet. Soc. (pres, 93-95); Boston Soc. Med. Improv. (pres, 04, 05). Gynecology.
- Green, C(harles) W(illiam)**, Western Electric Co, 463 West St, New York, N. Y. *Electrical engineering*. Waukegan, Ill, June 23, 84. B.S., Wisconsin, 07. Inst. elec. eng, Mass. Inst. Tech, 07-14, asst. prof, 14-17; major, C. A., 17-19; *telephone engineer, Western Elec. Co*, 19-
- director, chem. lab, 93-, dean. City chemist and later toxicologist to coroner, San Francisco. A.A.; Pharmaceut. Ass; Chem. Soc; Mineral Soc; Calif. Acad.*
- Green, Prof. George Rex**, State College, Pa. *Forestry*. Glen Hope, Pa, June 29, 84. A.B., Michigan, 11; M.S., Pa. State, 15. Asst. state forester, Ohio, 11-12; *assoc. prof. forestry, Pa. State*, 12- Wood technologist and aeroplane inspector, Naval Aircraft Factory, 17-19. A.A.; Soc. Foresters; Forestry Ass. Wood technology; forest utilization; properties and uses of wood.
- Green, Henry**, 461 Columbia Ave, Palmerton, Pa. *Chemistry*. Easton, Pa, Jan. 13, 88. B.S., Lafayette, 08. *Chemist, Alpha Portland Cement Co*, 00-10; John O. Wagener and Co, 10-15; *N. J. Zinc Co*, 15- Chem. Soc; Optical Soc; N. Y. Micros. Soc. Plasticity of paints; microscopy of pigments.
- Green, Prof. J(erome) J(oseph)**, 1028 N. Hudson Ave, Pasadena, Calif. *Physics, Electrical engineering*. Somerset, Ohio, Dec. 26, 66. M.E., Ohio State, 93; Paris, 08; Berlin, 09. Expert testing electrical apparatus, bur. awards, Chicago Expos, 93; chief instr, Nat. Sch. Elec, Chicago, 95; prof. physics and elec. eng, Notre Dame, 95-15; physics, San Diego Junior Col, 15-18; director vocational educ. and tech. dept, San Diego High Sch. and Junior Col, 18-20; *educ. supervisor, west. dept. educ. activities, Knights of Columbus*, 20- Int. Elec. Cong, St. Louis, 04. A.A. Wireless telegraphy; the alternating arc.
- Green, Prof. R(ufus) L(ot)**, Stanford University, Calif. *Mathematics*. Rush Co, Ind, March 3, 62. Cornell, 81-83; B.S., Indiana, 85, A.M., 89; Hopkins, 87-88. Instr. math, Indiana, 85-86, assoc. prof, 86-88, prof. pure math, 88-93; assoc. prof. math, Stanford, 93-94, *prof*, 94- A.A.; Math. Ass; Calif. Acad.
- Green, Dr. Wyman Reed**, University of Chattanooga, Chattanooga, Tenn. *Zoology*. Moultrie Co, Ill, June 1, 81. A.B., A.M., Kansas, 11; Ph.D, Chicago, 19. Asst. biol, Northwest State Nor. Sch, Okla, 08-09; head, biol. dept, high sch, Wichita, Kans, 11-12; instr, Carleton, 14-19; zool, Northwestern, 19-20; *head, dept. biol, Chattanooga*, 20- Life cycles in relation to environment; fossil fishes.
- Greene, Prof. Arthur M(aurice), Jr**, Spring Ave. and Myrtle St, Troy, N. Y. *Mechanical engineering*. Philadelphia, Pa, Feb. 4, 72. B.S., Pennsylvania, 93, M.E., 94, Sc.D., 16. Instr, Drexel Inst, 94-95; *mech. eng.*, Pennsylvania, 95-02; *prof*, Missouri, 02-07; *Rensselaer*, 07- Asst. engineer, Phila. Traction Co, 93, 97, 98, 04; mech. engineer and chairman of group jury, Nat. Export Expos, 99; junior dean, sch. eng, Missouri, 06-07. A.A. (past v. pres); Mech. Eng. (trustee and chairman, research committee). Heating; pumping; refrigeration; ventilation; steam engineering.
- Greene, Dr. Carl H(artley)**, 814 Virginia Ave, Columbia, Mo. *Physiological chemistry*. South Bend, Ind, June 22, 96. A.B., Missouri, 14; fellow, Yale, 15-17, Ph.D, 17; M.D., Hopkins, 20. Lieut, C.W.S., 18; res. house officer, Hopkins

- Hosp, 20; *instr. med.*, Mayo Foundation, 21—Chemistry of metabolism; pediatrics.
- Greene, Dr. Cha(rle)s Lyman**, 914 Lowry Building, St. Paul, Minn. *Medicine*. Gray, Maine, Sept. 21, 62. M.D., Minnesota, 90; extern, Great Ormond St. Hosp. for Children, London, 90-91; Hopkins, 93; Harvard, 94, 95, 97; London, 02; Heidelberg and Berne, 06. House physician, City and Co. Hosp, St. Paul, 89-90; lecturer surg. anat., Minnesota, 92, prof, 93, prof. applied anat. and instr. clin. med, 94, prof. clin. med. and physical diagnosis, 97-03, theory and practise of med, 03-07, med, 07-15, chief, dept. med, 09-15, resigned, 15. Attending physician, St. Luke's Hosp; Miller Mem. Hosp; consulting physician, State Hosp. Crippled Children. Col. M. R. C. A.A.; Am. Physicians; Therapeut. Soc; Am. Geog. Soc; Ass. Life Ins. Examiners; Minn. Acad. Med. Diagnosis and therapeutics of gastric diseases; heart disease; tuberculosis; typhoid fever; chronic Bright's disease.
- Greene, Prof. Cha(rle)s W(ilson)**, 814 Virginia Ave, Columbia, Mo. **Physiology*. Crawford Co, Ind, Aug. 12, 66. A.B., Stanford, 92, A.M., 93; Ph.D., Hopkins, 98. Instr. physiol., Stanford, 93-98, asst. prof, 98-00; *prof. physiol. and pharmacol.*, Missouri, 00—Instr. zool., Woods Hole, 96-97, physiol, 00; special investigator, Bur. Fisheries, 01, 02, 04, 06-17. A.A.; Physiol. Soc. (sec'y, 16); Ass. Anat.; Soc. Biol. Chem; Am. Med. Ass; Soc. Pharmacol; Wash. Acad; Ind. Acad. Phosphorescent organs in fishes; influence of inorganic salts on cardiac tissues; circulatory system of the hag fish; physiology of the Chinook salmon; speed of migration of fishes; growth in the absence of food; pharmacological reactions of the mammalian heart; chemistry of animal tissues in inanition; chemical composition of muscle tissue; storage of proteins in body tissue; changes in the human heart in oxygen want; reaction of organs at the asphyxia crisis; chemistry of fish ova.
- Greene, Pres. C(larence) W(ilson)**, Hedding College, Abingdon, Ill. *Electricity*. Hadley, Mich, July 17, 73. A.B., Michigan, 93, A.M., 05, Ph.D., 12. Principal, high sch., Iron Mountain, Mich, 95-02; *prof. physics*, Albion, 04-20; *pres.*, Hedding, 20—Pres, Bay View Univ. Summer Sch, 19—Assoc. Physical Soc. Polarization in the aluminum rectifier.
- Greene, Francis Vinton**, 62 E. 77th St, New York, N. Y. **Civil engineering*. Providence, R. I., June 27, 50. Grad, U. S. Mil. Acad, 70. Lieut. and capt. engineers, 70-86; maj. gen, U. S. Vols, 98-99; v. pres. and pres, Barber Asphalt Paving Co, 86-02; police commissioner, New York City, 03; v. pres, Ontario Power Co, Niagara Falls, 03—; *pres.*, Niagara, Lockport and Ontario Power Co, 06—Asst. astronomer, Int. Commission for North. Boundary Surv, 72-76; asst. engineer commissioner, in charge roads and bridges, Washington, D. C, 79-85; instr. practical mil. eng, U. S. Mil. Acad, 85. Civil Eng; Elec. Eng; Electrochem. Soc; Min. Eng. Deflection of the plumb-line along the forty-ninth parallel; military engineering.
- Greene, F(rank) C(ook)**, 30 N. Yorktown St, Tulsa, Okla. *Geology*, *Paleontology*. New Albany, Ind, April 30, 86. A.B., Indiana, 08, A.M., 09. *Geologist*, Mo. Bur. Geol. and Mines, 10-16; *Cosden Oil and Gas Co.* Asst, Kans. Geol. Surv, 06; U. S. Geol. Surv, 09, junior geologist, 10-16. A.A.; Geol. Soc; Paleont. Soc; Ind. Acad; St. Louis Acad. Stratigraphy; stratigraphy and paleontology of the Missouri coal measures; Missippian of Indiana.
- Greene, Laurenz**, Purdue University, La Fayette, Ind. *Horticulture*. Lincoln, Kans, May 13, 83. B.S., Kansas State, 06; M.S.A., Iowa State, 09. Asst. hort, Ft. Hays Exp. Sta, 06; N. Mex. Col, 06-07; Iowa State, 07-09, experimentalist, Exp. Sta, 09-17; *chief in hort.*, Purdue, 17—Soc. Hort. Sci; Pomol. Soc. Orchard management; seed improvement; spraying; cold storage; crown gall.
- Greenman, Dr. Jesse More**, Missouri Botanical Garden, St. Louis, Mo. **Botany*. North East, Pa, Dec. 27, 67. B.S., Pennsylvania, 93; M.S., Harvard, 99, Kirkland fellow, 99-01; Ph.D., Berlin, 01. Asst. bot, Pennsylvania, 90-93; asst, Gray Herbarium, Harvard, 94-05, instr. bot, 02-05; asst. curator, dept. bot, Field Museum Nat. Hist, 05-12; asst. prof. bot, Chicago, 08-13; assoc. prof, Washington (St. Louis), 13-17, *prof.*, 17—; *curator, herbarium*, Mo. Bot. Garden, 13—A.A.; Bot. Soc; Ecol. Soc; Ass. Prof; New Eng. Bot. Club; Ill. Acad; St. Louis Acad. The flora of Mexico and western United States; North American species of the genus *Senecio*.
- Greenman, Dr. M(ilton) J(ay)**, 3618 Woodland Ave, Philadelphia, Pa. **Anatomy*. North East, Pa, June 14, 66. Ph.B., Pennsylvania, 89, M.D., 92; hon. Sc.D., Pittsburgh, 12. Instr. biol., Pennsylvania, 89-91; asst. director, *Wistar Inst.*, 92-05, *director*, 05—A.A.; Soc. Nat; Ass. Anat; Philos. Soc; Phila. Acad; hon. mem. Cuban Nat. Hist. Soc. Peripheral nervous system; nerve fibers.
- Greenough, Dr. Robert B(atteny)**, 8 Marlborough St, Boston, Mass. *Medicine*. Cambridge, Mass, Nov. 9, 71. A.B., Harvard, 92, M.D., 96. Asst. *prof. surg.*, Harvard Med. Sch, 16—, *director, cancer commission, Harvard*, 17—Visiting surgeon, Mass. Gen. Hosp, 16—Fel. Surg. Ass; Soc. Clin. Surg; Ass. Cancer Research (v. pres, 19); Am. Acad. Surgery and pathology of cancer.
- Greenwald, Dr. Isidor**, Roosevelt Hospital, New York, N. Y. *Biological chemistry*. New York, July 7, 87. Col. City of N. Y., 00-04; Cooper Union, 04-08; A.B., Michigan, 09; Ph.D., Columbia 11. Asst. med. col, Cornell, 05-08; Columbia, 09-11; *chemist*, Montefiore Home and Hosp, 11-14; *Harriman Research Lab.*, Roosevelt Hosp, 14—A.A.; Chem. Soc; Soc. Biol. Chem; Soc. Exp. Biol. Physiology of parathyroid glands; intermediary metabolism; blood analysis.
- Greenway, John Campbell**, Warren, Ariz. *Engineering*. Huntsville, Ala, July 6, 72. B.S., Yale, 95. Asst. supt, Marquette Range, U. S. Steel Corp, 02-05, gen. supt, Canisteo district, 05-10; *gen. manager, Calumet and Ariz. Mining Co*, 10—; *New Cornelia Copper Co*, 11—; *Tucson, Cornelia and Gila Bend R. R.*, 15—Trustee, Arizona, 11-12; D. S. Cross; Croix de Guerre; Chevalier Legion d'honneur. Min. Eng.

- Greer, Dr. James R(ichard)**, 5401 Greenwood Ave, Chicago, Ill. *Physiology*. Jamaica, Ill, Nov. 8, 76. B.S., Chicago, 06, Ph.D., '09, M.D., Rush Med. Col, 12. Asst. physiol, Chicago, 07-09; med. col, Cornell, 10-11; *instr. med*, Rush Med. Col, 14- A.A.; Physiol. Soc. Glandular activities; immunity; metabolism and diabetes; electrocardiography and heart disease.
- Gregg, W(illis) R(ay)**, U. S. Weather Bureau, Washington, D. C. *Meteorology*. Phoenix, N. Y., Jan. 4, 80. A.B., Cornell, 03. Asst. observer, U. S. Weather Bur, 04-08, observer, 09-14, *meteorologist*, 15-, *in charge aerol. investigations*, 17- Meteorol. observer, Smithsonian exped. to Mt. Whitney, 13. Physical Soc; Meteorol. Soc; Wash. Philos. Soc. Aerology; meteorology of trans-Atlantic flight; free air conditions of temperature and wind.
- Gregory, Prof. Charles T(ruman)**, 1022 First St, West Lafayette, Ind. *Plant pathology*. Ithaca, Aug. 31, 87. B.S.A., Cornell, 10, Ph.D., 14. Asst. plant path, Cornell, 10-12, instr, 12-14, asst, prof, 14-19; *exten. pathologist*, Indiana, 19- Phytopath. Soc. Grape mildew; oospore germination and the sexuality in Peronosporaceae; new bean disease.
- Gregory, Dr. Emily Ray**, 2019 Hillyer Place, N. W., Washington, D. C. *Zoology*. Philadelphia, Pa, Nov. 1, 63. A.B., Wellesley, 85; fellow, Pennsylvania, 92-93, A.M., 96; Woods Hole, 93-95; Chicago, 95-97, fellow, 97-99, Ph.D., 99; scholar, Am. Woman's Table, Naples Zool. Sta, 99-00. Teacher, Mrs. Mitchell's Sch. for Girls, Phila, 85-86; private teacher, 86-87; teacher, Misses Case and Hallowell's Sch, 87-88; proof-reader, Am. Acad. Polit. and Social Sci, 90-91; teacher, Home Sch. for Girls, Baltimore, 93-94; Milwaukee Co, 94-95; asst. zool, Chicago, 97-99; *prof. biol*, Wells, 01-09; *Am. Col. for Girls, Constantinople*, 09- A.A.; Soc. Zool; Wash. Biol. Soc. Origin of the pronephric duct in selachians; development of the excretory system in turtles; *Echinarachnius parma*.
- Gregory, Prof. Herbert E(rnest)**, Yale University, New Haven, Conn. **Physiography*. Middleville, Mich, Oct. 15, 69. A.B., Yale, 96, Ph.D., 99. Instr. physical geog, Yale, 99-01, asst. prof. physiog, 01-04, *Silliman prof. geol*, 04- Asst. geologist, U. S. Geol. Surv, 00-09, geologist, 09-; Yale exped. to Peru, 12-13; supt. Conn. Geol. and Nat. Hist. Surv, 16-; mem. div. geol. and geog, Nat. Research Council; assoc. ed, 'Am. Jour. Sci,' 04; acting director, Bishop Museum, Honolulu, 19- A.A.; Geog. Soc. (councilor, 07-09, v. pres, 19); fel. Ass. Geog. (councilor, 11-13, committee on pub, 13-16, v. pres, 19, pres, 20); Am. Acad. Geology of Connecticut, Arizona and Utah; geography of Peru and Australia.
- Gregory, Prof. John H(erbert)**, Johns Hopkins University, Baltimore, Md. *Civil engineering*. Cambridge, Mass, Aug. 7, 74. B.S., Mass. Inst. Tech, 95. *Practising hydraulic and sanit. eng*, 95-; engineer, improved water and sewage works, Columbus, Ohio, 04-09; Passaic Valley sewer, N. J., 09-10; Metropolitan Sewerage Commission, N. Y. City, 10-11; assoc. prof. civil eng, Hopkins, 19-20, *prof. civil and sanit. eng*, 20- Thomas Fitch Rowland prize, Civil Eng,
10. Civil Eng; Soc. Test. Mat; Am. Water Works Ass; Pub. Health Ass; New Eng. Water Works Ass; Boston Soc. Civil Eng. Water purification; sewage and refuse disposal.
- Gregory, Dr. Louise H(oyt)**, Barnard College, Columbia University, New York, N. Y. *Zoology*. Princeton, Mass, July 21, 80. A.B., Vassar, 03, fellow, 05-07; A.M., Columbia, 07, Ph.D., 09. Asst. biol, Vassar, 03-05; *zool*, Barnard, Columbia, 08-09, instr, 09-18, *asst. prof*, 18- A.A.; Soc. Zool. Life history of Protozoa; cytology of conjugation of certain Protozoa.
- Gregory, Prof. W(illiam) B(enjamin)**, Tulane University, New Orleans, La. *Engineering*. Near Penn Yan, N. Y., March 13, 71. M.E., Cornell, 94, M.M.E., 03. Instr. drawing, Tulane, 94-97, asst. prof. *exp. eng*, 97-02, assoc. prof, 02-05, *prof*, 05- Consulting engineer, Miss. River Commission, 02-03; hydraulic expert, La. State Board of Eng, 05-; irrig. engineer, U. S. Dept. Agr, 05-; major, corps engineers, A.E.F., 18-19. Mech. Eng. (mem. council, 16-19); Civil Eng; Eng. Educ; La. Eng. Soc. (pres, 10); New Orleans Acad. (pres, 14); Soc. Ing. civils de France. Experimental engineering; hydraulics; tests of centrifugal and rotary pumps and of pumping stations; the Pitot tube; rice irrigation; drainage investigations in Louisiana rainfall and run-off; tests of pumping plants handling large volumes of water through small lifts.
- Gregory, Prof. W(illiam) K(ing)**, 149 W. 81st St, New York, N. Y. **Vertebrate paleontology*. New York, May 19, 76. A.B., Columbia, 00, A.M., 05, Ph.D., 10. Research asst. to Prof. H. F. Osborn, *Am. Museum Nat. Hist*, 99-13, asst. curator *vert. paleont*, 13, *assoc*, 14-; lecturer, asst. prof. and later *assoc. prof. paleont*, Columbia, 07- Ed, 'Am. Museum Jour,' 00-01. A.A.; Soc. Nat; Paleont. Soc; Galton Soc. (sec'y and treas, 18-); Soc. Mammal; N. Y. Acad. (sec'y, sect. biol, 11-); N. Y. Zool. Soc; cor. mem. London Zool. Soc. Anatomy; osteology of fishes and Amphibia; origin of vertebrates; the vertebrate skull; evolution of the locomotor system; classification of fishes and mammals; extinct ungulates; Eocene and later Primates; dentition.
- Greennan, Mrs. Elizabeth B(ennett)**, 504 Chalmers St, Champaign, Ill. *Mathematics*. Shawnee, Pa, Oct. 9, 80. A.B., Ohio, 03; A.M., Illinois, 08, Ph.D., 10. *Instr. math*, Nebraska, 10-16; *Illinois*, 18- Math. Soc. Theory of groups.
- Grier, Prof. N(orman) M(acDowell)**, 180 Kendall Ave, Bellevue, Pa. *Biology. Psychology*. Pittsburgh, Pa, June 13, 87. B.S., Pittsburgh, 11, fellow, 11-12, A.M., 12, Ph.D., 19; Cold Spring Harbor, 11; Yale, 12-14; Harris Teachers Col, 14-18; Paris, 19. Asst. biol, Yale, 12-14; instr, Cent. High Sch, St. Louis, 14-18; *prof*, Hollens Col, 19-20; *biol*, Washington and Jefferson, 20- Instr. biol, Pittsburgh, summers, 14, 15; asst. zool, Carnegie Museum, 14-16. Lieut, C.W.S., A.E.F., 19. A.A.; Paleont. Soc; St. Louis Acad. (sec'y, 17). Zoology; botany; vertebrate paleontology; paleobotany of coal; ecology of fresh-water mussels; psychology and pedagogy of biological science.
- Griffin, Dr. Edward Gray**, 55 Hanson Place, Brooklyn, N. Y. *Chemistry*. Wilkes-Barre, Pa,

- March 11, 89. B.S., Dartmouth, 10; A.M., Columbia, 11, Ph.D. 15. Chemist, Harriman Research Laboratories, 15-16; research dept., Barrett Co, 16-18; *research and mfg. chemist, Nat. Aniline and Chem. Co., 18-* Chem. Soc.; N. Y. Chemists Club. Inosite; pinite; invertase; anthraquinone and its derivatives and colors.
- Griffin, Prof. F(rank) L(oxley)**, Reed College, Portland, Oregon. *Mathematics, Astronomy*. Topeka, Kans, Aug. 19, 81. B.S., Chicago, 03, M.S., 04, fellow, 04-06, Ph.D. 06. Asst. John Crerar Library, Chicago, 02-06; instr. *math*, Williams, 06-09, asst. prof., 09-11; *prof, Reed, 11-* A.A.; Math. Soc.; Circolo Mat. di Palermo. Problem of n bodies; central orbits; differential equations; statistics.
- Griffin, H(arry) K(emp)**, Barrett Co, 17 Battery Place, New York, N. Y. *Physics*. Ill, Nov. 18, 82. Bradley Polytech, 08; Chicago, summer, 08; A.B., George Washington, 10. Lab. apprentice, Bur. Standards, 08-09, aid, 09-10, asst, 10-13, asst. physicist, 13-17, assoc. physicist, 17-21; *physicist, Barrett Co, 21-* Physical Soc. Heat; temperature measurement.
- Griffin, H(oward) C(ousens)**, Carnegie Institute of Technology, Pittsburgh, Pa. *Chemistry*. Bangor, Maine, Oct. 2, 81. A.B., Bowdoin, 04; Columbia. Instr. chem, Hobart, 04-07; Col. City of N. Y., 07-11; Carnegie Inst. Tech, 11-17; chief chemist, Atlantic Chem. Co, 17-18; *assoc. prof. chem, Carnegie Inst. Tech, 18-* A.A.; Chem. Soc.
- Griffin, Prof. Jno. (John) J(oseph)**, Catholic University of America, Washington, D. C. *Chemistry*. Corning, N. Y., June 24, 59. A.B., Ottawa, 81, A.M., 83; Ph.D., Hopkins, 95. Instr. physics, Ottawa, 83-86; *chem*, St. Thomas Aquinas Col, Cambridgeport, Mass, 86-87; *prof*, Ottawa, 87-90; *Catholic Univ, 95-*, dean, faculty of philos, 03-06, *faculty of science, 08-* A.A.; Chem. Soc.; Soc. Chem. Indust; Chem. Gesell; Electrochem. Gesell. Decomposition of diazo compounds; metatoluene sulphonic acid; synthesis of organic compounds, starting with acetylene.
- Griffin, Prof. Lawrence E(dmonds)**, Reed College, Portland, Oregon. *Zoology*. Dalton, N. Y., Sept. 10, 74. A.B., Ph.B., Hamline, 95; Minnesota, 95-98; Ph.D., Hopkins, 00. Instr. biol. col. for women, Western Reserve, 00-02; prof, Missouri Valley, 02-08; asst. prof, Philippine Med. Sch, 08-10, assoc. prof, 10-13, dean, col. liberal arts, 11-13; *prof. zool, Pittsburgh, 14-20; biol, Reed, 20-* Research asst, Carnegie Institution, 04-05. Soc. Zool; Micros. Soc. (pres, 18, 19); Ecol. Soc. Anatomy of Nautilus pompilius; dissection of the dog-fish; the Euplotidae.
- Griffin, Martin L(uther)**, North Dighton, Mass. *Chemistry*. Northampton, Mass, May 21, 59. A.B., Amherst, 83, A.M., 86. Professional chemist, Holyoke, Mass, 83-92; chem. expert, W. Va. Pulp and Paper Co, 92-08; with Emerson Lab, 08-10; Oxford Paper Co, 10-20; *chem. engineer, Mt. Hope Finishing Co, 20-* Chem. Soc.; Electrochem. Soc.; Soc. Chem. Indust; Min. Eng; Min. and Metal. Inst; Franklin Inst. Production of pulp and paper; processing of textiles
- and finishing bleacheries; water and sewage treatment; trades waste.
- Griffing, W(ard) R(eneau)**, Louisiana State University, Baton Rouge, La. *Botany*. Near Baskin, La, Dec. 3, 91. B.S., Louisiana, 14; M.S., Chicago, 16. *Instr. bot, Louisiana, 14-15, 19-*, asst. plant pathologist, Exp. Sta, 16-17. A.A.; Bot. Soc.
- Griffith, John H(owell)**, Iowa State College, Ames, Iowa. *Physics, Civil engineering*. Detroit, Mich, June 16, 68. B.S., Wisconsin, 93, fellow, 97, M.S., 98; Michigan, 08-11. Consulting engineer, 92-98; prof. math. and civil eng. Clarkson Sch. Tech, 98-01; asst. engineer, Cambria Steel Co, 01-03; designing engineer, dept. bridges, Pa. Lines, 04; chief engineer, Metal. Co. of Am, 06; asst. prof. civil eng, Michigan, 07-11; assoc. engineer-physicist, Bur. Standards, 11-19; *prof. exp. eng, Iowa State, 19-* Civil Eng. Analytical mechanics; tests of engineering materials; bridge and concrete columns; physics of earth pressure.
- Griffiths, Dr. David**, Takoma Park, D. C. **Botany*. Abaristwyth, Wales, Aug. 16, 67. B.S., S. Dak. Col, 92, M.S., 93; Ph.D., Columbia, 00. Teacher sciences, high sch, Aberdeen, S. Dak, 93-98; prof. bot, Arizona, and botanist, Exp. Sta, 00-01; agriculturist, *U. S. Dept. Agr, 01-19, horticulturist, 20-* A.A.; Soc. Hort. Sci; Bot. Soc; Wash. Bot. Soc; Wash. Acad; Torrey Bot. Club. North American Sordariaceae; certain groups of grasses; fungi; the genus *Opuntia*; flowering bulbous genera.
- Griffitts, Dr. C(harles) H(urlbut)**, University of Michigan, Ann Arbor, Mich. *Psychology*. Ozawkie, Kans, Jan. 5, 89. A.M., Kansas, 14; Ph.D., Michigan, 19. Instr. *psychol*, Park Col, 14-16; asst, *Michigan, 16-17, instr, 17-* Psychol. Ass. Individual and race differences; attention.
- Griffitts, Dr. T(homas) H(ouston) D(ow)**, U. S. Public Health Service, Washington, D. C. *Medicine*. Unita, Tenn, Oct. 26, 78. M.D., Grant, 03. Intern and acting asst. surgeon, U. S. Pub. Health Service, 03-07; asst. to sec'y and registrar vital statist, Ill. State Health Dept, 07-14; *epidemiologist, U. S. Pub. Health Service, 15-* Nat. Drainage Cong. Malaria; impounded waters; *Anopheles* mosquitoes.
- Griggs, Dr. Leland**, Hanover, N. H. *Embryology, Ornithology*. Rutland, Vt, Aug. 22, 79. A.B., Dartmouth, 02, Ph.D., 08. Prof. biol, Doane, 05-08; instr. zool, *Dartmouth, 08-16, asst. prof, 16-20, prof. biol, 20-* A.A.; Soc. Nat. Embryology of the salamander.
- Griggs, Prof. Robert F(iske)**, Ohio State University, Columbus, Ohio. *Botany*. Brooklyn, Conn, Aug. 22, 81. B.S., Ohio State, 03; A.M., Minnesota, 06; Ph.D., Harvard, 11. Asst. tropical agr, U. S. Dept. Agr, 01-02; prof. biol, Fargo, 03-05; *asst. prof. bot, Ohio State, 06-* Mem. Govt. expeditions to Porto Rico, Guatemala, Tex, Alaska; director, Nat. Geog. Soc. exped. to Katmai, Alaska. A.A.; Bot. Soc; Ecol. Soc. Geography; plant morphology and ecology; revegetation of volcanic areas; volcanoes of the Katmai district.

- Grimsley, Dr. G(eorge) P(erry)**, Baltimore and Ohio R. R. Offices, Baltimore, Md. *Geology, Mineralogy*. Granville, Ohio, Feb. 21, 68. A.B., Ohio State, 90, A.M., 91; Ph.D., Hopkins, 94. Asst. geol., Ohio State, 90-91; asst. geologist, Ohio Geol. Surv., 90-93; Kans. Geol. Surv., 95-03; prof. geol. and nat. hist., Washburn, 95-04; asst. state geologist, W. Va. Geol. Surv., 04-10; geologist and gen. manager, Nat. Limestone Co., 09-15; *chief, geol. bur., B. and O. R. R.*, 16-; Geologist, Kans. State Board of Agr., 96-; Kans. mineral exhibit, La. Purchase Expos., 04; with Fuel Ad., 18-19. A.A.; Geol. Soc.; Kans. Acad. Gypsum; cement clays; coal, gas and oil; gypsum deposits of Michigan and Kansas; clay industry of Kansas and West Virginia; iron ores of West Virginia; history of American oil development; mineral resources of Baltimore and Ohio Railroad.
- Grindley, Dr. H(arry) S(ands)**, 1010 W. Green St., Urbana, Ill. **Chemistry*. Champaign, Ill., April 13, 64. B.S., Illinois, 88; Morgan fellow, Harvard, 93-94, Sc.D., 94. Instr. chem., Illinois, 88-92; asst., Harvard, 92-93; asst. prof., Illinois, 94-99, assoc. prof., 99-04, prof. and director, chem. lab., 04-07, *prof. animal nutrition*, 07-A.A.; Chem. Soc.; Soc. Biol. Chem.; Soc. Animal Nutrition; Pub. Health Ass.; Soc. Prom. Agr. Sci. Animal and human nutrition; influence of preservatives upon the health; the nutrition value of silage and of the amino acids of proteins of feeding stuffs.
- Grinnell, Dr. Geo(rge) Bird**, 238 E. 15th St., New York, N. Y. *Anthropology*. Brooklyn, N. Y., Sept. 20, 49. A.B., Yale, 70, Ph.D., 80. Asst. osteol., Peabody Museum, Yale, 74-80; ed., 'Forest and Stream,' 80-11. Naturalist, Custer's exped. to Black Hills, 74; Ludlow's reconnaissance to Yellowstone Park, 75; explorer and collector of fossils in plains and Rocky Mts., Peabody Museum, 75-95; commissioner for sale of lands of Blackfeet and Ft. Belknap Indians, 95; Harriman exped. to Alaska, 99. A.A.; Anthropol. Ass.; fel. Ornith. Union; Soc. Mammal; Am. Geog. Soc.; Am. Mus. Nat. Hist.; N. Y. Zool. Soc. (board of managers). History and habits of plains Indians, chiefly Pawnee, Blackfeet and Cheyenne.
- Grinnell, Prof. J(oseph)**, University of California, Berkeley, Calif. **Zoology*. Okla., Feb. 27, 77. A.B., Throop, 97; A.M., Stanford, 01, Ph.D., 13. Asst. instr., Throop, 97-98; asst. embryol., Hopkins lab., Stanford, 00, instr. ornith., 01-02; biol. high sch., Palo Alto, 01-03; Throop, 03-05, prof., 05-08; *director, museum vert. zool., California*, 08-, asst. prof. zool., 13-17, assoc. prof., 17-20, *prof.*, 20- Ed., 'The Condor,' 06- A.A.; fel. Ornith. Union; Soc. Mammal; Ecol. Soc.; fel. Calif. Acad.; for. mem. British Ornith. Union; cor. mem. London Zool. Soc. Distribution of vertebrate animals in California.
- Griscom, Ludlow**, 37 Fifth Ave., New York, N. Y. *Ornithology*. New York, June 17, 90. A.B., Columbia, 12; A.M., Cornell, 15. Asst. biol. and ornith., Cornell, 15-16; in dept. ichthyol., *Am. Museum Nat. Hist.*, 16-17, *dept. ornith.*, 19-; Lecturer biol. and nature study, Virginia, summer, 14, prof., summer, 15. Mem. Ornith. Union; N. Y. Linnean Soc. (sec'y and ed., 12-14); British Ornith. Union. Nature study; ichthyology; botany.
- Griswold, W(illiam) T(udor)**, North East, Pa. *Engineering, Geology*. Brooklyn, N. Y., Oct. 15, 59. C.E., Columbia, 81. Senola and Durango R. R., Mex., 81-83; with U. S. Geol. Surv., 83-07; Guffey and Galey, 07-09; geologist, Phila. Co., 09-17; Pierce Oil Corp., 18; Columbia Syndicate, 19-20. Min. Eng. Topography; geology of petroleum.
- Groat, B(enjamin) F(eland)**, 2400 Oliver Building, Pittsburgh, Pa. *Mathematics, Physics*. Hannibal, Mo., Oct. 18, 67. B.S. (Eng.), Minnesota, 01, LL.B., 08, LL.M., 09. Instr. physics, Minnesota, 94-95, math. and mech., sch. mines, 98-01, asst. prof. in charge of dept., 01-05, prof. mech. and math., 05-10; *consulting engineer*, 10- Norman medal, Civil Eng.; silver medal, West. Pa. Eng. Soc. A.A.; Math. Soc.; Eng. Educ.; Civil Eng.; Mech. Eng.; West. Pa. Eng. Soc. Mechanics; hydraulics; engineering; characteristics of stream flow which determine backwater slopes; chemihydrometry; elastic catenaries; hydraulic models and similarity; water power; law.
- Grondahl, Prof. L(ars) O(laf)**, Union Switch and Signal Co., Swissvale, Pa. *Physics*. Hendrum, Minn., Nov. 27, 80. B.S., St. Olaf, 04, M.S., 05; Ph.D., Hopkins, 08. Instr. physics, St. Olaf, 04-05; lecture asst., Hopkins, 06-08; prof. physics and math., Spokane, 08-09; instr. physics, Washington (Seattle), 09-12; Carnegie Inst. Tech., 12-14, asst. prof., 14-17, assoc. prof., 17-20; *director research, Union Switch and Sig. Co.*, 20- Research with Naval Con. Board, 17-19. A.A.; Physical Soc.; Illum. Eng. Soc.; Electrochem. Soc.; Eng. Educ. A.C.-D.C. transformation; effects of magnetic field on thermal electromotive forces; thermoelectricity of Henssler alloys; box photometer; physical properties of magnetic substances.
- Gronwall, Dr. T(homas) H(akon)**, Ordnance Department, Washington, D. C. **Mathematics*. Axberg, Sweden, Jan. 16, 77. Upsala, 93-94, Ph.D., 98; Stockholm, 94-98; C.E., Berlin, 02. Asst. math., Stockholm, 97; practising civil engineer, 02-13; instr. math., Princeton, 13-14, asst. prof., 14-15; *math. expert, ordnance dept.*, 18- Ed., 'Annals of Math.' Math. Soc.; Circolo Mat. di Palermo; Soc. math. de France. Fourier and Laplace series; theory of prime numbers; linear differential equations; functions of complex variables; nomography; conformal representation; integral equations; theory of elasticity.
- Gross, Prof. Alfred O(tto)**, 11 Boody St., Brunswick, Maine. *Zoology*. Atwood, Ill., April 8, 83. A.B., Illinois, 08; Ph.D., Harvard, 12. Instr., Bowdoin, 12-13, *asst. prof. biol.*, 13-; Field ornithologist, Ill. State Lab. Nat. Hist., 06-07. A.A.; Soc. Zool.; Ornith. Union. Economic values of common Illinois birds; tropic-bird of the Bermuda Islands; reactions of Arthropods to monochromatic lights of equal intensities.
- Grossenbacher, J(ohn) G(asser)**, Apopka, Fla. *Botany, Plant pathology*. Berne, Switzerland, April 11, 75. A.B., Missouri, 06. Asst. bot., Missouri, 05-06; teaching fellow, Harvard, 06-

- 07; asst. botanist, N. Y. Exp. Sta, Geneva, 07-09, assoc. botanist, 09-12; pathologist, U. S. Dept. Agr, 12-15; *grove expert and owner Fla. Insecticide Co.*, 15- Mycosphaerella wilt of melons; crown-rot; arsenical poisoning; winter injury; currant-blight fungus; relation of climate to fruit-tree diseases.
- Grosvenor, Gilbert H(ovey)**, 1328 18th St, Washington, D. C. *Geography*. Constantinople, Turkey, Oct. 28, 75. A.B. Amherst, 97, A.M., 01. Instr. math. and modern languages, Englewood Acad, N. J., 97-99; asst. ed, '*Nat. Geog. Magazine*,' 99-00, managing and assoc. ed, 00-03, ed, 03- A.A.; Ass. Geog; Forestry Ass; Social Sci. Ass; Am. Hist. Ass. Commercial, political, physical and historical geography.
- Grosvenor, Dr. W(illiam) M(ason)**, 50 E. 41st St, New York, N. Y. *Chemical engineering*. St. Louis, Mo, Oct. 5, 73. B.S. Brooklyn Polytech, 93; Hopkins, 94-95; Ph.D. Pennsylvania, 98. Chemist, Castner Elec. Alkali Plant, 96; designing engineer and asst. treas, Ampere Electrochem. Co, 99; asst. supt, Gen. Chem. Co, 00-02, asst. manager, investigation dept, 03-04; supt, Contact Process Co, 05-06; treas, Geo. F. Westcott Co, 06-07; *consulting chem. engineer*, 07- Chem. Soc; Soc. Chem. Indust; Electrochem. Soc; Chem. Eng; N. Y. Chemists Club. Organic products; dyestuffs; pharmaceuticals; heavy chemicals.
- Grout, Dr. A(bel) J(oel)**, New Dorp, Staten Island, N. Y. *Botany*. Newfane, Vt, March 24, 67. Ph.B. Vermont, 90; Ph.D. Columbia, 97. Instr. science, State Nor. Sch, Johnson, Vt, 93-95; Plymouth, N. H., 97-99; Boys' High Sch, Brooklyn, N. Y., 99-08; *first asst. biol. Curtis High Sch, New Brighton*, 08- Curator, bot. dept, Museum of Brooklyn Inst, 99-03; ed, '*Bryologist*,' A.A.; Bot. Soc. Taxonomy of mosses; moss peristomes; adaptations of moss peristomes for spore distribution; ecology of mosses; photography of mosses.
- Grout, Dr. Frank F(itch)**, 504 University Ave, S. E, Minneapolis, Minn. *Geology*. Rockford, Ill, Jan. 24, 80. B.S. Minnesota, 04, M.S., 08; Ph.D. Yale, 17. Asst. chemist, W. Va. Geol. Surv, 04-06; asst. chemist and geologist, Ill. Geol. Surv, 06; instr. miner, Oklahoma, 06-07; *Minnesota*, 07-14, *prof. geol. and miner*, 14-; asst. geologist, U. S. Geol. Surv, 14-18, *geologist*, 18- Summer field geologist, Wis. Geol. Surv, Colo. Geol. Surv. and Minn. Geol. and Nat. Hist. Surv; special expert, U. S. Shipping Board, 18-19. A.A.; Geol. Soc; Min. and Metal. Eng; Chem. Soc. Petrography; plasticity of clay; composition and classification of coal; the minerals of copper-bearing rocks of Minnesota; the clays, iron ores and building stone of Minnesota; Duluth gabbro; petrology of igneous rocks; world mineral strategy.
- Grove, Prof. Charles C(layton)**, 3129 Broadway, New York, N. Y. *Mathematics*. Hanover, Pa, Dec. 19, 75. A.B. Pennsylvania Col, 00, A.M., 03; Ph.D. Hopkins, 06. Instr. math, Pa. State, 05; Baltimore Polytech, 05-06; asst. prof, Hamilton, 06-07; prof. math. and astron, Roanoke, 07-09; instr. math, Columbia, 09-10, asst. prof, 10-19. A.A.; Math. Soc; Math. Ass; Ass. Teachers Math. Middle States and Md; Circolo Mat. di Palermo. The syzygetic pencil and its Hesse group; the complete Pappus hexagon; business mathematics; mathematics of statistics; statistical cost analysis.
- Grover, Prof. F(rederick) O(rville)**, Oberlin College, Oberlin, Ohio. *Botany*. Bangor, Maine, July 31, 68. A.B. Dartmouth, 90, A.M., 93; A.B. Harvard, 95, Morgan fellow, 95-96, A.M., 96. Instr. math, St. James Mil. Acad, Macon, Mo, 90-92; Greek and math, Western Mil. Acad, Upper Alton, Ill, 92-94; asst. bot, Harvard, 95-96, Radcliffe, 95-97; assoc. prof, *Oberlin*, 98-00, *prof.*, 00- A.A.; Bot. Soc; Soc. Nat; New Eng. Bot. Club; Ohio Acad. (v. pres, 12, 14, pres, 16).
- Grover, Dr. Frederick W(arren)**, Union College, Schenectady, N. Y. *Physics*. Lynn, Mass, Sept. 3, 76. B.S. Mass. Inst. Tech, 99; M.S. Wesleyan, 01; Ph.D. George Washington, 07; Munich, 08. Asst. physics, Wesleyan, 99-01; instr. elec. eng, Lafayette, 01-02; lab. asst, Bur. Standards, 02-04, asst. physicist, 04-07, 08-11, assoc. physicist, 11; prof. physics, Colby, 11-20; *asst. prof. elec. eng, Union*, 20- Volunteer observer, Harvard Col. Observatory, summer, 99; asst. astron, Wesleyan, 00-01; with Bur. Standards, 17-18, consulting radio expert, 18- Physical Soc; Radio Eng. Measurement of inductance and capacity; absolute electrical measurements; inductance capacity; principles underlying radio communication.
- Grover, N(athan) C(lifford)**, The Northumberland, Washington, D. C. *Civil engineering*. Bethel, Maine, Jan. 31, 68. B.C.E. Maine, 90, C.E., 97; B.S. Mass. Inst. Tech, 96. Instr. civil eng, Maine, 91-94, asst. prof, 94-95, assoc. prof, 95-97, prof, 97-03; engineer, U. S. Geol. Surv, 03-07; hydro-construction and irrig. engineer, J. G. White and Co, 07-11; chief engineer, land classification board, U. S. Geol. Surv, 11-13, *chief hydraulic engineer in charge of water resources branch*, 13- Civil Eng; Wash. Acad; Wash. Soc. Eng; Boston Soc. Civil Eng. River discharge.
- Groves, Prof. J(ames) F(rederick)**, Ripon, Wis. *Botany*. McLeansboro, Ill, 79. Ph.D. Chicago, 15. *Prof. bot.*, Wyoming, 15-18; *Ripon*, 18- Pathologist, bur. plant indust, U. S. Dept. Agr, summers, 17-19. A.A.; Bot. Soc; Phytopath. Soc. Plant physiology, ecology and pathology.
- Groves, J(ohn) Stuart**, E. I. duPont de Nemours and Co, Wilmington, Del. *Chemistry*. Smyrna, Del, July 16, 81. A.B. Research chemist, exp. sta, E. I. duPont de Nemours and Co, 04-10; research chemist and supt, Georgetown Alcohol Plant, 10-15; gen. supt, Hopewell plant, E. I. duPont de Nemours and Co, 15-19, *special asst. dye div.*, 19- A.A.; Soc. Chem. Indust; Chem. Soc. Explosives; nitrocellulose; purification of crude fibre; ethyl alcohol from saw dust.
- Grubbs, Dr. S(amuel) B(ates)**, U. S. Public Health Service, Washington, D. C. *Medicine*. Indianapolis, Ind, Feb. 11, 71. A.B. Michigan, 93; M.D. Columbia, 96. *Commissioned officer, U. S. Pub. Health Service*, 97- Consulting physician, Presb. Hosp, San Juan, P. R, 10-12; director, Anti-tuber. Ass, San Juan, 11-12; lecturer tropical med, Louisville, 15; quarantine, Harvard, 16. Delegate, Office Int. d'Hygiene

- pub, 08. Int. Cong. Applied Chem, Paris, 00. A.A.; Am. Med. Ass; Pub. Health Ass. Preventive medicine; fumigation; health work organization.
- Gruber, Prof. Charles M(eryl)**, University of Colorado, Boulder, Colo. *Physiology, Pharmacology*. Hope, Kansas, March 11, 87. A.B., Kansas, 11, fellow, 11-12, A.M., 12; Ph.D., Harvard, 14. Teaching fellow, Harvard, 12-14; instr. physiol, Pennsylvania, 14-15; prof. *physiol. and pharmacol.*, Albany Med. Col, 15-17; asst. prof, Colorado, 17-18, prof, 18-Physiol. Soc; Soc. Pharmacol; Ass. Study Int. Secretions. Endocrine organs.
- Gruenberg, Dr. Benj(amin) C(harles)**, U. S. Public Health Service, Washington, D. C. *Biology*. Russia, Aug. 15, 75. B.S., Minnesota, 96; N. Y. Univ, 01-02; N. Y. Bot. Garden, 02-09; A.M., Columbia, 04, Ph.D, 11. Polariscopist, U. S. Lab, N. Y. City, 98-02; instr. biol, DeWitt Clinton High Sch, 02-10; Commercial High Sch, Brooklyn, 10-14; Julia Richman High Sch, 14-20; educ. director, U. S. Pub. Health Service, 20- Lecturer and coordinator, Dept. Educ, N.Y. City; director and instr, Rand Sch. Social Science; supervisor, summer play schools, Fed. for Child Study; labor adjustor, garment industry. A.A.; N. Y. Biol. Teachers Ass. Chemistry of bastard log-wood; compensatory motions and semi-circular canals; mycorrhiza; education.
- Gruener, Prof. Hippolyte**, 2089 Cornell Road, Cleveland, Ohio. *Chemistry*. New Haven, Conn, Feb. 23, 69. A.B., Yale, 91, Ph.D, 93; Munich, 94-95. Instr. science, Hill Sch, Pottstown, Pa, 93-94; instr. chem, Adelbert Col, *Western Reserve*, 95-03, asst. prof, 03-07, assoc. prof, col. for women, 98-07, prof, 07- A.A.; Chem. Soc; Pub. Health Ass; Chem. Gesell. Analytical methods, especially iodometric; vapor pressure of sulphur; water filtration and softening.
- Grulee, Dr. Clifford G(roselle)**, 104 S. Michigan Ave, Chicago, Ill. *Pediatrics*. Newport, Ky, Jan. 3, 80. A.B., Miami, 99, A.M., 01; M.D., Northwestern, 03; LL.D., Miami, 19. Asst. prof. *pediat*, *Rush Med. Col*, 14- Attending pediatrician, Home for Destitute Crippled Children; Presb. Hosp; past chief of pediat. staff, Cook Co. Hosp; attending and later consulting pediatrician, Provident Hosp. A.A.; Am. Med. Ass; Therapeut. Soc; Soc. Internal Med; Pediat. Soc; Cent. States Pediat. Soc. (sec'y, 16). Salt metabolism of spasmophilia.
- Grunsky, Dr. C(arl) E(wald)**, 57 Post St, San Francisco, Calif. *Civil engineering*. San Joaquin Co, Calif, April 4, 55. C.E., Polytech, Stuttgart, 77, Ing.D, 10. Asst. state engineer, Calif, 78-88; mem. Exam. Commission Rivers and Harbors, 89-90; Sewerage Board, San Francisco, 92-93; consulting engineer to commissioner of pub. works, Calif, 94; city engineer, San Francisco, 00-04; mem. Isthmian Canal Commission, 04-05; consulting engineer, U. S. Reclamation Service, 05-07; consulting engineer, 88-00, 08- A.A. (mem. exec. committee, Pacific div, 16); Civil Eng. (director); Calif. Acad. (pres). Irrigation; drainage; sewerage; water supply and power; valuation, depreciation and rate-base; public utility rate fixing; topographic stadia surveying.
- Gruse, Prof. W(illiam) A(rthur)**, Mellon Institute, Pittsburgh, Pa. *Chemistry*. Wheeling, W. Va, March 11, 92. A.B., Hopkins, 13; A.M., Wisconsin, 15, fellow, 15-16, Ph.D, 16. Asst. chem, Hopkins, 13-14; forest products, Wisconsin, 14-15; instr. chem, N. Y. Univ, 16-17; asst. prof, N. Y. State Col. Forestry, Syracuse, 17; *indust. fellow*, Mellon Inst, Pittsburgh. A.A.; Chem. Soc. Terpene inversions; by-products of acetone and wood distillation; oxidation of vegetable oils; compounds of aminophenols; condensation products of aldehydes.
- de Gryse, Rev. J(oseph) J(ohn)**, Harrisonburg, Va. *Entomology*. Roulers, Belgium, May 11, 85. Louvain, 04-08; Catholic Univ, 12-13. Scientific asst, bur. entom, U. S. Dept. Agr, 15-16. Teacher biol, private institutions. A.A.; Entom. Soc; Wash. Entom. Soc. Lepidopterous larvae.
- Guberlet, Dr. John E(arl)**, Oklahoma Agricultural Experiment Station, Stillwater, Okla. *Parasitology*. Courtland, Nebr, March 18, 87. A.B., Bethany (Kans), 09; Colorado, 09-10; A.M., Illinois, 11, fellow, 13-14, Ph.D, 14. Asst. *zool*, Colorado, 09-10; Illinois, 10-13; instr, Oregon, 14-15; prof. biol, Carroll, 15-18; *parasitologist*, Okla. Exp. Sta, 18- A.A.; Soc. Zool; Micros. Soc; Entom. Soc; Ill. Acad. Osteology of Loricati; cestodes of poultry; parasites of poultry and sheep.
- Gudeman, Dr. Edward**, 903 Postal Telegraph Building, Chicago, Ill. *Chemistry*. New York, N. Y, Jan. 25, 65. Ph.B., Columbia, 87, fellow, 89-90, Ph.D, 90; Berlin, 87-88; Göttingen, 88-89. In charge, dept. chem. and dyeing, Pa. Museum and Sch. of Indust. Art, 90-91; professional chemist, 91-00; consulting chemist and chemical engineer, 00- A.A.; Chem. Soc; Soc. Chem. Indust; Chem. Eng; Electrochem. Soc. Chemical technology; food products; economics.
- Gudger, Prof. E(ugene) W(illis)**, American Museum of Natural History, New York, N. Y. *Zoology*. Waynesville, N. C, Aug. 10, 66. B.S., Nashville, 93, M.S., 94; Ph.D., Hopkins, 05. Instr. science, City High Sch, Little Rock, Ark, 95-01; prof. biol, N. C. Col. for Women, Greensboro, 05-20. Research asst, U. S. Fisheries Lab, Beaufort, N. C, summers, 02-05, investigator, 05-11; research assoc, marine lab, Carnegie Institution, Tortugas, Fla, 12- Asst. ed, 'Bibliography of Fishes,' Am. Museum Nat. Hist, 17- A.A.; Soc. Zool; N. C. Acad. (sec'y, 07-18, pres, 18); Wash. Biol. Soc; fel. N. Y. Zool. Soc. Pipefish; toadfish; gaff topsail catfish; spotted eagle ray; whale shark; the sucking fish; myth of the shipholder; unusual methods of fishing in the South Seas.
- Guenther, Prof. A(ugust) E(rnest)**, College of Medicine, University of Nebraska, Omaha, Nebr. *Physiology*. Sandusky, Ohio, Jan. 20, 74. B.S., Michigan, 98; fellow, Hopkins, 03-04, Ph.D, 05. Asst. *physiol*, Michigan, 97-01; prof, Nebraska, 05-13, col. med, 13- A.A.; Physiol. Soc; Soc. Exp. Biol; Chem. Soc. Physiology of muscle.
- Guernsey, Samuel James**, Peabody Museum, Cambridge, Mass. *Anthropology*. Dover, Maine, 71. With Edison Elec. Co, 03-11; asst. curator, Peabody Museum, 11- Anthrop. Ass. Archeology of the southwestern United States; culture of the basket makers of Arizona and Utah.

- Guest, Dr. Herbert H(artley)**, Glastonbury, Conn. *Chemistry*. Yonkers, N. Y., June 9, 84. Ph.B., Yale, 08, Ph.D., 12. Asst. chem, Yale, 09-10, 11-12; *chemist, J. B. Williams Co*, 12- Chem. Soc. Organic chemistry.
- Guild, Prof. F(rank) N(elson)**, University of Arizona, Tucson, Ariz. *Mineralogy*. Jaffrey, N. H., Dec. 28, 70. B.S., Vermont, 94, M.S., 03; Ph.D., Stanford, 17. Instr. physics and French, Chicago Manual Training Sch., 94-95; *prof. chem. and geol.*, Mont. Col., 95-97; *chem. and miner.*, Arizona, 97- U. S. Assay Commission, 01; *assoc. mem.*, Naval Con. Board. A.A.; Chem. Soc.; London Soc. Chem. Indust. Optical mineralogy.
- Guild, Dr. Stacy R(ufus)**, 562 S. Seventh St., Ann Arbor, Mich. *Anatomy*. Sterling, Kans., Aug. 22, 90. A.B., Washburn, 10; A.M., Michigan, 14, Ph.D., 18. Asst. histol., Michigan, 12-13, instr., 13-18, *asst. prof. anat.*, 18- A.A.; Ass. Anat. Embryology; nervus terminalis of mammalia; side processes of sensory ganglia cells; morphology and auditory function of internal ear; prevention of deafness in war.
- Guiteras, Dr. Juan**, Hospital Las Animas, Havana, Cuba. *Tropical diseases*. Matanzas, Cuba, Jan. 4, 52. A.B., Matanzas Col., La Empresa, 67; M.D., Ph.D., Pennsylvania, 73. *Prof. gen. path. and tropical med.*, Havana, 00-, *dean, med. faculty*, 05-09; *director, Las Animas Hosp.*, 08-; *Pub. Health, Havana*, 09- Mem. Board for Infectious Diseases, 02-; *pres*, Second Med. Cong. of Cuba, 05; *v. pres*, Conf. of N. Am. Boards of Health; *mem. excc. committee*, Sanit. Cong. of Am. Republics, 02, 05, 07; *pres*, Nat. Board of Health, Cuba, 09- A.A.; *emer. mem.*, Am. Physicians; *Pub. Health Ass.* (v. *pres*); Havana Acad. de Cienc. Med. Fis. y Nat.; Havana Soc. de Estudios Clinicos. Yellow fever; filaria; uncinariasis; secondary infection by Shiga's bacillus in yellow fever; duration of life of the *Stegomyia calopus*; frequency of neuritis in the tropics.
- Gulick, Dr. Addison**, University of Missouri, Columbia, Mo. *Physiology*. Osaka, Japan, April 2, 82. A.B., Oberlin, 04; A.M., Harvard, 05; Ph.D., Würzburg, 10; fellow, Toronto, 10-11. Instr. *physiol.*, Minnesota, 11-12; *Missouri*, 12-13; *asst. prof.*, 13-18; *assoc. prof.*, 18- Soc. Nat.; Soc. Zool.; *Physiol. Soc.* Fossil land shells of Bermuda; spermatogenesis of nematodes.
- Gulick, Rev. John T(homas)**, E. Manoa Road, Honolulu, Hawaii. **Biology*. Waimea, Kawai, Hawaii, March 13, 32. A.B., Williams, 59, hon. A.M.; Union Theol. Sem., 59-61; hon. Ph.D., Adelbert, 89; Sc.D., Oberlin, 05. Missionary of Am. Board in North China, 64-75; in Kobe and Osaka, Japan, 75-99. Soc. Zool.; Econ. Ass. *Achatinella*: variation of species as related to geographical distribution; divergent evolution through cumulative segregation and through intensive segregation; cross-infertility; utility of specific characters; evolution, racial and habitudinal; isolation and selection; false biology and fatalism; social problems.
- Gummer, Prof. C(uthbert) F(rancis)**, Queen's University, Kingston, Ont., Can. *Mathematics*. Salisbury, England, Jan. 5, 83. B.A., Oxford, 04, M.A., 08. Asst. master, Denstone Col. (Eng), 06-08; *prof. math.*, Bishop's Col., 08-11; *asst. prof.*, *Queen's (Can)*, 11-20, *assoc. prof.*, 20- Assoc. ed., 'Am. Math. Monthly,' 20- Math. Soc.; Math. Ass.
- Gummere, Prof. Henry V(olkmar)**, Llanerch, Pa. *Mathematics*. Philadelphia, Pa., March 20, 70. B.S., Haverford, 88, A.M., 89; A.M., Harvard, 90, 90-91, 92-93, 98-99. Instr. math., Swarthmore, 93-98; *prof. math. and physics*, Ursinus, 99-04; math., Drexel Inst., 04-18, *educ. research*, 18-19; *director evening courses*, 14-18; *engaged in farming*, 19- A.A.; Math. Soc.; Circolo Mat. di Palermo.
- Gundersen, Dr. Alfred (Ludvig Georg)**, Brooklyn Botanic Garden, Brooklyn, N. Y. *Botany*. Kragerö, Norway, July 1, 77. A.B., Stanford, 97; A.M., Harvard, 07; Docteur de l'Univ., Paris, 10. Teacher, secondary schools, 98-03; *asst.*, Arnold Arboretum, 10-13; *asst. curator*, Brooklyn Bot. Garden, 13- A.A.; Bot. Soc.; Torrey Bot. Club. Classification of dicotyledons; history of botany.
- Gundersen, Dr. C(arl)**, Stillwater, Okla. *Mathematics*. Krageroe, Norway, Jan. 10, 64. A.B., Stanford, 97; A.M., Columbia, 99, fellow, 99-00, hon. fellow, 00-01, Ph.D., 02. Prof. math., La Grange, 02-04; instr., Mich. Agr. Col., 04-08, *asst. prof.*, 08-09; *prof.*, Okla. Col., 09- Math. Soc.; Math. Ass. The content or measure of assemblages of points.
- Gunn, Prof. Selskar M(ichael)**, International Health Board, 61 Broadway, New York, N. Y. *Sanitary science*. London, England, May 25, 83. B.S., Mass. Inst. Tech., 05; C.P.H., Harvard-Tech. Sch. of Pub. Health, 17. Bacteriologist, Boston Biochem. Lab., 05-06; first *asst. bacteriologist*, State Board of Health, Iowa, 06-08; *health officer*, Orange, N. J., 08-10; instr. sanit. biol., Mass. Inst. Tech., 10-11, *asst. prof. sanit. biol. and pub. health*, 11-13, *assoc. prof.*, 14-17; *assoc. director*, Commission for Prev. of Tuber, France, 17-20; *adviser, pub. health administration, ministry of health, Czecho-Slovakia*, 20- Lecturer hygiene, Iowa, 06-08; Tufts, 12-14; sanit. expert, Bur. Econ. and Efficiency, Milwaukee, 11; *asst. prof. biol.*, Simmons, 12-14; *director*, div. hygiene, Mass. Health Dept., 15-16; *managing ed.*, 'Am. Jour. Pub. Health,' 12-13, ed. 14-17, *mem.*, State Board of Labor and Industries, Mass., 14-15. Chevalier Légion d'honneur, 19. A.A.; Soc. Bact.; Pub. Health Ass. (see'y, 12-17); Social Hygiene Soc.; Statist. Ass. Public health; methods used by health departments; municipal sanitation.
- Gunther, Prof. Charles O(tto)**, Stevens Institute of Technology, Hoboken, N. J. *Mathematics*. New York, N. Y., May 21, 79. M.E., Stevens, 00. Instr. math., Stevens, 00-02, *asst. prof.*, 02-04, math. and mech., 04-08, *prof. math. and head, dept. math.*, 08- With ordnance dept., U.S.A., 18-19. A.A.; Math. Soc.; Math. Ass.; *assoc. Civil Eng.*; Mech. Eng.; Eng. Educ.; Soc. astron. de France; Circolo Mat. di Palermo. Integration by trigonometric and imaginary substitution; exterior ballistics.
- Gunthorp, Prof. Horace**, University of Washington, Seattle, Wash. *Zoology*. Holbeach, England, Aug. 28, 81. Ph.B., Hamline, 05; A.B., Stanford, 09; A.M., Kansas, 12; fellow, Minne-

- sota, 17-18. Prof. biol, Southwestern (Kans.), 09-11; instr. zool, Kansas, 11-12; prof. biol, Monmouth, 12-16; zool, Washburn, 18-20; asst. prof, Washington (Seattle), 20- Mem. Kans. State Biol. Surv. 10. A.A.; Soc. Mammal; Wilson Ornith. Club; Cooper Ornith. Club; assoc. mem. Ornith. Union; Bot. Soc; Ass. Prof. Myriapoda; maize; thyroid feeding to tadpoles.
- Gurd, Dr. Fraser B(aillie)**, 731 Sherbrooke St, W, Montreal, Can. *Pathology*. Montreal, Jan. 7, 83. B.A., McGill, 04, M.D., 06. Asst. pathologist, Montreal Gen. Hosp., 07-08; instr. and demonstrator path. and bacter, Tulane, 09-11; *lecturer immunol. and demonstrator surg*, McGill. Asst. surgeon, Montreal Gen. Hosp; major, M. C. C. A.; hon. capt, R. A. M. C. Ass. Path. and Bact. Bacteriology; surgery; bacteriology of the female genital tract; leprosy; anaphylaxis; wound treatment.
- Gurley, W(illiam) F(rank) E(uene) Reed**, 6151 University Ave, Chicago, Ill. *Paleontology*. Oswego, N. Y., June 5, 54. Cornell, 73-75. State geologist, Ill, 93-97; *curator paleont*, Chicago, 00- A.A.; Paleont. Soc; Geol. Soc; Ill. Acad; cor. mem. Austrian Imp. Geol. Soc. Paleozoic paleontology.
- Gushee, Miss Vera M(arie)**, 63 Vernon St, Northampton, Mass. *Astronomy*. Cincinnati, N. Y., Feb. 7, 94. A.B., Smith, 16; M.S., Chicago, 17. Computer, Yerkes Observatory, 16-17; demonstrator, asst. and later instr, astron, Smith, 17- Asst, 'Nautical Almanac' Office, summer, 18. Asst, solar eclipse exped. to Matheson, Colo, 18. Astron. Soc.
- Güssow, H(ans) T(heodor)**, Central Experimental Farm, Ottawa, Can. *Botany*. Breslau, Germany, Aug. 24, 79. Royal Bot. Gardens, Breslau, 94-96; Leipzig, 98-99; Berlin, 99-00. Asst. to consulting botanist, Royal Agr. Soc. England, 03-09; *Dominion botanist, Cent. Exp. Farm, Ottawa*, 09- A.A.; Phytopath. Soc. (assoc. ed, 'Phytopathology,' 16); British Soc. Econ. Biol; Royal Micros. Soc; hon. mem. Royal Hort. Soc. (mem. sci. committee); Verein für angewandte Bot; Soc. mycol. de France. Mycology; bacteriology; phytopathology.
- Gustafson, Prof. A(xel) F(erdinand)**, College of Agriculture, Ithaca, N. Y. *Agronomy*. Joy, Ill, Nov. 24, 80. B.S., Illinois, 07, M.S., 12; Ph.D., Cornell, 20. Asst. soil physics, Illinois, and Exp. Sta, 07-10, instr, 10-11, assoc, 11-15, asst. prof, 15-20; *soils, Cornell*, 20- A.A.; Soc. Agron. Soil physics; soil survey; soil moisture and tillage for corn.
- Guthrie, Prof. C(harles) C(laude)**, University of Pittsburgh, Pittsburgh, Pa. **Physiology*. Gilmore, Mo, May 13, 80. B.S., Missouri, 97, M.D., 01, fellow, 01-02; Ph.D., Chicago, 07. Demonstrator physiol, Western Reserve, 02-03; instr, Chicago, 03-06; *prof. physiol. and pharmacol*, Washington (St. Louis), 06-09; *Pittsburgh*, 09- Physiol. Soc; Soc. Exp. Biol; Soc. Pharmacol. Blood reactions and alterations; resuscitation; phenomena attending and following cerebral and other anemias; survival of isolated tissues; engrafted tissues; suture of blood-vessels; organ transplantation with anastomosis of blood-vessels; pharmacology of magnesium salts and digitalis; physiology of muscle, nerve and heart; experimental and clinical shock; influenza.
- Guthrie, Dr. David Vance**, Louisiana State University, Baton Rouge, La. *Physics*. Barterbrook, Va, Oct. 15, 84. A.B., Washington and Lee, 03, A.M., 04; Ph.D., Hopkins, 08. Research asst, Yerkes Observatory, 08; instr. physics, Virginia, 08-10, adj. prof, 10-11, *prof. physics and astron*, Louisiana, 11- A.A. Spectroscopy.
- Guthrie, Prof. Edward Sewall**, Ithaca, N. Y. *Chemistry*. Coin, Iowa, Dec. 27, 80. B.S.A., 05; M.S.A., 10; Ph.D., Cornell, 13. Instr. dairying, Ohio State, 05-08; *dairy indust*, Cornell, 08-13, *prof*, 13- Rancidity and metallic flavor in butter.
- Guthrie, Prof. J(oseph) E(dward)**, 319 Lynn Ave, Ames, Iowa. *Entomology*. York, N. Y., Sept. 24, 71. B.S., Minnesota, 00, M.S., 01. Asst. zool, Iowa State, 01-02, instr, 02-04, asst. prof, 05-14, assoc. prof, 14-17, *prof*, 17- A.A.; Entom. Soc; fel. Iowa Acad. Collembola of Minnesota.
- Guyer, Prof. Michael F(rederic)**, University of Wisconsin, Madison, Wis. **Zoology*. Plattsburg, Mo, Nov. 17, 74. Missouri, 90-92; B.S., Chicago, 94, fellow, 97-00, Ph.D., 00; A.M., Nebraska, 96; Paris and Naples, 08-09; Smithsonian table, Naples Zool. Sta, 09. Asst. zool, Nebraska, 95-96; teacher biol, high sch, Lincoln, Nebr, 96-97; head, dept. biol, Cincinnati, 00-11; *prof. zool, Wisconsin*, 11- Mem. Nat. Research Council. A.A.; Soc. Nat; Ass. Anat; Soc. Zool. (v. pres, cent. branch, 08, 09); Micros. Soc. (pres, 16, 17); Wis. Acad. Cytology; embryology; genetics.
- Guyton, T(homas) L(ee)**, Ohio State University, Columbus, Ohio. *Entomology*. Winterest, Ohio, July 22, 84. B.S.(Agr), Ohio State, 13, M.S., 16, fellow. Asst. entomologist, Ohio Exp. Sta, 17-18; *scientific asst, Pa. Dept. Agr*, 18- A.A.; Entom. Soc; Ass. Econ. Entom. Economic entomology.

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- Haanel, Dr. Eugene (Emil Felix Richard)**, 236 First Ave, Ottawa, Can. *Physics, Mineralogy*. Breslau, Germany, May 24, 41. Gymnasium, Breslau, 58; A.M., Ohio (Athens), 72; Ph.D., Breslau, 73. Prof. science, Adrian, 66; nat. science, Albion, 68-72; physics and miner, director of Faraday Hall, and dean, dept. science, Victoria (Can), 72-89; *prof. physics*, Syracuse, 89-01; supt. of mines, *Dom. of Can*, 01-08, *director, Dept. of Mines*, 08- Chairman, commission to investigate electrothermic processes for the smelting of iron ores and the making of steel in operation in Europe. Physical Soc; Chem. Eng. (v. pres); Electrochem. Soc; Can. Min. Inst; Royal Soc. Can; Faraday Soc. (v. pres). Hydriodic acid as a blow-pipe reagent; gypsum tablets in blow-pipe analysis; hydrobromic acid and tetrachlorid of tin as blow-pipe reagents; location and examination of magnetic ore deposits by magnetometric measurements; the smelting of iron ores by the electrothermic processes; investigation of an electric furnace at Domnarföet, Sweden.
- Haas, Dr. A(lbert) R(ichard) C(arl)**, Citrus Experiment Station, Riverside, Calif. *Botany*.

- Seranton, Pa, May 29, 88. B.S, Pa. State, 13, M.S, 14; Chicago, summers, 13, 14; A.M, Harvard, 16, Ph.D, 17, Sheldon traveling fellow, at California, 17-18; Woods Hole, summers, 16, 17. Asst. bot, Pa. State, 13-14, instr, 14-15; Wisconsin, 19; asst. prof, *Citrus Exp. Sta, California*, 19- Plant physiology; relation of hydrogen-ion concentration to plant metabolism; relative masses of protein anions and cations.
- Haas, Prof. W(illiam) H(erman)**, Northwestern University, Evanston, Ill. *Geology*. Bellevue, Ohio, Jan. 20, 72. A.B, Chicago, 03; A.M, Ohio Northern. *Assoc. prof. geol, Northwestern*, 14- *Geology and geography of Mesa Verde*; influence of glaciation in Ohio.
- Haberman, Dr. J(ules) Victor**, 60 W. 85th St, New York, N. Y. *Neurology, Psychopathology*. New York, April 11, 81. A.B, Columbia, 02, M.D, 05; Berlin, 08. Asst. physician, Königliche Charité, Berlin, 06-08; *instr. neurol, Columbia*, 08-14, *psychotherapy*, 13-; asst. neurol, Vanderbilt Clinic, 08-14, visiting physician, 12-18. Capt, M.C, 18-19. Psychol. Ass; Medico-Psychol. Ass; Am. Med. Ass; Eugenics Research Ass; Nat. Ass. for Study of Exceptional Children; Child Health Org; Prog. Educ. Ass; N. Y. Acad. Med. Examination of mind; nervous and mental diseases.
- Hackett, Dr. L(ewis) W(endell)**, International Health Board, 61 Broadway, New York, N. Y. *Medicine*. Benicia, Calif, Dec. 14, 84. A.B, Harvard, M.D, 12, D.P.H. Instr, Harvard, Med. Sch, 13; *director, Int. Health Board, Panama*, 14-15, *Brazil*, 16- *Director, sanit. surv, British Honduras*, 15. A.A; Am. Med. Ass. Public health; anaphylaxis; air filtration; animal parasitology.
- Hackh, Prof. Ingo W(aldemar) D(agobert)**, 1619 Turk St, San Francisco, Calif. *Chemistry*. Stuttgart, Germany, March 25, 90. Ph.G, Brunswick, 09; A.B, California, 17. Chemist, E. DeHaen, Seelze, Germany, 10-11; Abbott Alkaloidal Co, 12-13; VonRuck Research Lab, 13-15; asst. chem, California, 15-18; *prof. biochem, Col. Physicians and Surg, San Francisco*, 18- A.A; Chem. Soc. Physical and organic chemistry; periodic system of the elements; system of structure symbols.
- Hadden, D(avid) E(dward)**, Alta, Iowa, *Astronomy*. Ireland, Oct. 22, 66. Wesley Col, Ireland, 86-87; B.S, Morningside, 04; registered pharmacist, Iowa. Mem. solar eclipse exped, Wadsworth, N. C, 00; to Colo, 18. Fel. Iowa Acad; Royal Astron. Soc. Can; Soc. Belge d'Astron. Meteorology; the sun.
- Hadley, Prof. F(rederick) B(rown)**, College of Agriculture, University of Wisconsin, Madison, Wis. *Veterinary science*. Burlington, Vt, Jan. 31, 80. D.V.M, Ohio State, 07; Chicago, summer, 10. Instr. anat, Wash. State, 07-08, asst. prof. anat. and surg, 08-09; vet. anat, Ohio State, 09-10; *vet. science, Wisconsin*, 10-11, *assoc. prof, 11-17, prof, 17-* Vet. Med. Ass. Veterinary pathology and therapeutics.
- Hadley, Prof. Laurence**, 111 Waldron St, West Lafayette, Ind. *Mathematics*. Danville, Ind, March 19, 76. B.S, Earlham, 02; A.M, Michigan, 07, Ph.D, 15. Instr. *math*, Earlham, 02-12, asst. prof, 12-15, *prof, 15-18; assoc. prof, Purdue*, 18- Math. Ass.
- Hadley, Dr. Philip B(ardwell)**, University of Michigan, Ann Arbor, Mich. *Biology*. Shelburne Falls, Mass, Jan. 10, 81. Ph.B, Brown, 03, Ph.D, 08. Prof. *bacter*, R. I. Col, and chief, div. biol, R. I. Exp. Sta, 08-20; *asst. prof, Michigan*, 20- Biologist, R. I. Fish Commission; bacteriologist, Providence. A.A; Soc. Zool; Soc. Bact. Bacteriology; protozoology; animal behavior; biology of *Eimeria avium*; paratyphoid infections in birds; methods of immunization in avian diseases; inheritance in poultry and rabbits.
- Hadley, Dean S(tephen) M(arshall)**, Penn College, Oskaloosa, Iowa. *Astronomy*. West Newton, Ind, 60. Ph.B, Penn (Iowa), 84; A.M, Harvard, 93; Ph.D, Wisconsin, 04. Principal, acad, Friendsville, Tenn, 84-85; LeGrand, Iowa, 85-87; *prof. math. and astron, Penn (Iowa)*, 87-, *dean*, 09- A.A; Math. Ass. Relative masses of binary stars.
- Hadwen, Dr. I. Seymour A**, Biological Survey, U. S. Department of Agriculture, Washington, D. C. *Pathology*. Lees, England, 77. D.V.Sc, McGill, 02. Vet. capt, C.M.R, S. Africa, 02; asst. pathologist, Can. Dept. Agr, 05-17, chief animal pathologist, 17-20, *chief veterinarian, in charge reindeer investigation, U. S. Dept. Agr*, 20- A.A; Ass. Path. and Bact; Soc. Bact; Vet. Med. Ass; Entom. Soc; Ont. Entom. Soc; B. C. Entom. Soc; London Entom. Soc; Econ. Biol. Parasitology; tick paralysis; bovine hematuria.
- Haecker, Prof. T(heophilus) L(evi)**, 1205 Raymond Ave, St. Paul, Minn. *Animal nutrition*. Valley City, Ohio, May 4, 46. Wisconsin, 63-64, 67-68, 91. Exec. clerk to governor, Wis. 74-91; instr. dairying, *Minnesota*, 91-94, prof. dairy husbandry, 94-07, dairy husbandry and animal nutrition and in charge, animal nutrition lab, 07-10, *dairy and animal husbandry*, 10-18, *prof. emeritus*, 18- Lecturer, grad. sch, Cornell. A.A; Soc. Animal Production; Soc. Agron. Milk and meat production; food of maintenance; feeding standards.
- Hagan, Prof. Harold R(aymond)**, University of Utah, Salt Lake City, Utah. *Zoology*. Chicago, Ill, May 20, 86. B.S, Utah Col, 14; M.S, Harvard, 17. Instr. zool. and entom, Utah Col, 14-17, asst. prof. and assoc. entomologist, Exp. Sta, 17-20; *assoc. prof. zool. and head of dept, Utah*, 20- State crops and pests inspector, 19- A.A; Entom. Soc; Ass. Econ. Entom; Utah Acad. Entomology; embryology of insects; grain insects; fruit tree leaf roller.
- Hagar, Stansbury**, 48 Wall St, New York, N. Y. *Anthropology*. San Francisco, Calif, Dec. 9, 69. A.B, Yale, 92; LL.B, N. Y. Law Sch, 97. Sec'y, dept. ethnol, *Brooklyn Inst*, 94-17, pres, 17- Mem. exec. committee, dept. astron, Brooklyn Inst. Int. Cong. Americanists, 02, 08-10. A.A. (mem. council); Anthropol. Ass. (mem. council, 19); fel. Ethnol. Soc. (treas); Folklore Soc. (v. pres, 00, 09); Inst. Social Sci; N. Y. Explorers Club (sec'y, 18-19). Zodiacal symbolism of ancient Peru; mythology and ritual of American Indians.

Hageman, Dr. Aaron Martin, 33 Glenwood Ave., Bloomfield, N. J. *Chemistry*. Bound Brook, N. J., Aug. 17, 90. B.S., Rutgers, 12, M.S., 13; fellow, Wisconsin, 16-18, Ph.D., 18. Asst. chem., Rutgers, 13-16; *chief chemist in charge anal. chem., chemical research, glass and metal, Westinghouse Lamp Co.*, 18- Chem. Soc.; Electrochem. Soc. Inorganic chemistry; metallurgy; chemistry and metallurgy of molybdenum and tungsten.

Hagen, Rev. John G(eorge), S. J., Specola Vaticana, Rome, Italy. **Mathematics, Astronomy*. Bregenz, Austria, March 6, 47. Münster, 70-71; Bonn, 71-72; Ditton Hall, England, 75-80. Prof. math, Prairie du Chien, Wis., 80-88; *director, observatory, Georgetown*, 88-06; *Vatican Observatory, Rome*, 06- Math. Soc.; Astron. Soc.; Wash. Acad.; for. assoc. Royal Astron. Soc.; Pontificia Acad. Rom. dei Nuovi Lincei; Astron. Gesell.; Math. Verein; Leopold Carol. Acad.; Soc. Sci. de Bruxelles; Soc. Astron. Ital. Synopsis of higher mathematics; *Leonardi Euleri opera collecta*; variable stars and star colors; nebulae; rotation of the earth.

Hagenow, Prof. Charles F(rederick), Washington University, St. Louis, Mo. *Physics*. Altona, Germany, Feb. 3, 74. B.S., Nebraska, 00, A.M., 06; Ph.D., Chicago, 19. Instr. math. Nebraska, 04-06; Armour, 06-09, *physics*, 09-13; instr., Chicago, 18-19; *asst. prof., Washington (St. Louis)*, 19- A.A. Electro-optics; double electric refraction; thermionic and photo-electric phenomena at lowest attainable pressures.

Hager, Dorsey, Higgins Building, Los Angeles, Calif. *Geology*. St. Paul, Minn., June, 87. Washington (St. Louis), 06-09; Columbian, 09-10. Field foreman, Kern Trading and Oil Co., 10-13; consulting and field geologist, 13-19; *consultant and chief geologist, Nat. Exploration Co. and Union Oil Co. of Cal.*, 19- Min. Eng.; Ass. Petrol. Geol. Petroleum geology and technology.

Haggerty, Prof. M(elvin) E(verett), University of Minnesota, Minneapolis, Minn. *Psychology*. Bunker Hill, Ind., Jan. 17, 75. A.B., Indiana, 02, A.M., 07; A.M., Harvard, 09, Ph.D., 10. Asst. prof. psychol., Indiana, 09-11, *assoc. prof. and later prof.*, 11-15; *educ. psychol., Minnesota*, 15-, *dean, col. educ. and director, psycho-educ. clinic*, 20- Asst. philos., Harvard, 09-10. A.A.; Psychol. Ass. Animal psychology; educational psychology; psychology of learning and work.

Hahn, C(larence) W(ilson), 89 Murray Lane, Flushing, N. Y. *Biology*. Plainville, Ohio, Aug. 19, 77. B.S., Cincinnati, 99; M.S., Trinity (Conn.), 01; A.M., Harvard, 03. Instr. biol., Cincinnati, 99-00; *nat. hist.*, Trinity (Conn.), 00-01; *teacher science, high sch.*, Little Falls, N. Y., 03-04; *biol., High Sch. of Commerce, N. Y. City*, 04- A.A.; Soc. Nat.; N. Y. Biol. Teachers' Ass. Regeneration in Actinia, Halcambia and Metridium; reptilian embryology; biological technic; life history and changes in the nucleus of Haemogregarina stepanovi of the turtle; trypanosomes and haemogregarines of the frog; Myxosporidia of fish.

Hahn, Prof. Dorothy A(nna), Mt. Holyoke College, South Hadley, Mass. *Chemistry*. Phila-

delphia, Pa., April 9, 76. A.B., Bryn Mawr, 99, fellow, 07-08; Leipzig, 06-07; fellow, Yale, 15-16, Ph.D., 16. Prof. chem., Pa. Col. for Women, 99-06; instr., Mt. Holyoke, 08-14, *assoc. prof.*, 14-16, *prof.*, 16- Chem. Soc. Grignard addition to unsaturated ketones; isomerism of derivatives of cyclopropane; polypeptid-hydantoins; sulphur-hydantoins and iso-sulpho-cyanids; chemical solubilities.

Haigh, Prof. Frank L(oyal), 833 Washington St., Walla Walla, Wash. *Chemistry*. Green Lake, Wis., Nov. 25, 85. A.B., Ripon, 08; Ph.D., Yale, 12. Instr. chem., Sheffield Sci. Sch., Yale, 12-15; *prof. and head of dept., Whitman*, 16- Chem. Soc. Inorganic chemistry.

Haigh, Dr. L(eonard) D(ixon), 1617 Cauthorn Ave., Columbia, Mo. *Chemistry*. Yorkville, Ill., Nov. 24, 75. B.S., Michigan, 00, M.S., 03; Ph.D., 11. Commercial chemist, 03-07; *asst. prof. agr. chem., Missouri*, 07- Chem. Soc. Chemistry of beef animals.

Haines, Prof. A(rthur) L(ee), 508 Cottage Ave., Vermilion, S. Dak. *Chemistry*. Wyoming, Iowa, June 25, 74. B.S., Upper Iowa, 96; A.M., South Dakota, 05; Wisconsin. Asst. chem., South Dakota, 04-05, chem. and physics, 05-06, instr. chem., 06-13, *asst. prof.*, 13-19, *assoc. prof.*, 19-, in charge of dept., 18-19. Chem. Soc. (pres, S. Dak. sect.); S. Dak. Acad. (sec'y-treas). Dehydration of alcohol by calcium carbide.

Haines, Prof. Thomas H(arvey), 1194 Oak St., Columbus, Ohio. *Psychology*. Moorestown, N. J., Nov. 4, 71. A.B., Haverford, 96, A.M., 97; A.M., Harvard, 98, Ph.D., 01; M.D., Ohio State, 12. Asst. philos., Harvard, 99-00; *prof. psychol., Ohio State*, 01-15, *mental and nervous diseases*, 15-; *field consultant, Nat. Committee Mental Hygiene*, 19- Voluntary asst., Burgholzi, Zürich, Switzerland, 13; clin. clerk, Nat. Hosp. Paralyzed and Epileptic, London; first asst. physician, Boston Psychopath. Hosp., 13-14; *prof. psychol., Smith*, 14; clin. director, Ohio Bur. Juvenile Research, 14-17; psychol. examiner, U. S. A., 17-18. A.A.; Psychol. Ass.; Psychopath. Ass.; Am. Med. Ass.; Medico-Psychol. Ass. Simultaneity of mental processes; psychology of the esthetic reaction; relation of perceptive and revived mental material; the synthetic factor in tactual space-perception; mental measurements of the blind; crime and mental deficiency.

Haines, Prof. Walter S(tanley), Rush Medical College, Chicago, Ill. *Toxicology, Chemistry, Materia medica*. Chicago, Sept. 27, 50. Mass. Inst. Tech., 69-71; M.D., Northwestern, 73; Sorbonne and Ecole de Méd., Paris, 75-76; hon. A.M., Monmouth, 81. Prof. chem., Northwestern, 72-76; chem. and toxicol., *Rush Med. Col.*, 76-85, chem., pharmacy and toxicol., 85-05, chem., *mat. med. and toxicol.*, 05-, *professorial lecturer toxicol., Chicago*, 01- Chemist, Presb. Hosp., Chicago; mem. committee of revision, U. S. Pharmacopœia, 00, 10; Ill. State Food Standard Commission; Ill. State Commission on Occupational Diseases. A.A.; Chemical Soc.; Am. Med. Ass.; London Chem. Soc. The urine; chemistry of drugs and of foods; toxicology.

Hake, Prof. H(arry) G(ray), Washington University, St. Louis, Mo. *Electrical engineering*.

- Barry, Ill, Feb. 1, 83. B.S., Illinois, 07, M.S., 10, E.E., 13. Instr. *elec. eng.*, Illinois, 07-13; asst. prof., *Washington (St. Louis)*, 13-18, *assoc. prof.*, 18- Elec. Eng.; Illum. Eng. Soc. Illumination.
- Hake, J(oseph) W(illiam), Carleton College, Northfield, Minn. *Physics*. Hoyleton, Ill, Oct. 7, 82. B.S., Cent. Wesleyan, 07; A.B., Illinois, 09; A.M., Northwestern, 13. Acting prof. *physics*, Wheaton (Ill), 09-10; asst., Northwestern, 10-13; instr., West Virginia, 13; *asst. prof.*, Carleton. Physical Soc. Astrophysics.
- Halberstadt, Baird, 311 W. Market St, Pottsville, Pa. *Geology*. Pottsville, Jan. 26, 60. Pennsylvania, 82. Aid, Pa. Geol. Surv., 81-85, asst. geologist, 90-92; special agent, eleventh census, 89-91; consulting mineralogist and geologist, Pa. Board Agr., 08-19; federal fuel administrator, 17-19; *supervising coal inspector*, 18- A.A.; Geol. Soc.; Min. and Metal. Soc.; Appalachian Eng. Ass. (v. pres); Soc. d'Ethnog. Geology of coal; anthracite and bituminous coal fields of Pennsylvania; microscopy of coal.
- Hale, Dr. Albert C(able), 487 Halsey St, Brooklyn, N. Y. *Chemistry, Physics*. Adams, N. Y., Sept. 2, 45. A.B., Rochester, 69, A.M., 72, E.M., 81; Ph.D., Heidelberg, 80. V. principal and teacher science, high sch., Jersey City, 73-77; pres., Colo. Sch. Mines, 80-83; head teacher physical science, Boys' High Sch., Brooklyn, 83-12. Col. entrance examiner in chem., 02-06. A.A.; Chem. Soc. (director, 87-02, v. pres, 89, sec'y, 89-02); Min. Eng.; Colo. Sci. Soc.; Brooklyn Inst. (pres, dept. chem., 86); New Eng. Ass. Chem. Teachers (v. pres, 01); N. Y. Chem. Teachers Club (pres, 02); N. Y. Physics Club (v. pres, 89, pres, 90); Chem. Gesell.
- Hale, Prof. C(larence) F(rederick), State College for Teachers, Albany, N. Y. *Physics, Chemistry*. S. Manchester, Conn., 77. B.S., Wesleyan, 03, M.S., 07; Ph.D., Cornell, 09. Asst., Wesleyan, 05-07, instr., 07-08; research assoc., Gen. Elec. Co., 09-11; *prof. physics*, N. Y. State Col. Teachers, 11- Physical Soc. Liquefaction of gases; hydrazin; small gas pressure; spectrum of hydrazin and ammonia.
- Hale, Dr. Frank E(ugene), Mt. Prospect Laboratory, 421 Flatbush Ave, Brooklyn, N. Y. *Chemistry, Bacteriology*. Brooklyn, Oct. 19, 75. A.B., Yale, 00, Silliman fellow, 00-02, Ph.D., 02. Asst. chem., Yale, 00-02; anal. chem., Columbia, 02-03; chemist, *dept. water, gas and elec.*, N. Y. City, 03-06, in charge, Mt. Prospect lab., 06-13, *director of laboratories*, 13- Chem. Soc.; Water Works Ass.; Munic. Eng.; Pub. Health Ass.; New Eng. Water Works Ass.; N. Y. Chemists Club. Use of tartar emetic as a standard; starch as an indicator in iodometric analysis; hydrolysis of starch; structure of the starch molecule and of the starch iodids; analysis of coal, water, and sewage; sewage disposal; water sanitation.
- Hale, Dr. George Ellery, Mt. Wilson Observatory, Pasadena, Calif. *Astrophysics*. Chicago, Ill, June 29, 68. B.S., Mass. Inst. Tech., 90; Berlin, 93-94; hon. Sc.D., Pittsburgh, 97; LL.D., Beloit, 04; California, 12; Princeton, 17; Sc.D., Yale, 05; Manchester, 07; Oxford, 09; Cambridge, 11; Chicago, 16; Columbia, 17. Direc-
- tor, Kenwood Observatory, 90-96; *assoc. prof. astrophysics*, *Chicago*, 92-97, *prof.*, 97-05, *non-res. prof.*, 05-, *director*, Yerkes Observatory, 95-05; *Mt. Wilson Observatory, Carnegie Institution*, 04- Co-editor, 'Astron. and Astrophys.', 92-95; 'Astrophys. Jour.', 95- Janssen medal, Paris Acad., 94; Rumford medal, Am. Acad., 02; Draper medal, Nat. Acad., 04; gold medal, Royal Astron. Soc., 04; Silva medal, Soc. Astron. de Mex., 08; Bruce medal, Pacific Astron. Soc., 16; Janssen medal, Soc. astron. de France, 17; Galileo medal, Florence, 20. Commander Order Leopold II, 20; commander Order Crown of Italy, 20. Hon. chairman, Nat. Research Council; mem. Geophys. Union; mem. exec. committee, Int. Research Council; trustee, Calif. Inst. Tech.; Huntington Library and Art Gallery. Nat. Acad. (for. sec'y); A.A.; Astron. Soc.; Physical Soc.; Am. Acad.; Philos. Soc. (v. pres); Pacific Astron. Soc.; Meteorol. Soc.; Optical Soc.; hon. mem. N. Y. Acad.; Wash. Acad.; hon. fel. Royal Astron. Soc. Can.; for. assoc. Royal Astron. Soc.; for. mem. Royal Soc.; hon. fel. London Physical Soc.; hon. mem. Royal Inst.; hon. mem. Cambridge Philos. Soc.; Edinburgh Royal Soc.; Royal Irish Acad.; cor. mem. British Ass.; for. cor. Bur. des Longitudes de France; Soc. de Physique; for. assoc. Paris Acad.; for. mem. Upsala Acad.; for. mem. Soc. degli Spettroscop. Ital.; hon. mem. Acad. Gioenia, Catania; for. mem. Soc. Sci. Ital.; Acad. dei Lincei; Soc. Holland. des Sciences; Amsterdam Acad.; for. hon. mem. Vienna Acad.; hon. mem. Moscow Imp. Soc. Nat.; Russian Astron. Soc.; assoc. Belgian Acad.; hon. mem. Christiania Sci. Soc.; Int. Astron. Union. Spectroscopy; solar and stellar physics.
- Hale, Prof. Harrison, Fayetteville, Ark. *Chemistry*. Columbus, Miss., Dec. 27, 79. A.B., Emory, 99; M.S., Chicago, 02; Harrison fellow, Pennsylvania, 06-08, Ph.D., 08. Asst. principal pub. schools, Edgewood, Ga., 99-01; instr. *chem.*, Drury, 02-03, asst. prof., 03-05, *prof.*, 05-18; *prof. and head of dept.*, *Arkansas*, 18- City chemist, Springfield, Mo., 11-14; chemist, Springfield City Water Works, 11-18. Chem. Soc.; Electrochem. Soc.; Pub. Health Ass. Boiler waters in Oklahoma; an electrolytic method for the analysis of zinc ores; reduction of zinc ores; active chlorin as milk preservative.
- Hale, Dr. William J(ay), Dow Chemical Co, Midland, Mich. *Chemistry*. Ada, Ohio, Jan. 5, 76. A.B., A.M., Miami, 97; A.B., Harvard, 98, A.M., 99, Ph.D., 02, fellow (Berlin and Göttingen), 02-03. Instr. chem., Michigan, 04-08, asst. prof., 08-15, *assoc. prof.*, 15-19; *director org. chem. research*, *Dow Chem. Co.*, 19- A.A.; Chem. Soc.; fel. London Chem. Soc.; Soc. chim. de France; Soc. suisse de Chim.; Chem. Gesell. Organic chemistry; dehydromucic acid; biphenyl derivatives; β -dioxims; isoxazoles; furfural derivatives; pyrimidins; cyclopentadienes; condensations among aldehydes and ketones; dehydroacetic acid; four membered cyclic ureas, or uretidones; nitropyrrole derivatives; the calculations of general chemistry.
- Hale, Prof. (William) Worth, Harvard Medical School, Boston, Mass. *Pharmacology*. Inavale, Nebr., Sept. 9, 76. M.D., Michigan, 04, A.B., 08.

- Asst. surgeon, Granite Mining Hosp, Granite, Mont, 04-05; asst. pharmacol, Michigan, 05-08; asst. pharmacologist, U. S. Pub. Health Service, 08-13; asst. prof. *pharmacol*, *Harvard Med. Sch.*, 13-18, *assoc. prof. and asst. dean*, 18-Physiol. Soc; Pharmacol. Soc.
- Haley, Prof. Francis R(aymond)**, Wolfville, N. S. Can. *Physics*. Yarmouth, N. S., Aug. 24, 62. B.A. Acadia, 84, M.A. 91; A.B. Harvard, 86; Leipzig, 91-92. Instr. Free Acad, Norwich, Conn, 88-91; *prof. physics*, *Acadia*, 92-, dean. faculty of applied science, 09-17. Mem. board of governors, N. S. Tech. Col; examiner physics, N. S. Provincial Med. Board; high sch. and teachers' certificates for N. S; Physical Soc; N. S. Inst. X-rays.
- Hall, Prof. Arthur G(raham)**, University of Michigan, Ann Arbor, Mich. *Mathematics*. Memphis, Mich, Dec. 9, 65. B.S. Michigan, 87; Ph.D. Leipzig, 02. Teacher physics and chem, later teacher math. and principal, high sch, LaPorte, Ind, 87-91; instr. math, Michigan, 91-93; head teacher physics, high sch, Grand Rapids, Mich, 93-94; instr. math, Michigan, 94-03; asst. prof, Illinois, 03-05; prof, Miami, 05-08; *prof. math, registrar and univ. ed*, *Michigan*, 08- A.A; Math. Soc. Theory of transformation groups.
- Hall, Dr. A(saph), Jr**, Naval Observatory, Washington, D. C. *Astronomy*. Cambridge, Mass, Oct. 6, 59. George Washington, 76-78; A.B. Harvard, 82; Ph.D. Yale, 89. Asst. Naval Observatory, 82-85; Yale Observatory, 85-89; asst. astronomer, Naval Observatory, 82-92; prof. astron, Michigan, 92-05; asst. Naval Observatory, 05-08, *prof. math*, *U. S. Navy*, 08-; *astron*, *George Washington*, 08- A.A. (sec'y, A. 95, gen. sec'y, 97, v. pres, 00); Astron. Soc; Wash. Acad; Astron. Gesell. Mass of Saturn; orbit of Neptune's satellite; orbits of comets; determination of star places with meridian circles; equatorial observations; determination of orbits of satellites.
- Hall, Dr. Dorothy**, 2411 Putnam St, Toledo, Ohio. *Chemistry*. Toledo, Sept. 20, 96. B.S. Michigan, 18, fellow, 18-20, Ph.D. 20. Asst. anal. chem, Michigan, 17-19; *with research lab*, *Gen. Elec. Co*, *Schenectady*, N. Y. Analytical methods in chemistry.
- Hall, Prof. Edwin H(erbert)**, 39 Garden St, Cambridge, Mass. *Physics*. Gorham, Maine, Nov. 7, 55. A.B. Bowdoin, 75, LL.D. 05; Ph.D. Hopkins, 80. Asst. *physics*, Hopkins, 80-81; instr. *Harvard*, 81-88, asst. prof, 88-95, prof, 95-14, *Rumford prof*, 14- Nat. Acad; A.A. (v. pres, 04); Physical Soc. (mem. council, 03-06); Am. Acad; cor. mem. British Ass. Hall effect in various metals; changes of temperature in walls of steam-engine cylinder; thermal conductivity of nickel and iron; deflection of falling bodies; Thomson effect in soft iron; theory of thermoelectric action; thermoelectric heterogeneity in various metals; air resistance to falling inch-spheres; electromagnetic and thermomagnetic effects in soft iron; theory of thermoelectric action and of thermal conduction in metals, based upon the conception of dual electric conduction.
- Hall, Dr. Elliot S(nell)**, 127 Forrest Ave, Jamestown, N. Y. *Chemistry*. Kiantone, N. Y., Oct. 21, 73. A.B. Amherst, 96; fellow, Hopkins, 03-04, Ph.D. 04. Asst. chem, Cornell, 00-01; research asst, Chicago, 04-06; acting asst. prof. chem, Washington (Seattle), 06-07; assoc. prof. Amherst, 07-12. Chem. Soc. Inorganic chemistry.
- Hall, Dr. Elmer E(dgar)**, 1501 Le Roy Ave, Berkeley, Calif. *Physics*. McGregor, Iowa, Aug. 21, 70. B.S. Southern California, 93; M.S. California, 96, Whiting fellow, 01-02; Ph.D. Cornell, 02. V. principal and head, science dept, high sch, Long Beach, 96-99; asst. *physics*, *California*, 99-01, instr, 02-06, asst. prof, 06-10, assoc. prof, 10-19, *prof*, 19- A.A; Physical Soc. Penetration in total reflection; vibrations in buildings due to street traffic, running machinery and wind gusts.
- Hall, Dr. G(ranville) Stanley**, 156 Woodland St, Worcester, Mass. *Psychology*. Ashfield, Mass, Feb. 1, 46. A.B. Williams, 67, A.M. 70, LL.D. 89; Union Theol. Sem. 67-68, 70-71; Berlin and Bonn, 69-70; Berlin and Heidelberg, 71-72; Ph.D. Harvard, 78; Berlin and Leipzig, 78-80; LL.D. Michigan, 88; Hopkins, 02; Maryland, 07. Prof. philos. Antioch, 72-76; instr. Harvard, 76-78; lecturer, Harvard and Williams, 80-81; prof. psychol, Hopkins, 81-88; pres. and prof. psychol, Clark, 88-20. Ed. 'Am. Jour. of Psychol.' 87-; 'Pedagog. Sem.' 91-; 'Am. Jour. of Religious Psychol.' 04-15; 'Jour. Internat. Relations,' 10-; 'Jour. Applied Psychol.' 17. Nat. Acad; Psychol. Ass; hon. mem. Psychopath. Ass; Philos. Ass; fel. Am. Acad; Antiq. Soc; Mass. Hist. Soc. Experimental psychology; child-study; education; philosophy.
- Hall, Prof. H(arvey) M(onroe)**, University of California, Berkeley, Calif. *Botany*. Lee Co, Ill, March 29, 74. B.S. California, 01, M.S. 02, Ph.D. 06. Herbarium asst, California, 01-02, asst. bot. and asst. botanist, Exp. Sta, 02-03, instr, 03-08, asst. prof, 08-19; *investigator ecol. research*, *Carnegie Institution*, 19- Hon. curator, herbarium, California. Bot. Soc; Ecol. Soc; fel. Calif. Acad. Experimental taxonomy and ecology of North American plants, especially compositae.
- Hall, Prof. Ivan C(lifford)**, University of California, Berkeley, Calif. *Bacteriology*. Allegan, Mich, Aug. 7, 85. A.B. Colo. Col, 08; M.S. California, 11. Bacteriologist, Cutter Laboratories, 11-15; asst. *bacter*, *California*, 11-13, asst. prof, 15-18, *assoc. prof*, 18- Bacteriologist, Red Cross Lab. Car, 18. A.A; Soc. Bacter; West. Soc. Nat; Cooper Ornith. Club; Calif. Acad. Anaerobic bacteria; action of gentian violet on bacteria; lymphangitis in horses.
- Hall, Prof. Lyman B(eecher)**, Haverford College, Haverford, Pa. *Chemistry*. New Bedford, Mass, Jan. 16, 52. A.B. Amherst, 73; Ph.D. Göttingen, 75; fellow, Hopkins, 76-79. Asst. *chem*, Hopkins, 79-80; prof, *Haverford*, 80-17, *emer. prof*, 17- Special agent, tenth census, 80. A.A; Chem. Soc; Philos. Soc; Chem. Gesell. Orthonitro-salicylic acid; oxidation of sulphamids; litmus.
- Hall, Mrs. Mary B(owers)**, 37 E. Church St, Bethlehem, Pa. *Zoology*. Saco, Maine, Oct. 2,

71. B.L, Smith, 95; A.M, Radcliffe, 98; Ph.D, Pennsylvania, 09. Demonstrator zool. and bot, Smith, 98-99; instr. zool, Wellesley, 99-08. Boston Soc. Nat. Hist. Peripheral distribution of the cranial nerves of *Spelerpes bilineatus*; histogenesis and hystolysis of the intestinal epithelium of *Bufo lentiginosus*.
- Hall, Dr. Maurice C(rowther)**, U. S. Department of Agriculture, Washington, D. C. *Parasitology*. Golden, Colo, July 15, 81. B.S, Colo. Col, 05; A.M, Nebraska, 06; Ph.D, George Washington, 15, D.V.M, 16. Instr. biol. and chem, high sch, Canon City, Colo, 06-07; junior zoologist, U. S. Dept. Agr, 07-11; asst. zoologist, 11-16; parasitologist, research lab, Parke, Davis and Co, 16-18; *senior zoologist, U. S. Dept. Agr, 19*-Prof. zool. and parasitol, George Washington, 13-16; zoologist, U. S. Insecticide and Fungicide Board, 15-16; special lecturer parasitol, Detroit Col. Med, 17-18; lieut, V. C, 18-19. Delegate, Pan-Am. Sci. Cong, 15-16. A.A; Soc. Zool; Ass. Econ. Entom; Vet. Med. Ass. (reviewer, 'Jour,' 16-); U. S. Live Stock Sanit. Ass; Soc. Trop. Med; Wash. Helminth. Soc. (sec'y, 10-16, 19-); Wash. Entom. Soc. Parasites of carnivores; nematodes of rodents; *Chenopodium*; insecticides; anthelmintic medication; specific treatment for parasitic diseases.
- Hall, Dr. Norris F(olger)**, Harvard University, Cambridge, Mass. *Chemistry*. Philadelphia, Pa, July 7, 91. A.B, A.M, Haverford, 13; A.M, Harvard, 15, Ph.D, 17. Teaching fellow chem, Harvard, 14-15; asst. bur. chem, U. S. Dept. Agr, 17; junior chemical engineer, U. S. Bur. Mines, 17; lieut. and capt, C.W.S, A.E.F, 18-19; *instr. chem, Harvard, 19*- Chem. Soc. Isotopes.
- Hall, Dr. R(alph) E(dwin)**, Geophysical Laboratory, Washington, D. C. *Physical chemistry*. Charlestown, Ohio, 85. A.B, Ohio Wesleyan, 07; A.M, Ohio State, 11; fellow, Chicago, 14-16, Ph.D, 16. Instr. chem, Ohio State, 09-14; assoc, Chicago, 14-16; asst. prof, Iowa State, 16-17; *physical chemist, geophys. lab, Carnegie Institution, 17*- Capt, C.W.S, 18. A.A; Chem. Soc; Wash. Philos. Soc. Cryohydric measurements on dilute solutions; solubility relations under pressure.
- Hall, Prof. Robert A(nderson)**, 466 74th St, Brooklyn, N. Y. *Chemistry*. Rowan Co, N. C, March 2, 86. A.B, Chicago, 05, Ph.D, 07. Assoc. prof. chem, North Carolina, 10-12; biochem. and pharmacol, Minnesota, 13-17; *chemist, Standard Aniline Products Co, 19*- Lieut, Inf, A. E. F, 17-19. Chem. Soc; Soc. Biol. Chem; N. Y. Chemists Club. Biochemistry; pharmacology; citrates; methylene di-salicylic acid and derivatives.
- Hall, Dr. Robert W(illiam)**, Lehigh University, Bethlehem, Pa. *Zoology*. Cincinnati, Ohio, Aug. 17, 72. Ph.B, Yale, 95; A.B, Harvard, 97, A.M, 98, Ph.D, 01. Asst. zool, Harvard, 96-99; Yale, 99-01, instr, 01-02; *biol, Lehigh, 02-04*, asst. prof, 04-09, *prof, 09*- Instr. zool, Woods Hole, 99-03. A.A. Vertebrate embryology.
- Hall, Dr. Roscoe W(illis)**, St. Elizabeth's Hospital, Washington, D. C. *Psychiatry*. Millers-town, Pa, Feb. 22, 88. Ph.B, Dickinson, 08; M.D, Hopkins, 12. Asst. and instr. psychiat,
- Hopkins and res. psychiatrist, Hopkins Hosp, 15-17; *senior asst. physician, Govt. Hosp. for Insane, Washington, 19*- Psychopath. Ass. Psychopathology.
- Hall, Dr. T(homas) P(roctor)**, 1301 Davie St, Vancouver, B. C. *Mathematics, Physics*. Hornby, Ont, Oct. 7, 58. A.B, Toronto, 82, fellow, 83-84; Clark, 90-93, Ph.D, 93; A.M, Ph.D, Ill. Wesleyan, 88; M.D, Nat. Med. Univ, 02. Science master, Woodstock (Can), 85-90; prof. nat. science, Tabor, 93-96; physics, Kansas City, 97-01; ed, 'Am. X-ray Jour,' 02-05. A.A; Iowa Acad. (pres, 96); B. C. Acad. (pres, 12-14); British Ass. Hyper-space; vector algebra; relation of tone quality to the form of sound waves.
- Hall, Dr. William B(onnell)**, 720 Tremont St, Selma, Ala. *Physiology*. Lowndes Co, Ala, Jan. 3, 66. C.E, A.M, Univ. of the South, 85; M.D, Virginia, 90. Asst. teacher, grammar sch, Sewanee, Tenn, 86-89; asst. physician, Ala. Insane Hosp, Tuscaloosa, 91-93; prof. mat. med. and physiol, Univ. of the South, 93-07, v. chancellor, 09-14; *physician and planter, 14*-; *mayor, Selma, Ala, 20*- A.A. Biology.
- Hall, Prof. William Shafer**, Lafayette College, Easton, Pa. *Mathematics*. Chester, Pa, June 24, 61. C.E, Lafayette, 84, E.M, 86, M.S, 87. Instr. mining eng, *Lafayette, 84-92*, asst. prof, 92-96, *prof. and head of dept, 96-15*, *math, 15*-, *clerk of faculty, 09*- A.A; Math. Ass; Ass. Prof; Mech. Eng. Mensuration; differential and integral calculus; descriptive geometry; mine surveying.
- Hall, William T(homas)**, Massachusetts Institute of Technology, Cambridge, Mass. **Chemistry*. New Bedford, Mass, Aug. 4, 74. B.S, Mass. Inst. Tech, 95. Asst. *anal. chem, Mass. Inst. Tech, 98-00*, instr, 00-11, asst. prof, 11-18, *assoc. prof, 18*- A.A; Chem. Soc. Rate of hydrolysis of salicin with acids.
- Hall, Prof. Winfield S(cott)**, Berwyn, Ill. **Physiology*. Batavia, Ill, Jan. 5, 61. B.S, Northwestern, 87, M.D, 88, M.S, 89; M.D, Leipzig, 94, Ph.D, 95. Instr. biol. and head of dept, Haverford, 89-93; *prof. physiol, Northwestern, 95-19*, *emer. prof, 19*-; *head, dept. social hygiene, Board of Temperance and Moral Welfare, Presb. Church, 19*- Lecturer physiol. and dietetics, Mercy Hosp. Sch. for Nurses; Wesley Hosp. Sch. for Nurses; physiol. of exercise, Y. M. C. A. Col, Chicago. A.A; Physiol. Soc; Am. Med. Ass. (chairman, sect. path. and physiol, 05); Soc. Exp. Biol; fel. Am. Acad. Med. (pres, 05); Am. Med. Soc. for Study of Alcohol and other Narcotics (pres, 02-10); fel. Chicago Acad. Physiology; changes in the proportions of the human body; absorption of carniferrin; retention of iron in the animal organism; regeneration of the blood; the evaluation of anthropometric data; the chest pantograph; mathematical relations of certain chest measurements; metabolism; nutrition; dietetics; influences of diet upon the chyle; influences of alcohol upon metabolism; internal secretions and the endocrine organs, testes and ovaries; adolescence; virility; senility; rejuvenescence; eugenics.

- Halleck, Prof. Reuben Post, 1154 S. Third Ave, Louisville, Ky. *Psychology*. Rocky Point, L. I., Feb. 8, 59. A.B., Yale, 81, A.M., 96; LL.D., Kentucky, 12. Instr. psychol, Male High Sch, Louisville, 83-96, principal and instr. psychol, 96-12. Examiner, Louisville Nor. Sch., 84-95. A.A.; Soc. Sci. Educ.; S. Soc. Philos. and Psychol. Pedagogical applications of physiological psychology; neural bases of ethics.
- Hallett, Dr. George H(ervey), Hatboro, Pa. *Mathematics*. Manchester, Maine, Dec. 30, 70. A.B., Pennsylvania, 93, Hector Tyndale fellow, 93-94, A.M., 94, Ph.D., 96. Instr. math, Pennsylvania, 94-04, asst. prof., 04-10, prof., 10-Algebra.
- Hallock, Dr. A(lbert) P., 41 Morris St, Yonkers, N. Y. *Chemistry*. Peekskill, N. Y., May 16, 55. Ph.B., Columbia, 80, Ph.D., 83. Chemist, Consolidated Gas Co., 80-87; with Carl H. Schultz Mineral Water Establishment, 87-11; Beech Nut Packing Co., 17-20. A.A.; Chem. Soc. (treas., 07); Soc. Chem. Indust.; N. Y. Chemists Club; Chem. Verein.
- Hallock, Dr. Frank Kirkwood, Cromwell Hall, Cromwell, Conn. *Medicine*. Oyster Bay, L. I., N. Y., Aug. 18, 69. A.B., Wesleyan, 82, A.M., 85; M.D., Columbia, 85. *Med. director, Cromwell Hall, 98-* Director and neurologist, Middlesex Hosp., Middletown, Conn.; trustee, Wesleyan. A.A.; Neur. Ass.; Am. Med. Ass.; Harvey Soc.; N. Y. Neur. Soc.; Boston Soc. Psychiatr. and Neur.; Conn. Med. Ass. (pres, 11); N. Y. Acad. Med. Neurology; psychotherapy.
- Halpin, Prof. James G(arfield), 2500 University Ave, Madison, Wis. *Animal husbandry*. N. Y., Oct. 18, 82. B.S.A., Cornell, 05. Instr., R. I. Col., 05-06; asst. prof., Mich. Agr. Col., 06-09; prof. poultry husbandry, Wisconsin, 09- Influence of inbreeding; nutrition.
- Halsey, Dr. J(ohn) T(aylor), 1232 Maison Blanche Building, New Orleans, La. *Pharmacology, Therapeutics*. Elizabeth, N. J., Nov. 8, 70. Princeton, 87-88; M.D., Columbia, 93; St. Luke's Hosp., 93-95; Freiburg, 95-96; Strasbourg, 96-98; Marburg, 98-00. Asst. pharmacol. lab, Marburg, 98-99; demonstrator pharmacol, med. faculty, McGill, 00-01, lecturer, 01-03, asst. prof. pharmacol. and therapist, 03-04; prof. mat. med., therapist. and clin. med., Tulane, 04- Therapeut. Soc.; Ass. Study Int. Secretions; Am. Med. Ass. Metabolism; renal physiology; chemistry of toxins, agglutinins and similar bodies; clinical actions of drugs; electrocardiography.
- Halstead, Dr. Albert E(dward), 30 N. Michigan Boulevard, Chicago, Ill. *Surgery*. Canada, April 21, 68. M.D., Northwestern, 90. Prof. and head, dept. anat, Northwestern, 97-01, prof. surg., 01-16; Illinois, 16- Senior surgeon, St. Luke's Hosp., Chicago; lieut. col., M. R. C. Fel. Surg. Ass.; Am. Med. Ass.; Chicago Surg. Soc. (pres); Int. Surg. Soc.
- Halsted, Dr. George Bruce, 929 Ninth Ave, Greeley, Colo. **Mathematics, Logic*. Newark, N. J., Nov. 25, 53. A.B., Princeton, 75, fellow, 75-76, A.M., 78; Columbia, 76; fellow, Hopkins, 76-78, Ph.D., 79. Instr. postgrad. math, Princeton, 78-81; prof. math, Texas, 82-03; St. John's (Md), 03; Kenyon, 03-06; *State Teachers Col., Greeley, Colo., 06-* Editorial contributor math, 'Century Dict.' Mem. d'honneur du Comité Lobatchefsky. A.A. (v. pres, 03); Math. Soc.; London Math. Soc.; fel. Royal Astron. Soc.; Soc. math. de France; Circolo Mat. di Palermo; and other Am. and foreign math. societies. Non-Euclidean geometry; the foundations of geometry; algorithmic logic; history of geometry; new treatment of geometry without motion, ratio or any infinite process, without limits or any continuity assumption; non-Euclidean spherics; non-Euclidean contribution to philosophy; foundations and technique of arithmetic.
- Halsted, Prof. William S(tewart), 1201 Eutaw Place, Baltimore, Md. **Surgery*. New York, N. Y., Sept. 23, 52. A.B., Yale, 74, LL.D., 04; M.D., Columbia, 77, hon. Sc.D., 04; Vienna, Leipzig and Würzburg, 79-80; hon. F.R.C.S., England, 00; F.R.C.S., LL.D., Edinburgh, 05. Demonstrator anat, Columbia, 81-85; attending surgeon, Bellevue, Presb., Roosevelt, Charity and Emigrant Hospitals, N. Y. City, 82-86; *surgeon-in-chief, Hopkins Hosp., and prof. surg., Hopkins, 89-* Nat. Acad.; A.A.; Surg. Ass.; Ass. Path. and Bact.; Ass. Anat.; Col. Surg.; Soc. Exp. Biol.; hon. mem. Soc. Exp. Path.; Am. Acad.; cor. mem. London Harveian Soc.; cor. mem. Acad. de Chirurg. de Paris; Acad. Royale de Méd. de Belgique; Ass. française de Chirurg.; hon. mem. Gesell. für Chirurgie; for. fel. Swedish Acad.; Stockholm Med. Soc. Clinical and experimental physiology, pathology and surgery.
- Halvorsen, A(rthur) L(udwick), 174 Water St, Perth Amboy, N. J. *Chemistry*. Sunde, Norway, Oct. 6, 68. Grad. Christiania Tech. Sch., 09. Research chemist with Dr. Emil Collett, Christiania, 09; chemist and later research chemist, Roessler and Hasslacher Chem. Co., 11- With Norwegian Legation, Havana, Cuba, 10. A.A.; Min. Eng. Cyanid hydro-metallurgy.
- Ham, Prof. Frank W(illard), 201 S. Seventh Ave, Bozeman, Mont. *Physics*. Newark, N. J., Sept. 11, 75. B.S., Mont. State, 03, M.S., 05; Chicago, summers, 08, 11, 14. Asst. chemist, Mont. Exp. Sta., 05-07, instr. physics, Mont. Col., 07-09, asst. prof., 09-11, prof., 11- Assoc. Physical Soc.
- Hamaker, Prof. J(ohn) I(rvin), Randolph-Macon Woman's College, Lynchburg, Va. *Zoology*. Elizabethtown, Pa., Nov. 29, 69. A.B., Kansas, 93; A.B., Harvard, 94, A.M., 95, Ph.D., 97. Asst. zool., Radcliffe, Harvard, 94-95, Harvard, 95-97; prof. biol., Trinity (N. C.), 97-04; *Randolph-Macon Woman's Col., 04-* A.A.; Soc. Zool. The nervous system; actinians of Beaufort, N. C.
- Hamann, Dr. C(arl) A(ugust), 416 Osborn Building, Cleveland, Ohio. *Anatomy*. Davenport, Iowa, Jan. 26, 68. M.D., Pennsylvania, 90. Asst. demonstrator anat, Pennsylvania, 91-93; prof., Western Reserve, 93-, applied anat. and clin. surg. and dean, med. dept., 11- A.A.; Soc. Nat.; Ass. Anat.; Ass. Path. and Bact.; fel. Surg. Ass.; Am. Med. Ass.; Cleveland Acad. Med. Human anatomy.
- Hambleton, J(ames) C(hase), Galloway, Ohio. *Entomology, Botany*. West Jefferson, Ohio, Nov. 12, 63. A.B., Macalester, 89; A.M., Ohio State, 08. Prof. nat. sciences, Liceo de Ancud,

- Chile, 94-99; instr. science, East High Sch, Columbus, Ohio, 00-17, *supervisor nature study, 18-*, principal, *Trades High School*. Naturalist, 'Comision de Limites,' Chile; instr. entom. lake lab, Ohio State, summer, 09. A.A.; Entom. Soc; Ohio Acad; Soc. Cie. du Chile. Systematic entomology; Corizus; lichens of Ohio; Coreidae; grasses of Ohio.
- Hamburger, Dr. Walter W(ile)**, 104 S. Michigan Ave, Chicago, Ill. *Medicine*. Chicago, Sept. 10, 81. B.S, Chicago, 03, M.S, 04, M.D, Rush Med. Col, 06. *Asst. prof. med, Rush Med. Col, 14-* Attending physician, Cook Co. Hosp, 13-; assoc. attending physician, Michael Reese Hosp, 12-; major, M.C. 17-19. Am. Physicians; Soc. Clin. Invest. Internal medicine.
- Hamerschlag, Pres. Arthur Arton**, Carnegie Institute of Technology, Pittsburgh, Pa. *Education*. Nebraska, Nov. 22, 72. Sc.D, Lehigh, 07; Pittsburgh, 07; LL.D, Trinity (Conn), 12; Allegheny, 15. Engineer, 88-92; supt, St. George's Evening Trade Sch, 92-03; *director, Carnegie Inst. Tech, 03-* Consulting engineer, N. Y. Trade Sch, and Boys' Prep. Trade Sch, 92-04; pres, City Planning Commission, Pittsburgh, 14-15; mem. Schenley Mem. Commission; mem. educ. jury awards, Panama-Pacific Expos, 15. A.A; Eng. Educ. Trade and technical education; administration of technical education.
- Hamill, Dr. Samuel McC(lintock)**, 1822 Spruce St, Philadelphia, Pa. *Medicine*. Oak Hall, Pa, Nov. 3, 64. Princeton, 86; M.D, Pennsylvania, 88. Demonstrator physical diagnosis and instr. clin. med, Pennsylvania, 92-01; *prof. diseases of children, Phila. Polyclinic, 01-*; *post-grad. dept, Pennsylvania, 19-* Mem. gen. med. board and chairman, nat. child welfare committee, Council Nat. Defense; director, child welfare, Pa. Delegate, Cannes Med. Conf. of Red Cross societies. Am. Med. Ass; Child Hygiene Ass. (pres, 15-16); *Pediat. Soc; Phila. Pediat. Path. and Neur. Societies; Phila. Col. Physicians.*
- Hamilton, Prof. Alice**, 800 S. Halsted St, Chicago, Ill. *Industrial toxicology*. New York, N. Y, Feb. 27, 69. M.D, Michigan, 93, A.M, 10; Leipzig, 95; Munich and Frankfurt, 96; Hopkins, 97; Chicago, 99-01; Pasteur Inst, Paris, 02. Prof. path, Woman's Med. Col. Chicago, 97-01; asst. pathologist, McCormick Inst. for Infectious Diseases, 02-09; *special investigator occupational poisons, U. S. Bur. Labor Statistics, 11-*; *asst. prof. indust. med, Harvard Med. Sch, 19-* Mem. Ill. Commission to Investigate Diseases of Occupation, 08-09, director, 09-10; mem. Governor's Commission on Health Insurance, Ill; lecturer indust. med, Chicago, 16-; Cutter lecturer, Harvard, 19. Ass. Path. and Bact; Am. Med. Ass; Pub. Health Ass; Chicago Path. Soc. (pres, 11). Bacteriology; immunology; industrial poisoning in the manufacture of explosives and dyes; lead poisoning.
- Hamilton, Prof. Arthur Stephen**, Physicians and Surgeons Building, Minneapolis, Minn. *Neurology*. Wyoming, Iowa, Nov. 28, 72. B.S, Iowa, 94; M.D, Pennsylvania, 97. *Prof. nervous and mental diseases, Minnesota, 05-*, chief of div, 12- Neur. Ass; Medico-Psychol. Ass; Psychopath. Ass. Clinical neurology; neuropathology.
- Hamilton, E(dward) H(enry)**, U. S. Smelting Co, Midvale, Utah. *Metallurgy*. Montreal. B.S, McGill, 84, summers, 84-91. Chemist, Standard Oil Co, 91-93; Pueblo Smelting and Ref. Co, 93-06, asst. supt. and metallurgist, 96-00; supt. U. S. Zinc Co, 00-02; asst. manager and metallurgist, Washoe Smelter, 02-05; gen. supt, Ariz. Smelting Co, 05-07; metallurgist, various companies, 07-15; consulting metallurgist and manager of smelteries, Cons. Min. and Smelting Co, 16, manager electrolytic zinc plant, 17-18; *supt. Midvale smelter, U. S. Smelting, Refining and Mining Co, 18-* With Can. Geol. Surv. A.A; Chem. Soc; Min. Eng; Soc. Chem. Indust; Electrochem. Soc; Can. Inst. Min. Metal; Royal Soc. Arts London. Copper smelting and lead; production of zinc by electrolysis.
- Hamilton, Prof. F(rancis) M(arion)**, 455 Park Ave, Leonia, N. J. *Psychology*. Markle, Ind, Jan. 21, 67. A.B, Indiana, 97, A.M, 01; fellow, Chicago, 04-05; Ph.D, Columbia, 07. Teacher, principal and supt. pub. schools, Ind, 88-95; instr. Latin and math, North Manchester Col, 90-91; asst. psychol, Indiana, 97-98; asst. educ. director, Association Col, Cent. Y. M. C. A, Chicago, 98-99; instr. psychol. and pedag. and director, psychol. lab, Ohio State, 99-01; prof. psychol. and pedag, Wis. State Nor. Sch, Platteville, 01-03; asst. psychol, Columbia, 05-06; *prof, N. Y. Training Sch. for Teachers, 06-11, head of dept, 11-* A.A; Psychol. Ass. Perceptual factors in reading; educational tests.
- Hamilton, Dr. G(ilbert) V(an Tassel)**, Frazeysburg, Ohio. *Psychology*. Frazeysburg, Jan. 15, 77. A.B, Ohio Wesleyan, 98; M.D, Jefferson Med. Col, 01; Harvard, 05-08. Res. physician, Jewish Hosp, Phila, 01; State Hosp, Warren, Pa, 02-05; McLean Hosp, 05-07; lecturer psychol, State Nor. Sch, Santa Barbara, Calif, 15-17. Research worker, Stanley McCormick Grant, 08-17; visiting psychopathologist, Miradero Sanitarium, 10-17; capt. air service, 17-18. Mem. ed. board, 'Jour. Animal Behavior.' Psychol. Ass; Medico-Psychol. Ass; Psychopath. Ass; Am. Med. Ass. Animal behavior; psychopathology; industrial psychology.
- Hamilton, G(eorge) H(all)**, Lowell Observatory, Flagstaff, Ariz. *Astronomy*. London, England, Jan. 31, 84. B.A, Cambridge, 07, M.A, 11. Vol. worker, Observatory, Oxford, 08-10; prof. astron, physics and French, Bellevue, 10-14; astronomer, Lowell Observatory, 17- A.A; fel. Royal Astron. Soc. Mars, Jupiter and Jupiter's satellites.
- Hamilton, Dr. Hugh**, 315 Walnut St, Harrisburg, Pa. *Medicine*. Philadelphia, Pa, May 18, 47. B.S, Pa. State, 66; M.D, Pennsylvania, 71, M.S, 80, hon. A.M, 16; Lafayette, 67. Chemist and geologist, Pa. Agr. Soc, 67-80; visiting physician, Harrisburg Hosp, 79-81; *examining surgeon, U.S.A., 79-* Sec'y, board of trustees, Harrisburg Acad. V. pres, Pan-Am. Med. Cong; mem. Int. Med. Cong, Berlin. A.A; Am. Med. Ass; Phila. Acad; Harrisburg Acad. Med. (pres). Vegetable physiology; use of milk; medical entomology.
- Hamilton, Prof. John Orr**, 6 Park Road, Manhattan, Kans. *Physics*. Princeton, Ind, Sept. 4, 67. Monmouth, 83-87; B.S, Chicago, 01. Prin-

- cipal, high sch, Roseville, Ill, 96-99; asst. prof. physics, *Kansas State*, 01-08, prof, 08- Kans. Acad. Renewal of sulphated storage cells; weather; the light of the fire-fly; effect of different light rays on plant growth.
- Hamilton, Dr. W(illiam) F(awcett)**, 287 Mountain St, Montreal, Can. *Medicine*. Baie Vertie, N. B, 65. N. B. Nor. Sch; M.D, McGill, 91. Medical supt, Montreal Gen. Hosp, 91-94; asst. physician, *Royal Victoria Hosp*, 94-04, *physician*, 04-; asst. prof. med. and clin. med, McGill. Am. Physicians; Can. Med. Ass. Internal medicine; cardiac diseases.
- Hamlin, Dr. M(arston) L(ovell)**, National Aniline and Chemical Co, Brooklyn, N. Y. *Chemistry*. New York, N. Y, Feb. 8, 87. A.B, Amherst, 08; A.M, Columbia, 09, fellow, 11-12, Ph.D, 12; Strasbourg, 09-10. Research chemist, Harri-man Lab, Roosevelt Hosp, 12-13; research and operating chemist, Gen. Bakelite Co, 13-15; chief chemist, plant D, Butterworth-Judson Corp, 15-18; research chemist, *Nat. Aniline and Chem. Co*, 19- A.A; Chem. Soc. Industrial chemistry; lipolytic enzymes; hydrolysis of esters; explosives and dye intermediates.
- Hamman, Prof. Louis**, 1107 St. Paul St, Baltimore, Md. *Medicine*. Baltimore, Dec. 21, 77. A.B, Rock Hill, 96; M.D, Hopkins, 01. Asst, instr. and later assoc. med, Hopkins, 03-15, acting head of dept, 18-19. Physician in charge, Phipps Dispensary, 05-15; asst. visiting physician, Hopkins Hosp. Am. Physicians; Soc. Clin. Invest; Am. Med. Ass. Internal medicine.
- Hammer, Prof. Bernard W(ernick)**, Iowa State College, Ames, Iowa. *Bacteriology*. Hillsboro, Wis, Oct. 7, 86. B.S, Wisconsin, 08; Ph.D, Chicago, 20. Asst. agr. bacter, Wisconsin, 08-09, bacteriologist, hygiene lab, 09-11; prof. dairy bacter, Iowa State, and chief dairy bacter, *Exp. Sta*, 11- Soc. Baet; Pub. Health Ass; Dairy Sci. Ass. Chemistry; dairy bacteriology.
- Hammer, William J(oseph)**, 55 Liberty St, New York, N. Y. *Physics*, *Electrical engineering*. Cressona, Pa, Feb. 26, 58. High sch. Lab. asst. to Edward Weston, 78-80; to Thomas A. Edison, 80-81; engineer, English Edison Co, 81-82; chief engineer, German Edison Co, 82-84; chief inspector, Edison Co, 84-86; manager, Boston Edison Co, 86-88; consulting engineer, Cincinnati Centennial Expos, 88; representative of Thos. A. Edison, Paris Expos, 89; consulting elec. engineer and expert, *N. Y. City*, 90- Lecturer, various institutions and societies; mem. committee on organization, La. Purchase Expos, 04; pres, Nat. Conf. Standard Elec. Rules; sec'y and expert, Aeronautics Committee, Hudson-Fulton Celebration. John Scott and Elliott Cresson medals, Franklin Inst; grand prize, La. Purchase Expos, 04. Delegate, Int. Elec. Cong, Paris, 00. A.A; Physical Soc; Elec. Eng. (v. pres); Electrochem. Soc. (past pres); N. Y. Elec. Soc; Franklin Inst; Aero Club; Aeronaut. Soc. (v. pres). Radium; radiant phenomena; phosphorescence and fluorescence; X-rays; cathode rays; selenium and its properties; lighting by incandescence; aeronautics.
- Hammett, Dr. F(rederick) S(imonds)**, Wistar Institute, West Philadelphia, Pa. *Biochemistry*. Boston, Mass, Nov. 18, 85. A.B, Tufts, 08; M.S, R. I. Col, 11; A.M, Harvard, 14, Ph.D, 15. Asst. chemist, R. I. Exp. Sta, 09-12; teaching fellow biochem, Harvard Med. Sch, 13-15, asst. anat, 14-15; prof. physiol. and biochem, Southern California, 15-17; instr. anat, Harvard Med. Sch, 17-18; fellow biochem, *Wistar Inst.* A.A; Soc. Biol. Chem; Chem. Soc. Plant physiology; uric acid metabolism; biochemistry of placenta; growth; phosphorus and protein metabolism.
- Hammond, J(ohn) C(hurchill)**, U. S. Naval Observatory, Washington, D. C. *Astronomy*. Livingston Co, Mich, June 3, 71. B.S, Michigan, 94; M.S, Chicago, 96. Asst, 'Nautical Almanac' Office, 98-00; computer, *U. S. Naval Observatory*, 00-03, asst. astronomer, 03-17, astronomer, 17- In charge, U. S. Naval Observatory solar eclipse exped, 18. Astron. Soc; Wash. Philos. Soc. Comets, asteroids and satellites; positions of fundamental stars.
- Hammond, John Hays**, 120 Broadway, New York, N. Y. *Mining engineering*. San Francisco, Calif, March 31, 55. Ph.B, Yale, 76, hon. A.M, 98; Royal Sch. of Mines, Freiberg; D.E, Stevens; LL.D, St. John's (Md); hon. M.E, Colo. Sch. Mines. Special expert, U. S. Geol. Surv, 80; mining engineer. Nat. Conservation Committee, 08-; Int. Cong. Applied Chem, London, 09. A.A; Min. Eng; Acad. Polit. and Social Sci; Archeol. Inst; Nat. Civic Federation; Am. Acad; London Inst. Min. and Metal; Royal Scottish Geog. Soc. Mining.
- Hammond, Dr. L(ester) D(avisson)**, Bureau of Standards, Washington, D. C. *Chemistry*. Petersburg, Ind, June 23, 83. A.B, Indiana, 07; A.M, Wisconsin, 10, Ph.D, 16. Acting asst. prof. chem, Mo. Sch. Mines, 16-17; instr. org. chem, Kansas State, 17-18; asst. prof. chem, Armour, 18-19; assoc. chemist, *Bur. Standards*, 19- Chem. Soc. Electrochemistry; electro-deposition of nickel.
- Hamor, W(illiam) A(llen)**, Mellon Institute, Pittsburgh, Pa. *Chemistry*. DuBois, Pa, March 27, 87. Pittsburgh, 04-07, hon. A.M, 13. Research asst, Col. City of N. Y, 07-14; asst. to director, *Mellon Inst*, 14-16, asst. director, 16- Shale-oil expert, Can. Dept. Mines, 08; ed. staff, 'Jour. Indust. Eng. Chem,' 12-14. Major, C.W.S, 17-18. Chem. Soc; Electrochem. Soc. Chemical economics; economic utilization of fuels; anesthetics; shale oil and petroleum.
- Hanawalt, Prof. Francis W(ayland)**, 826 N. Steele St, Tacoma, Wash. *Mathematics*, *Astronomy*. Monticello, Ind, Feb. 22, 59. A.B, DePauw, 84, A.M, 02; Chicago, 97, 99; Cornell, 01; Chamberlin Observatory, 03; Columbia, 16. Prof. math. and astron, Mt. Morris, 84-93; instr. math, DePauw, 93-98; prof. math. and astron, Iowa Wesleyan, 98-03; Albion, 03-07; *Puget Sound*, 08- A.A; Math. Ass; Math. Soc.
- Hance, Prof. J(ames) H(arold)**, State Geological Survey, Urbana, Ill. *Geology*. Chicago, Ill, Aug. 14, 80. B.S, Northwestern, 01; Washington (Seattle), 08, M.E, 11; Ph.D, Chicago, 18. Junior, asst. and assoc. geologist, U. S. Geol. Surv, 10-15; asst. geol, Chicago, 14-15; asst. prof, Iowa, 15-18; geologist, Roxana Petrol. Co, 18-19; valuation engineer, oil sect, internal revenue bur, U. S. Treas. Dept, 19; acting prof. in

- charge geol. dept, Denison, 19-20; *asst. chief, State Geol. Surv. Ill.*, 20- Mineral examiner, U. S. Gen. Land Office, 17. A.A.; Min. and Metal. Eng.; Ass. Petrol. Geol. Metallurgy; valuation of mineral properties.
- Hañce, Dr. Robert T(heodore)**, University of Pennsylvania, Philadelphia, Pa. *Zoology*. Cincinnati, Ohio, Jan. 10, 92. A.B., Cincinnati, 13, A.M., 14; Harrison fellow, Pennsylvania, 14-16, Ph.D., 17. Asst. zool., Cincinnati, 13-14, Pennsylvania, 16-18; chairman zool., A.E.F. Univ., Beaune, and lieut., Sanit. C, 19; *instr. zool., Pennsylvania*, 20- A.A.; Soc. Zool.; Micros. Soc. Mammalian and plant cytology; somatic chromosomes; Paramecium.
- Hancock, Prof. Harris**, University of Cincinnati, Cincinnati, Ohio. **Mathematics*. Ellerslie, Va., May 14, 67. Virginia, 86; A.B., Hopkins, 88; Cambridge, 91; Ph.D., Berlin, 94; Sc.D., Paris, 01. Asst. math., Chicago, 92-93, 94-95, assoc., 95-97, instr., 97-00; *prof., Cincinnati*, 00- A.A.; Math. Ass.; Math. Soc.; Ass. Prof. (treas., 18-); London Math. Soc.; Math. Verein; Soc. math. de France; Circolo Mat. di Palermo. Kronicker's modular systems; Abelian integrals; elliptic functions and integrals; calculus of variations; maxima and minima; minimal surfaces; algebraic numbers; geometry of numbers.
- Hancock, Dr. Joseph L(ane)**, 937 Hyde Park Boulevard, Chicago, Ill. *Entomology*. Chicago, April 12, 64. M.D., Northwestern, 88. *Physician, Chicago Elevated Rys.* A.A.; Chicago Acad.; Chicago Entom. Soc. (past curator and ed., 'Mem'); life fel. London Entom. Soc. Tettigidae of North America; Tettiginae; the striped meadow cricket; ornithophilous pollination; the castle-building spider; brain weight of birds; Tettigidae of Ceylon.
- Hand, Prof. W(illiam) F(lower)**, Agricultural College, Miss. *Chemistry*. Shubuta, Miss., Dec. 1, 73. B.S., Miss. Agr. Col., 93, M.S., 95; Ph.D., Columbia, 03. Asst. chemist, *Miss. Agr. Col.*, 93-99, *prof. chem. and state chemist*, 99- A.A.; Chem. Soc.; Agr. Chem. (v. pres., 20). Organic chemistry; synthesis in the quinazalin group; synthesis of ketodihydroquinazalins and of diquinazoyls.
- Handy, James Otis**, 5723 Woodmont, Pittsburgh, Pa. *Chemistry, Metallurgy*. Barnstable, Mass., Jan. 2, 69. Mass. Inst. Tech., 84-86. Asst. chemist, U. P. R. R., 86-87; B. and O. R. R., 88; *chief chemist, Pittsburgh Testing Lab.*, 89-, *director, special investigations*, 20- Mem. commission on filtration of water supplies of Pittsburgh and Alleghany, 95. Chem. Soc. (councillor); Soc. Chem. Indust.; West. Pa. Eng. Soc. Chemical analysis; rapid method for phosphorus in steel; magnesia in compounds; water softening; metallurgy of copper, cobalt and vanadium; oil and grease refining processes; synthetic resin manufacture.
- Hanford, Dr. G(eorge) A(rthur)**, P. O. Box 55, Syracuse, N. Y. *Physiological chemistry*. Syracuse, Oct. 14, 75. A.B., Yale, 98, Ph.D., 02. Asst. physiol. chem., Yale, 99-02; lecturer, Syracuse Med. Col., 02-03, director, dept. chem., 03-06, prof. chem. and physiol. chem., 06-07; *manager, Hanford Mfg. Co., Syracuse*, 07- Physiological rôle and toxicology of caesium compounds.
- Hanke, Dr. Milton Theo(dore)**, University of Chicago, Chicago, Ill. *Chemistry*. Chicago, April 23, 93. B.S., Chicago, 14, Ph.D., 17. Asst. prof. physiol. chem., N. Dak. Col., 16-17; *research chemist, Sprague Mem. Inst., Chicago*, 18- Chem. Soc.; Soc. Biol. Chem. Biochemistry; bacteriology; oxidation of maltose; proteinogenous amines; electrical constitution of organic compounds.
- Hankinson, T(homas) L(eroy)**, New York State College of Forestry, Syracuse, N. Y. *Ichthyology*. Valparaiso, Ind., April 12, 76. B.S., Mich. Agr. Col., 98; Cornell, 00. Prof. zool. and physiol., East. Ill. State Nor. Sch., 02-19; *ichthyologist, Roosevelt Wild Life Exp. Sta., Syracuse*, 19- Investigator, Mich. Biol. and Geol. Surv.; N. Y. Col. Forestry, summers, 15- A.A.; Ecol. Soc. (v. pres., 19); Fisheries Soc.; Soc. Ichthyol. and Herp.; Soc. Mammal.; Micros. Soc. (treas., 10-15); Wilson Ornith. Club (sec'y, 15); Ill. Acad. (treas., 17); Mich. Acad. Ornithology; aquatic biology; habits and life histories of fish.
- Hanna, Dr. G. Dallas**, California Academy of Sciences, San Francisco, Calif. *Zoology*. Carlisle, Ark., April 24, 87. A.B., Kansas, 09, A.M., 13; Ph.D., George Washington, 18. Asst., Bur. Fisheries, 11-19; *curator invert. paleont., Calif. Acad. Sciences*, 19- Field worker, Alaska, 11-19. A.A.; Calif. Acad.; Wash. Biol. Soc. Conchology; recent and fossil mollusks and diatoms; Alaska fur-seal herd.
- Hanna, Prof. Olysses S(herman)**, 828 Atwater Ave., Bloomington, Ind. *Mathematics*. Selma, Ind., Jan. 16, 65. A.B., Indiana, 95, A.M., 98; Harrison fellow, Pennsylvania, 99-01, Ph.D., 05. Instr. math., high sch., New Castle, Ind., 90-94; Indiana, 95-99, asst. prof., 99-09, *assoc. prof.*, 09- A.A.; Math. Soc.; Eng. Educ.; Ass. Prof.; Ind. Acad.; Soc. astron. de France; Math. Verein; Circolo Mat. di Palermo. The bitangentials of the quintic, sextic, septic and octic.
- Hannibal, Harold**, Stanford University, Calif. *Paleontology*. Alviso, Calif., Nov. 27, 89. A.B., Stanford, 13. Private research, 09-11, 16-20; asst., Wash. State Museum, 11-12; field geologist for Ralph Arnold, California and North Pacific Coast, 11-15. Le Conte Geol. Soc. Recent and fossil land and fresh water Mollusca of Pacific coast; Pliocene and Pleistocene floras of California; paleontology of marine Cretaceous, Tertiary and Quaternary of Pacific Coast; cartography and structure of California coast ranges; geologic museums.
- Hansen, Prof. Niels E(bbesen)**, Brookings, S. Dak. *Horticulture*. Ribe, Denmark, Jan. 4, 66. B.S., Iowa State, 87, M.S., 95; Sc.D., South Dakota, 17. Practical horticulture, Iowa, 87-91; asst. prof. hort., Iowa State, 91-95; *prof., S. Dak. Col.*, 95- Explorer, U. S. Dept. Agr., Asia, eastern Europe and northern Africa, 97-98, 06, 08-09; for S. Dak., 13. Gold medal, Mass. Hort. Soc., 17. Delegate from U. S. to Int. Conf. of Genetics, London, 06. A.A. (sec'y, plant sect); Soc. Hort. Sci.; S. Dak. State Hort. Soc. (sec'y); Royal Hort. Soc. Genetics; breeding fruits and roses for cold resistance; importing and breeding hardy alfalfa; agricultural ex-

- ploration in Russia, Transcaucasia, Siberia, China and Turkestan; imported Siberian fat-rumped sheep.
- Hansen, Paul**, 39 W. Adams St, Chicago, Ill. *Civil engineering*. Arlington, Va., Aug. 9, 79. B.S., Mass. Inst. Tech., 03. Asst. engineer, Mass. State Board of Health, 03-04; engineer, City of Columbus, 04-05; Ohio State Board of Health, 05-10; Ill. State Water Surv., 10-15; Ill. State Dept. Health, 15-20; *mem. firm, Pearse, Greeley and Hansen*, 20- Lecturer, Illinois. Civil Eng.; Chem. Soc.; Pub. Health Ass. Sanitary engineering; public health; stream sanitation; sewage treatment; water resources; typhoid fever.
- Hanson, Prof. Frank Blair**, Washington University, St. Louis, Mo. *Zoology*. Bloomington, Ill., July 15, 86. A.B., George Washington, 13; fellow, Illinois, 14-15, A.M., 15; traveling fellow, American, 15-16, Ph.D., 19. Instr. *zool*, Washington (St. Louis), 16-18, asst. prof., 18-20, *assoc. prof.*, 20- A.A.; Soc. Zool.; Soc. Mammal.; St. Louis Acad. Vertebrate morphology; origin and development of the shoulder girdle and sternum; skeleton of the alligator; development of the mouse; anatomy of the catfish.
- Hanson, Herbert C(hristian)**, University of Colorado, Boulder, Colo. *Botany*. Faribault, Minn., April 19, 91. A.B., Minnesota, 14; A.M., Nebraska, 16. Asst. prof. bot., State Nor. Sch., Peru, Nebr., 16-17; instr., Cincinnati, 17-18; plant quarantine inspector, fed. hort. board, U. S. Dept. Agr., 18-20; *instr. biol.*, Colorado, 20- A.A.; Bot. Soc.; Ecol. Soc. Leaf structure and environment; Malvaceae; ecology; physiology.
- Hanson, H(erman) H(erbert)**, Dover, Del. *Chemistry*. Strafford, N. H., April 6, 76. B.S., Pa. State, 02; M.S., Maine, 06. Asst. chemist, Maine Exp. Sta., 02-07, *assoc. chemist*, 07-16, chemist, 16-19; asst. chemist, W. Va. Exp. Sta., 19-20; *state chemist*, Del., 20- With Food Ad., 17-18; capt., S. C., 18-19. A.A.; Chem. Soc.; Agr. Chem. Analysis and microscopy of foods, drugs and agricultural products.
- Hanzlik, Prof. P(aul) J(ohn)**, 1353 E. Ninth St, Cleveland, Ohio. *Pharmacology*. Shueyville, Iowa, July 24, 85. Ph.G., Iowa, 02, Ph.C., 08; A.B., Illinois, 08, A.M., 11; M.D., Western Reserve, 12; Vienna, 13-14. Demonstrator *pharmacol.*, Western Reserve, 12-13, instr., 13-15, *assoc.*, 15-17, asst. prof., 17-20, *assoc. prof.*, 20- Pharmacologist, U. S. Bur. Mines, 18. Capt., M.C., 18, M.R.C., 19- Soc. Pharmacol.; Physiol. Soc.; Soc. Exp. Biol.; Soc. Biol. Chem.; Am. Med. Ass.; Cleveland Acad. Med. Gastro-intestinal absorption of certain drugs and the recovery of these and others from animal tissues and fluids; clinical action of veratrum, chelidonium, hexamethylenamin, piperazin, salicylic acid and salicylates; fish poisoning; hemostatics; skin-irritant war gases; anaphylactoid phenomena.
- Harcourt, Prof. R(obert)**, Ontario Agricultural College, Guelph, Ont. *Chemistry*. Ontario, Can., 66. B.S.A., Toronto, 93. Asst. chemist, Ont. Agr. Col., 93-01, *prof. chem.*, 01- A.A.; Chem. Soc.; Soc. Chem. Indust.; Agr. Chem.; Can. Inst. Chem. Chemistry of foods, including wheat, flour and breakfast foods; insecticides and fungicides; incubation of eggs; line and sulphur washes; the dairy industry; soils and fertilizers.
- Hard, Prof. Herbert A(aron)**, Fargo, N. Dak. *Geology, Chemistry*. Columbus, Ohio, Oct. 2, 73. B.S., Ohio Wesleyan, 97; Michigan, 06-09. Instr. geol., Ohio Wesleyan, 96-97; teacher science, Ludington and Bay City, Mich., 98-06; asst. chem., Michigan, 06-09; prof. geol., N. Dak. Col., 09-14; with U. S. Geol. Surv., 14-17; *state drainage and flood control engineer*, N. Dak., 17- Director, State Geol. and Soil Surv., N. Dak., 09-14. A.A.
- Hardenbergh, Dr. James Ball**, State Livestock Sanitary Board Laboratory, Harrisburg, Pa. *Bacteriology*. Harford, N. Y., July 17, 87. D.V.M., Pennsylvania, 11. Asst. director *Pa. State Livestock Sanit. Board Lab*, 11-13, *director*, 14- Instr. bacter., vet. dept., Pennsylvania, 11-13. Vet. Med. Ass. Infectious abortion in cattle; hemorrhagic septicemia; vaccination against tuberculosis.
- Hardenburg, Prof. E(arle) V(olcart)**, College of Agriculture, Ithaca, N. Y. *Agronomy*. B.S., Cornell, 12, M.S.A., 15, Ph.D., 19. Instr. *farm crops*, Cornell, 12-18, *asst. prof.*, 19- Soc. Agron.; Potato Ass.; N. Y. Potato Ass. (see'y, 15-). Potato and field bean production.
- Harder, Dr. E(dmund) C(ecil)**, Harrison Building, Philadelphia, Pa. *Geology*. New Holstein, Wis., Sept. 22, 82. A.B., Wisconsin, 05, A.M., 07, Ph.D., 15. Field asst., U. S. Geol. Surv., 05-06; mining geologist, 07; junior geologist, U. S. Geol. Surv., 08-09, asst. geologist, 09-14, geologist, 14-20; *geologist and mining engineer*, Rep. Min. and Mfg. Co. and other mining companies, 20- Manager, S. Am. mining, Brazilian Iron and Steel Co., 10-13. A.A.; Geol. Soc.; Min. and Metal. Eng.; Soc. Econ. Geol.; Wash. Acad.; Wash. Geol. Soc. Economic geology; iron, manganese and chrome ores; bauxite; magnetic ore deposition; rock decay; soil bacteriology.
- Harder, Dr. Oscar E(dward)**, University of Minnesota, Minneapolis, Minn. *Chemistry*. Franklin Co., Ark., Feb. 3, 83. A.B., Oklahoma, 10, A.M., 11; Ph.D., Illinois, 15. Instr. chem., Oklahoma, 10-11; food analyst, Kans. State Board of Health, Kansas, 11-13; research chemist, committee C 9, Soc. Test. Mat. and Portland Cement Ass., 15-18; N. K. Fairbanks Co., 18; fellow, Mellon Inst., 18-19; *assoc. prof. metallurgy*, Minnesota, 19- A.A.; Chem. Soc.; Min. and Metal. Eng. Metallurgy; alloys of chromium, copper and nickel; organic impurities in sand used for concrete; uranium.
- Hardesty, Prof. Irving**, Tulane University, New Orleans, La. **Neurology*. Beaufort, N. C., Oct. 8, 66. A.B., Wake Forest, 92, Sc.D., 18; Ph.D., Chicago, 99. Principal, Wakefield Acad., N. C., 92-93; asst. biol., Missouri, 95-96; neur., Chicago, 98-00; instr. *anat.*, California, 00-03, asst. prof., 03-07, *assoc. prof.*, 07-09; *prof.*, Tulane, 09- A.A.; Ass. Anat. Development and architecture of the nervous system and organs of the special senses, human and comparative.
- Hardin, Dr. Willett L(epley)**, Mt. Washington, Los Angeles, Calif. **Chemistry, Physics, Mineralogy*. Lima, Ohio, Dec. 8, 68. B.S., Buchtel,

- 93; Ph.D, Pennsylvania, 96, fellow, 96-99. Instr. chem. and physics, Buchtel, 93-94; lecturer physical chem, Pennsylvania, 96-00, instr. physical and tech. chem, 99-00; gen. manager, Symmes Valley Coal Co, 03-07; asst. sec'y and treas. Mex. Nat. Gas Co, 08-11; *consulting chemist*, 11- Chairman, jury awards, sect. chem. apparatus, Nat. Export Expos, 99. A.A.; Chem. Soc.; Min. Eng. The liquefaction of gases; atomic masses of silver, mercury, cadmium, tungsten and palladium; derivatives of palladium with organic bases.
- Harding, Prof. A(rthur) M(cCracken)**, University of Arkansas, Fayetteville, Ark. *Mathematics*. Pine Bluff, Ark, Sept. 3, 84. A.B, Arkansas, 04; A.M, Chicago, 13, Ph.D, 16. Adj. prof. math, Arkansas, 05-09, assoc. prof, 09-16, *prof. math. and astron*, 16-, univ. examiner, 16-19, *director, general extension*, 19- A.A.; Math. Soc.; Math. Ass. Projective differential geometry.
- Harding, Prof. C(harles) Francis**, 503 University St, W. Lafayette, Ind. *Electrical engineering*. Fitchburg, Mass, Sept. 11, 81. B.S, Worcester, 02, E.E, 10; Cornell, 05-06; Dartmouth, 08. Testing dept, Gen. Elec. Co, 02; elec. engineer, Worcester, Providence and Fort Wayne, 03-05; asst. prof. elec. eng, Cornell, 05-06; asst. elec. eng, Stone and Webster, Boston, 07-08; *head prof. elec. eng. and director, elec. lab, Purdue*, 08- Fel. Elec. Eng; Eng. Educ; Nat. Elec. Light Ass; Ind. Acad; Ind. Eng. Soc. (past pres). Leakage losses in dielectrics at high voltages; photometric and spectrophotometric analyses of locomotive headlights; electrical fixation of nitrogen; central station rates and valuations.
- Harding, Dr. Everhart Percy**, 413 S. Oak St, Minneapolis, Minn. *Chemistry*. Waseca, Minn, Aug. 15, 70. A.B, Minnesota, 94, M.S, 95; Ph.D, Heidelberg, 00. Asst. chem, Minnesota, 94-96, instr, 96-99, lecturer, 01-05, asst. prof, 05-13, *assoc. prof*, 13- A.A.; Chem. Soc. Chemistry of wheat; synthesis and reduction of aldazins; synthesis and derivatives of hydrazones; synthesis of 2:5 dimethylbenzaldehyde; sulphur compounds in coal gas; rapid determination of fat in milk products; benzene in illuminating gas.
- Harding, Dr. H(arry) A(lexis)**, Agricultural College, Urbana, Ill. *Bacteriology*. Oconomowoc, Wis, Nov. 28, 71. B.S, Wisconsin, 96, fellow, 97-08, M.S, 98; Germany, 98; Ph.D, Cornell, 10. Bacteriologist, N. Y. Exp. Sta, Geneva, 99-13; *prof. dairy bact, Illinois*, 13- A.A.; Soc. Bact; Dairy Sci. Ass; Pub. Health Ass. Dairy bacteriology; bacterial plant diseases; causes of cheese ripening; soft rot in plants; fixation of nitrogen; city milk supplies.
- Harding, Prof. V(ictor) J(ohn)**, University of Toronto, Toronto, Can. *Biological chemistry*. Bury, England, Oct. 23, 85. B.Sc, Victoria (Eng), 06, Beyer fellow, 07, M.Sc, 07, Sc.D, 12. Demonstrator chem, Victoria (Eng), 08-10; McGill, 10-11, lecturer biol. and physiol. chem, 11-13, asst. prof, 13-17, assoc. prof, 17-20; *prof. path. chem, Toronto*, 20- Soc. Biol. Chem; fel. London Chem. Soc; assoc. Inst. Chem. Gt. Britain and Ireland. Physiological chemistry; terpenes; essential oils; synthetic perfumes; ninhydrin reaction; substitution in aromatic compounds; synthesis of purins in the animal body; creatin; metabolism during pregnancy.
- Hardwick, Rose S(tandish)**, 161 S. Huntington Ave, Boston, Mass. *Psychology*. A.B, Smith, 90, A.M, 09. Asst. psychol, Psychopathic Hosp, Boston, 13-14; *instr*, Am. Sch. for Physical Educ, 15-18; *educ, Boston Sch. of Physical Educ*, 14-; *staff psychologist*, N. E. Home for Little Wanderers, 15- Lecturer psychol, sch. domestic science, Y. W. C. A, Boston, 15-18. Psychol. Ass. Tests; visual defects.
- Hardy, Dr. Arthur Sherburne**, Woodstock, Conn. *Mathematics*. Andover, Mass, Aug. 13, 47. Grad, U. S. Mil. Acad, 69; Ecole des Ponts et Chaussées, 73-74; hon. A.M, Iowa; Ph.D, Dartmouth. Prof. civil eng, Grinnell, 71-73; Dartmouth, 74-78, math, 78-93; ed, 'Cosmopolitan', 93-95; U. S. minister resident and consul gen, Teheran, Persia, 97-99; envoy extraordinary and minister plenipotentiary of the U. S, Greece, Roumania and Servia, 99-01; Switzerland, 01-03; Spain, 03-05. Quaternions; calculus; topographical surveying; imaginary quantities.
- Hardy, Dr. James G(raham)**, Williamstown, Mass. *Mathematics*. Easton, Pa, March 13, 74. A.B, Lafayette, 94, A.M, 97; fellow, Hopkins, 97-98, Ph.D, 98. Instr. and later assoc. prof. *math, Williams*, 98-13, *prof*, 13- Math. Soc. Darboux lines on surfaces; curves of triple curvature; curves in a space of n-dimensions.
- Hare, Dr. Earle R(ussell)**, 623 Syndicate Building, Minneapolis, Minn. *Anatomy*. Summerfield, Ohio, May 26, 72. A.B, Iowa Wesleyan, 94; M.D, Minnesota, 00. Prosector anat, Minnesota, 00-05, demonstrator, 05-08, instr, 08-10, surg, 10-17. Ass. Anat; Am. Med. Ass.
- Hare, Dr. H(obart) A(mory)**, 1801 Spruce St, Philadelphia, Pa. **Therapeutics*. Philadelphia, Sept. 20, 62. M.D, Pennsylvania, 84, B.S, 85; M.D, Jefferson Med. Col, 93. Clin. prof. diseases of children, Pennsylvania, 90-91; *prof. therapeut. and diagnosis, Jefferson Med. Col*, 91- Fiske Fund, R. I. Med. Soc, 85, 86; Fothergillian medal, London Med. Soc, 88; prize, Acad. Royale de Méd. de Belgique, 89; Cartwright prize, 89; Boylston prize, 91. Soc. Nat; Am. Physicians; Physiol. Soc; Phila. Col. Physicians. Experimental therapeutics; clinical medicine.
- Hare, Prof. R(aleigh) F(rederick)**, Las Cruces, N. Mex. *Chemistry*. Opelike, Ala. B.S, Ala. Polytech, 92, M.S, 93; Ph.D, Columbia, 11. Asst. chem, Ala. Polytech, 92-93; N. Mex. Col, 93-05, head, dept. chem, 05-15; *field agent, bur. crop estimates, U. S. Dept. Agr*, 16- Agricultural and physiological chemistry.
- Hares, C(harles) J(oseph)**, 305 Franklin St, Denver, Colo. *Geology*. Marcellus, N. Y, May 6, 81. B.S, Syracuse, 07, M.S, 08; fellow, Chicago, 08-10. Junior Geologist, U. S. Geol. Surv, 10-13, assoc. geologist, 13-16, paleontologist, 16-17; *chief geologist, Ohio Oil Co*, 17- A.A.; Geol. Soc; Min. Eng; Min. Cong; Petrol. Inst; Wash. Geol. Soc. Stratigraphy; coal; oil.
- Harger, Rolla N(eil)**, Yale University, New Haven, Conn. *Chemistry*. Decatur Co, Kans, Jan. 14, 90. A.B, Washburn, 15; A.M, Kansas, 17. Lab. instr. chem, Washburn, 13-15; instr, Kansas,

- 15-17; asst. biochemist, soil fertility, bur. plant indust, U. S. Dept. Agr, 17-20; *National research fellow, Yale*, 20- Chem. Soc. Organic chemistry; metal; soil organic matter and organic fertilizers; cyanamide.
- Hargitt, Prof. Cha(rle)s W(esley)**, Syracuse University, Syracuse, N. Y. **Zoology*. Near Lawrenceburg, Ind, March 28, 52. B.S., Moores Hill, 77; Mass. Inst. Tech, 84-85; Ph.D, Ohio (Athens), 90; Naples Zool. Sta, 94, 03, 11; hon. Sc.D, Evansville. *Prof. nat. sciences*, Moores Hill, 85-88; *biol*, Miami, 88-91; *Syracuse*, 91- Asst. director, Cold Spring Harbor, 91-93; trustee, Woods Hole, 00- A.A. (sec'y, F, 95, v. pres, 03); Soc. Nat; Soc. Zool; Wash. Acad; N. Y. State Sci. Teachers Ass. (pres, 99); Syracuse Acad. (pres, 96-99). Morphology, development, regeneration and variation among coelenterates; the Alcyonaria of Porto Rico; development of Scyphomedusae; Medusae of Woods Hole; Hydromedusae of the Bay of Naples; animal behavior; Anthozoa of Woods Hole; Hydrozoa of Eastern United States.
- Hargitt, Dr. George T(homas)**, Syracuse University, Syracuse, N. Y. *Zoology*. Fairfield, Ind, Feb. 13, 81. Ph.B, Syracuse, 02; fellow, Nebraska, 02-03, A.M, 03; Ph.D, Harvard, 09; Adam T. Bruce fellow, Hopkins, 09-10. Asst. zool, Syracuse, 03; teacher biol, high sch, Poughkeepsie, N. Y, 04-05; Syracuse, N. Y, 05-07; asst. and Austin teaching fellow *zool*, Harvard, 07-09; instr, Northwestern, 10-13; assoc. prof, *Syracuse*, 13-20, *prof*, 20- A.A; Soc. Zool; Ecol. Soc. Regeneration in Gonionemus and Hydromedusae; budding tentacles of Gonionemus; maturation, fertilization and cleavage in Pennaria tiarella and Tubularia crocea; germ cells of coelenterates; cytology of diverse strains of Paramecium; growth of Paramecium in pure cultures of bacteria.
- Haring, Prof. Alexander**, 2489 Sedgwick Ave, New York, N. Y. *Engineering*. Troy, N. Y, Aug. 19, 71. C.E, Rensselaer, 95; LL.B, N. Y. Univ, 09, LL.M, 10, J.D, 11. *Prof. bridge and railway eng*, N. Y. Univ, 05- Civil Eng; Eng. Educ. Bridge and railway engineering.
- Haring, Prof. C(larence) M(elvin)**, University of California, Berkeley, Calif. *Veterinary science*. Freeville, N. Y, June 1, 78. D.V.M, Cornell, 04. Asst. vet. anat, Cornell, 03-04; instr. vet. science and bacter, *California*, 04-06, asst. prof. *vet. science*, 06-12, *prof*, 13-, *director, Exp. Sta*, 20- Lecturer vet. surg, San Francisco Vet. Col, 07-08; capt, V. C, 18-19. A.A; Vet. Med. Ass. (sec'y, 15). Hog cholera; bovine tuberculosis; diseases of poultry.
- Haring, H(orace) E(gbert)**, Bureau of Standards, Washington, D. C. *Chemistry*. Delanco, N. J, Aug. 30, 95. B.S, Franklin and Marshall, 16; A.M, Princeton, 17. Asst. chemist, ordnance dept, 17-19; *Bur. Standards*, 19-20, *assoc. chemist*, 20- Chem. Soc. Electrodeposition.
- Harkins, Prof. W(illiam) D(raper)**, University of Chicago, Chicago, Ill. **Chemistry*. Titusville, Pa, Dec. 28, 73. A.B, Stanford, 00, Ph.D, 08; Chicago, 00, 04; Karlsruhe, 09-10. Asst. chem, Stanford, 98-00, instr, 00; prof, Montana, 00-12; instr, *Chicago*, 12-14, *assoc. prof*, 14-17, *prof*, 17- Research assoc. Mass. Inst. Tech, 10; prof. lecturer, Mellon Inst, 15-17; Illinois, 18-19. A.A; Chem. Soc; Mont. Acad. (sec'y); Chem. Gesell. Molecular rearrangement; chronic poisoning of herbivorous animals by arsenic; excess-potential and the Marsh test; relation between the E.M.F. and the surface tension in the boundary between two liquid phases; electromotive force of a mercury, mercuric oxid, hydrogen cell in fused sodium hydroxide; solubility of triionic salts in solutions of other salts with common and with non-common ions; structure, evolution and stability of atoms; surface energy and entropy; over-voltage; solubility; spectrum of the isotopes of lead; separation of chlorine into isotopes.
- Harkness, Prof. James**, McGill University, Montreal, Can. *Mathematics*. Derby, England, 64. B.A, Cambridge, 85, M.A, 88; M.A, London, 89. Assoc. math, Bryn Mawr, 88-93, *assoc. prof*, 93-96, *prof*, 96-03; *Redpath prof, McGill*, 03- Math. Soc. (assoc. ed, 'Trans,' v. pres, 08-); fel. Royal Soc. Can. Theory of functions; elliptic functions.
- Harlan, Dr. Harry V(aughn)**, U. S. Department of Agriculture, Washington, D. C. *Agriculture*. London Mills, Ill, Feb. 19, 82. B.S, Kansas State, 04, M.S, 09; Sc.D, Minnesota, 14. Instr. agr, Philippine Islands, 05-08; *with barley investigations, bur. plant indust, U. S. Dept. Agr*, 09- Agr. reconnaissance, Titicaca Plateau, 13-14; crop surv, Cent. Europe and Balkans, 19. Soc. Agron; Wash. Acad; Wash. Bot. Soc. Breeding, classification and growth of barley.
- Harman, Dr. Mary T(heresa)**, Kansas State Agricultural College, Manhattan, Kans. *Zoology*. Odon, Ind, Aug. 21, 78. A.B, Indiana, 07, A.M, 09, Ph.D, 12. Instr. *zool*, Pa. State, 07-10; teaching fellow, Indiana, 10-12; instr, *Kansas State*, 12-14, asst. prof, 14-17, *assoc. prof*, 17- Teaching fellow, biol. sta, Indiana, summer, 05, instr. embryo and histol, summers, 06-09, 11, 12. A.A; Soc. Zool; Micros. Soc. Regeneration and cytology; embryology.
- Harned, Prof. Herbert Spencer**, University of Pennsylvania, Philadelphia, Pa. *Physical chemistry*. Camden, N. J, Dec. 2, 88. A.B, Pennsylvania, 09, B.S, 10, fellow, 12-13, Ph.D, 13. Instr. *physical chem, Pennsylvania*, 13-17, *asst. prof*, 17- Lecturer, Pennsylvania, 14- Chem. Soc. Chlorids of columbium; conductance titrations; hydrogen electrode activities of salt solutions; catalysis in liquid systems; gas reactions.
- Harned, Joseph E**, Oakland, Md. *Pharmacy*. Oakland, Dec. 1, 70. Phila. Col. Pharmacy. *Proprietor, Oakland Pharmacy*. A.A; Bot. Soc. Agricultural and systematic botany; flora of the Alleghenies.
- Harned, Prof. R(obey) W(entworth)**, Agricultural College, Miss. *Entomology*. Charles Co, Md, July 16, 84. B.S.(Agr), Ohio State, 06; Cornell, summers, 08, 14. Asst. biologist, *Miss. Agr. Col. and Exp. Sta*, 06-08, *prof. zool. and entom. and entomologist*, 08- Sec'y and exec. officer, Miss. State Plant Board, 18- A.A; Entom. Soc; Ass. Econ. Entom. Economic entomology; insect biologies; insects of Mississippi.
- Harper, Dr. D(aniel) Roberts**, 3d, National Bureau of Standards, Washington, D. C. *Physics*. Ridley Park, Pa, June 17, 85. B.S, Pennsylvania, 05,

- Hector Tyndale fellow, 07-08, Ph.D, 10. Instr. physics, Pennsylvania, 04-09; asst. physicist, Bur. Standards, 09-18; investigator, Bur. Efficiency, 18; *physicist, Bur. Standards*, 19- A.A.; Physical Soc; Wash. Acad; Wash. Philos. Soc; Soc. de Physique. Thermometry and heat measurements; internal combustion engines.
- Harper, Prof. E(ugene) H(oward)**, R. F. D. 2, Bedford, Va. *Zoology*. Port Byron, Ill, July 7, 67. A.B, Oberlin, 90; A.M, Harvard, 95; Ph.D, Chicago, 02. Instr. nat. science, Fargo, 96-99; biol, Alma, 02-04; zool, Northwestern, 04-09, asst. prof, 09-14. Soc. Zool. Fertilization and development of the pigeon's egg; regulation in Stylaria; behavior of Perichaeta, Corethra and Paramecium.
- Harper, Francis**, 3101 24th St, N. E, Washington, D. C. *Vertebrate zoology*. Southbridge, Mass, Nov. 17, 86. A.B, Cornell, 14. Scientific asst., U. S. Fisheries Lab, Beaufort, N. C, 13; asst. zool, Cornell, 13-14; asst. nat. science, Brooklyn Museum, 15; special agent fisheries investigations, N. Y. State Conservation Commission, 16; *asst. biologist, U. S. Biol. Surv.*, 16-17, 19-Zoologist, Can Geol. Surv. exped. to Great Slave Lake, 14; lieut. S. C, A. E. F., 18-19. Soc. Ichthyol. and Herp; Soc. Mammal; mem. Ornith. Union; Wash. Biol. Soc; N. Y. Linnean Soc. (sec'y, 10, 11). Birds of North America and France; fauna of northwestern Canada and Okefinokee swamp; Limicolae; Pelecanoididae; conservation of swamp lands; hygiene.
- Harper, Dr. Henry Winston**, 2216 Rio Grande St, Austin, Tex. **Chemistry*. Boonville, Mo, Sept. 20, 59. Mound City Col, Boonville, 72-74; Ph.G, Phila. Col. Pharmacy, 81; M.D, Virginia, 92, 94; Europe, 97; LL.D, Baylor, 14. Mfg. chemist and perfumer, Ft. Worth, Tex, 81-84; chemist and metallurgist, Colo. and Refugio Mining and Smelting Co, 84-85; Compañía La Imogéña, 86; chemist and pathologist to Drs. Beall and Adams, Ft. Worth, Tex, 87-90; adj. prof. chem, Texas, 94-97, assoc. prof. in charge, sch. of chem, and director, chem. lab, 97-03, *prof. chem, 03-, dean, grad. sch.*, 13-, chemist, Miner. Surv, 01-06. Fifth, Seventh and Eighth Int. Congresses Applied Chem. A.A; Chem. Soc; Electrochem. Soc; Soc. Chem. Indust; Am. Med. Ass; Ass. Prof; fel. Tex. Acad. (pres, 00, v. pres, 01); fel. London Chem. Soc; Chem. Gesell. Pharmacology; geology; pathology; chemistry of fatigue; chemistry of asphalt; amethystine blue; water analysis; analyses of several artesian waters; municipal water supply of El Paso, Tex; the waxes in the candallila plant; bituminous coal distillation; hydrolysis of sawdust; bromids and iodids from deep wells of Texas.
- Harper, Prof. M(errick) W(esley)**, Cornell University, Ithaca, N. Y. *Animal husbandry*. Grove City, Ohio, Oct. 24, 77. B.S, Ohio State, 01; M.S, Illinois, 02. Asst. forage crop investigation, U. S. Dept. Agr, 02-05; asst. *animal husbandry*, Missouri, 03-05; Cornell, 05-06, instr, 06-07, asst. prof, 07-11, *prof.*, 11- A.A. Forage crops for fattening cattle; animal breeding; breeding of horses; training and breaking of horses.
- Harper, Prof. R(obert) A(lmer)**, Columbia University, New York, N. Y. **Botany*. Leclaire, Iowa, Jan. 21, 62. A.B, Oberlin, 86, A.M, 91; Hopkins, 88-89; Ph.D, Bonn, 96. Prof. Greek and Latin, Gates, 86-88; instr. science, Lake Forest Acad, 89-91; prof. bot. and geol, Lake Forest, 91-98; *bot.*, Wisconsin, 98-11; *Torrey prof.*, Columbia, 11- Nat. Acad; A. A. (v. pres, 10); Soc. Nat. (pres, cent. branch, 07, 08, 09); Bot. Soc. (pres, 16); Phytopath. Soc; Ecol. Soc; Philos. Soc; Am. Acad; Bot. Gesell. Physiology of lower plants; cytology of the fungi; fertilization in mildews; cell and nuclear division in slime molds; morphogenesis in the algae.
- Harper, Dr. Roland M(cMillan)**, College Point, N. Y. *Geography, Demography, Ecology*. Farmington, Maine, Aug. 11, 78. B.E, Georgia, 97; Ph.D, Columbia, 05. Forestry collector, Ga. Geol. Surv, 03-04; botanist and geographer, Ala. Geol. Surv, 05-06, 11-13, 19; Fla. State Geol. Surv, 08-10, 14-15; asst. agr. geog, office farm management, U. S. Dept. Agr, 17, 18. A.A; Ass. Geog; Soc. Foresters; New Eng. Bot. Club; Torrey Bot. Club. Taxonomy; native weeds; forestry; distribution and ecology of plants of southern and eastern states; soils; agriculture; illiteracy in the south; classification of occupations; population.
- Harper, W(illiam) E(dmund)**, Dominion Astrophysical Observatory, Victoria, B. C. *Astrophysics*. Bruce Co, Ont, March 20, 78. A.B, Toronto, 06, A.M, 07. Observer, Dominion Observatory, 06-14, astronomer, 14-19; *research astronomer, Dominion Astrophys. Observatory*, 19- Medal, Royal Astron. Soc. Can. Fel. Royal Astron. Soc. Can. Stellar radial velocities; orbits of spectroscopic binaries.
- Harriman, N(orman) F(ollett)**, Union Pacific Laboratory, Omaha, Nebr. *Experimental engineering, Chemistry*. Cameron, Mo, Jan. 12, 73. *Chemist and engineer of tests, U. P. R. R. Co*, 02- Chem. Eng; Soc. Test. Mat; Chem. Soc; Mech. Eng. Testing engineering materials.
- Harrington, Prof. Elmer A(dna)**, Massachusetts Agricultural College, Amherst, Mass. *Physics*. Winchendon, Mass, Oct. 7, 84. A.B, Clark, 05, A.M, 06, Ph.D, 15. Asst. physics, Clark, 05-07; instr, Williams, 09-12; Smith, 12-14; acting prof, North Carolina, 15-16; instr, Michigan, 16-17; lieut. U. S. N, 17-19; asst. prof. *physics*, Clark, 19-20; *prof.*, Mass. Col, 20- A.A; Physical Soc; Physik. Gesell. Sound; the vibrations of a tuning-fork; dielectric constants of water solutions; exterior and interior ballistics; damping coefficient of quartz.
- Harrington, Dr. E(rtle) L(eslie)**, Westinghouse Lamp Co, Bloomfield, N. J. *Physics*. Bucklin, Mo, March 7, 87. B.S, Missouri, 10, A.B, 11; A.M, Harvard, 15; Ph.D, Chicago, 16. Supt. schools, 10-11; head, dept. physics, State Teachers Col, Mo, 11-17; instr. physics, Chicago, 18; *research physicist, Westinghouse Lamp Co*, 18- Mo. Sci. and Math. Soc. (pres, 14). Coefficient of viscosity of air.
- Harrington, Geo(rge) T(raver)**, Rock Ridge, Greenwich, Conn. *Botany*. Randolph Center, Vt, Oct. 18, 85. B.S, Vermont, 09; B.S, George Washington, 12; Wisconsin; Chicago. Scientific asst, seed lab, U. S. Dept. Agr, 09-20; *man-*

- ager, estate and grounds, 20- Teacher bot, George Washington, 12-19. A.A.; Wash. Bot. Soc. Physiology and germination of seeds.
- Harris, Dr. A(bram) W(inegardner)**, 150 Fifth Ave, New York, N. Y. *Agriculture*. Philadelphia, Pa, Nov. 7, 58. A.B., Wesleyan, 80, A.M., 83, LL.D., 04. Sc.D., Bowdoin, 94; LL.D., New Brunswick, 00; Maine, 01. Tutor math. and registrar, Wesleyan, 81-84, instr. hist., 84-88; asst. director, office of exp. stations, U. S. Dept. Agr., 88-91, director, 91-93; pres, Maine, 93-01; director, Tome Inst., 01-06; pres, Northwestern, 06-16; *cor. sec'y, Board of Educ, M. E. Church*, 16- A.A.
- Harris, Dr. Clarence P(eavy)**, Tower Manufacturing Co, New York, N. Y. *Chemistry*. Danbury, Conn, Sept. 18, 91. Chemist, Columbia, 14, A.M., 15, Ph.D., 17. *Chief chemist, Tower Mfg. Co.* Chem. Soc. Syntheses in the terpene field.
- Harris, Prof. David Fraser**, 80 S. Park St, Halifax, N. S., Can. *Physiology*. Edinburgh, Scotland, Feb. 24, 67. Edinburgh; M.B., C.M., Glasgow, 93, M.D., 95; B.Sc., London, 99; Sc.D., Birmingham, 11; Berne; Zürich; Jena. Muirhead demonstrator physiol., Glasgow, 95; lecturer, St. Andrews, 98-08; Birmingham, 09; *prof. physiol. and histol., Dalhousie*, 11-Armistead lecturer, Dundee, 95; Thomson lecturer nat. science, Aberdeen, 11; hygiene, St. Andrews; Birmingham, 09; Queen's (Can), 13; univ. representative, Med. Council of Can., 12. Fel. Edinburgh Royal Soc; Scottish Micros. Soc. (pres, 08-09); London Biochem. Soc; N. S. Inst. (v. pres, 14). Neuromuscular periodicities; reducing powers of tissues; physiological inertia in protoplasm; consciousness as a cause of neural activity; history of physiology.
- Harris, Dr. D(owney) L(amar)**, Metropolitan Building, St. Louis, Mo. *Pathology*. Franklin, Ky, April 26, 75. M.D., Michigan, 99. Pathologist, St. Louis City Hosp. and city bacteriologist, St. Louis, 06-13; prof. hygiene and prev. med., St. Louis, 13-16. Major, M.C., 18-19. Ass. Path. and Bact; Soc. Bact. Rabies.
- Harris, Prof. F(ranklin) S(tewart)**, Experiment Station, Logan, Utah. *Agronomy*. Benjamin, Utah, Aug. 29, 84. B.S., Brigham Young, 07; Ph.D., Cornell, 11. Instr. science, Juarez Acad, Mex, 04-05; asst. agr. chem, Brigham Young, 06-07; asst. chemist, Utah Exp. Sta., 07-08; asst. soils, Cornell, 09-10, instr., 10-11; *prof. agron, Utah Col, and agronomist, Exp. Sta.*, 11-, *director*, 16- Director, sch. agr. eng, Utah Col, 12-16. Chairman, sect. agr. eng, Int. Dry Farming Cong, 12-14. A.A.; Soc. Agron. (pres, Cornell sect, 10-11, v. pres, 19, pres, 20); Soc. Agr. Eng. (councilor, 15); Farm Econ. Ass; Ass. Sugar Beet Agr; fel. Utah Acad. (pres, 16). Irrigation; dry farming; sugar beets; soils.
- Harris, Prof. G(ilbert) D(ennison)**, Cornell University, Ithaca, N. Y. **Paleontology, Stratigraphy*. Ellicott, N. Y., Oct. 2, 64. Ph.B., Cornell, 86, 86-87. Asst. Ark. Geol. Surv., 87-88; U. S. Geol. Surv., 88-92; Tex. Geol. Surv., 92-93; asst. prof. paleont, Cornell, 94-97, *paleont. and stratig.*, 97-09, *prof.*, 09- State geologist, La., 98-09; ed. and publisher, 'Bulletins Am. Paleont'; 'Paleont. Americana.' A.A.; Paleont.
- Soc; Geol. Soc; Soc. géol. de France. Paleontology and stratigraphy of the Gulf Tertiaries.
- Harris, Prof. Gorham W(aller)**, 47 Churchill St, Newtonville, Mass. *Chemistry*. Providence, R. I., Jan. 7, 85. A.B., Harvard, 07, A.M., 09, Ph.D., 15. Asst. and teaching fellow *chem*, Harvard, 08-10; instr, *Simmons*, 10-13, *asst. prof.*, 14-A.A.; Chem. Soc. Floating equilibrium.
- Harris, Harry**, U. S. Post Office, Kansas City, Mo. *Ornithology*. Moberly, Mo, April 17, 78. Michigan; Washington (St. Louis). Commercial artist, 99-02; *cashier, Kansas City Post Office*, 02- Mem. Ornith. Union; Cooper Ornith. Club; Wilson Ornith. Club; St. Louis Acad. Birds of the Kansas City region.
- Harris, Prof. H(enry) F(auntleroy)**, Wesley Road, Atlanta, Ga. *Pathology*. Chambers Co, Ala, March 10, 67. Private schools; M.D., Atlanta Med. Col., 89; M.D., Jefferson Med. Col., 90. Prof. chem, South. Med. Col., 92-95; assoc. prof. path. and bacter, Jefferson Med. Col., 96-01; Col. Physicians and Surg, Atlanta, 02-10; sec'y and director, laboratories, Ga. State Board of Health, 03-17. Ass. Path. and Bact; Soc. Trop. Med. Bacteriology; effects of drugs-on tissue; pellagra; amebic dysentery; hookworms.
- Harris, Isaac F(aust)**, Tuckahoe, N. Y. *Chemistry*. Chapel Hill, N. C. B.S., North Carolina, 00, M.S., 02; Ph.D., Yale, 15. Chemist, Conn. Exp. Sta. and Carnegie research student, 01-07; *director, Lederle Antitoxin Lab*, 07-12; Arlington Research Laboratories, 12-15; dept. biochem, E. R. Squibb and Sons, 16-19; *Harris Laboratories*, 20- Chem. Soc; Soc. Exp. Biol; Pub. Health Ass. Physiological chemistry; vegetable proteins and their decomposition products; blood serum immunity; vitamins.
- Harris, Dr. J(ames) Arthur**, Cold Spring Harbor, N. Y. **Botany, Zoology*. Plantsville, Ohio, Sept. 29, 80. A.B., Kansas, 01, A.M., 02; Ph.D., Washington (St. Louis), 03. Asst. bot, Mo. Bot. Garden, 01-03; instr, Washington (St. Louis), 03-07; librarian, Mo. Bot. Garden, 04-07; *bot. investigator, sta. for exp. evolution, Carnegie Institution*, 07- Instr. bot, summer sch, Kansas, 00, 01. A.A.; Soc. Nat. (treas, 15-20); Soc. Exp. Biol; Bot. Soc; Ecol. Soc; Statist. Ass; Meteorol. Soc. Plant and animal ecology and geographical distribution; experimental evolution; biometry.
- Harris, Dr. J(ames) E(imer)**, 211 Park Ave, East Orange, N. J. *Chemistry*. Larned, Kans, Nov. 5, 82. A.B., Michigan, 08, M.S., 09, Ph.D., 11. Instr, high sch, Bay City, Mich, 04-07; asst. physics, Michigan. 08-11, instr, chem, 11-17; *research chemist, West. Elect. Co.*, 17- Research chemist, Mich. Exp. Sta, summers, 10-14. Chem. Soc. Physical and soil chemistry; elastic properties of bismuth wires; lime-sulphur compounds; adsorption in soils and kaolin; soil acidity; selective adsorption in suspension colloids.
- Harris, Dr. Norman Mac L(eod)**, 577 Jarvis St, Toronto, Canada. *Bacteriology*. Montreal, Can, Feb. 3, 70. M.B., Toronto, 94. Demonstrator bacter, Toronto, 96-97; asst. path, Hopkins, 97-98, bacter, 98-99, instr, 99-00, assoc, 00-03; instr, Chicago, 03-07, asst. prof, 07. A.A.; Ass. Path. and Bact; Soc. Bact. (sec'y and treas.

- 08); Pub. Health Ass. Typhoid fever; gonorrheal infections; B. mortiferus; milk sickness.
- Harris, Prof. W(alter) B(utler)**, Greenholm, Princeton, N. J. *Civil engineering*. Princeton, July 13, 65. C.E. Col. of New Jersey, 86. Asst. engineer, Cent. R. R. of N. J., 89; instr. civil eng., *Princeton, prof. geod.*, 98— Township engineer; pres, Board of Health; borough engineer. Protection of New Jersey shore.
- Harris, Prof. W(illiam) H(erbert)**, P. O. Station 20, New Orleans, La. *Pathology*. Chillicothe, Ohio, Oct. 6, 85. A.B., Tulane, 02, M.D., 07. *Asst. prof. path. med. dept. Tulane*, 15—, *prof. post-grad. med. dept.*, 17— Acting asst. surgeon, U. S. Pub. Health Service, 09. Ass. Path. and Bact.; Am. Med. Ass. Pellagra; leprosy; experimental emphysema; influenza.
- Harrison, Prof. B(ruce) M(agill)**, Iowa State College, Ames, Iowa. *Zoology*. Ottawa, Kans., March 29, 81. B.S., Ottawa (Kans.), 05; M.S., Illinois, 08; Chicago. *Asst. zool.*, Illinois, 08; instr., *Iowa State*, 12–15, *asst. prof.*, 15— *Asst. state entomologist*, Iowa, summers, 17, 18. A.A.; Iowa Acad. Separation of diastase from organic materials and from catalase.
- Harrison, Prof. F(rancis) C(harles)**, Macdonald College, P. Q., Can. *Bacteriology*. London, 89; B.S.A., Toronto, 92; Cornell, 92; Wisconsin, 93; Berne, 99–00; Copenhagen, 00; Sc.D., McGill, 07. *Prof. bacter.*, Ont. Agr. Col., 96–05; *MacDonald Col., McGill*, 05—, *principal*, 08— *Soc. Bact.* (v. pres, 14, 20); Pub. Health Ass; fel. Royal Soc. Can. (pres, sect. V, 19). Agricultural, dairy and food bacteriology; aesculin media; biology of *Pseudomonas radiclecola*.
- Harrison, Prof. J(ohn) B(urchmore)**, Government Laboratory, Georgetown, British Guiana. *Chemistry, Geology, Agriculture*. Birmingham, England, May 29, 56. A.B., Christ's Col., Cambridge, England, 77, A.M., 87. Island prof. chem. and agr. science, Barbados, B.W.I., 79–89; *govt. analyst and geologist and prof. chem., British Guiana*, 89—, *director science and agr.*, 05—; mem. exec. council. 18. Wollaston award, London Geol. Soc., 89; Companion of St. Michael and St. George, 91. A.A.; Geol. Soc.; Chem. Soc.; fel. London Chem. Soc.; London Geol. Soc.; Inst. Chem. Gt. Britain and Ireland; British Soc. Pub. Analysts. Tropical agricultural chemistry; the oceanic deposits and coral rocks of the West Indies; the geology of the Guianas; tropical products; the geological structure and petrography of British Guiana; igneous rocks in relation to soil formation in the tropics.
- Harrison, Prof. Julia Peachy**, Skidmore School of Arts, Saratoga Springs, N. Y. *Chemistry*. Richmond, Va., April 30, 86. A.B., Richmond, 07, B.S., 08, A.M., 09; Ph.D., Hopkins, 12, Carnegie fellow, 12–13; fellow, Bryn Mawr, 13–14. Reader chem., Bryn Mawr, 14–15; head, chem. dept., Sweet Briar, 15–16; Agnes Scott, 16–18; *asst. prof. chem.*, Carnegie Inst. Tech., 18–20; *head of dept., Skidmore Sch.*, 20— *Chem. Soc.* Physical and organic chemistry.
- Harrison, Dr. M(arion) M(yrl)**, Miller Rubber Co., Akron, Ohio. *Chemistry*. Owensboro, Ky., March 27, 90. B.S., Ky. State, 12; A.M., Clark, 13; research chemist, *Miller Rubber Co.*, 15–18, *chief chemist*, 19— Capt., C. W. S., 18. A.A.; Chem. Soc. Physico-organic chemistry; chemical dynamics.
- Harrison, Dr. R(oss) G(ranville)**, Osborn Zoological Laboratory, New Haven, Conn. *Zoology, Anatomy*. Germantown, Pa., Jan. 13, 70. A.B., Hopkins, 89, Ph.D., 94; M.D., Bonn, 99; hon. A.M., Yale, 07. Lecturer morphol., Bryn Mawr, 94–95; instr. anat., Hopkins, 96–97, assoc., 97–99, assoc. prof., 99–07; *prof. comp. anat.*, Yale, 07— Managing ed., 'Jour. Exp. Zool.'; co-ed., 'Jour. Morphol.', 07–10; trustee, Woods Hole, 08— Archduke Ranier medal, Austrian Zool. and Bot. Soc., 14. Nat. Acad; A.A.; Soc. Nat. (sec'y, 01–03, pres, 13); Ass. Anat. (pres, 12); Soc. Zool. (mem. exec. committee, 02, 10–13); Soc. Exp. Biol.; Physiol. Soc.; Philos. Soc.; Anat. Gesell. Development of fins of fishes; the histogenesis of the peripheral nervous system; transplantation in amphibian larvae; development of the lateral line in Amphibia; relation of the nervous system to muscle differentiation in the embryo; development and regeneration of peripheral nerves; cultivation of tissues outside the organism; organic symmetry.
- Harrow, Dr. B(enjamin)**, 437 W. 59th St., New York, N. Y. *Biochemistry*. London, England, Aug. 25, 88. B.S., Columbia, 11, A.M., 12, Ph.D., 13. *Asst. org. chem.*, Clark, 11; *biochem.*, Columbia, 12–13; *asst. prof.*, Fordham, 13–14; *assoc.*, Columbia, 14— A.A.; Chem. Soc. Plant pigments; urine and blood analysis; dental chemistry; vitamins; history of chemistry; relativity.
- Harshbarger, Prof. W(illiam) A(sbury)**, 1401 College Ave., Topeka, Kans. *Mathematics, Botany, Entomology*. Brandonville, W. Va., Sept. 1, 62. B.S., Washburn, 93, Sc.D., 19; Chicago, 95–96. Instr. bot., *Washburn*, 93–94, *prof. math.*, 95— Instr. math., Kansas, summer, 09. Math. Soc.; Math. Ass. (pres. Kans. sect, 19); Kans. Acad. (v. pres. and pres); Kans. Ass. Math. Teachers (pres, 08). Genetics; mathematical pedagogy.
- Harshberger, Prof. John W(illiam)**, University of Pennsylvania, Philadelphia, Pa. *Botany*. Philadelphia, Jan. 1, 69. B.S., Pennsylvania, 92, Ph.D., 93. Instr. bot. and zool., *Pennsylvania*, 92–07, *asst. prof. bot.*, 07–10, *prof.*, 11— Teacher, Rittenhouse Acad., 92–95; ed. bot. words, 'Lippincott's New English Dict.', 95—; lecturer, Am. Soc. of Univ. Extension, 96; prof. in charge nature study, Pocono Pines Summer Sch., 03–08; in charge bot. biol. lab., Cold Spring Harbor, 13—; mem. Int. Commission on Phyto-geog., 10. A.A.; Soc. Nat.; Bot. Soc.; Ecol. Soc. (v. pres, 17); Am. Geog. Soc.; Forestry Ass; Philos. Soc.; Pa. Bot. Soc. (treas); Pa. Forestry Ass; Phila. Acad. (recorder, bot. sect); Phila. Geog. Soc.; Phila. Bot. Club. Plant pathology; mycology; maize; clovers; ethnobotany; ecology of New Jersey strand flora, Valley of Mexico, southeastern Pennsylvania, Mt. Katahdin (Maine) and the mountains of North Carolina; vegetation of North America; pine barrens of New Jersey.
- Harshman, Prof. Walter Scott**, Navy Department, Washington, D. C. *Astronomy*. North Jackson, Ohio, July 19, 59. B.S., Ohio Northern,

- 83, C.E. 84; Cornell, 88-90; M.S., George Washington, 92, Ph.D. 94; Hopkins, 92-93. *Prof. math. and astron.*, Tri-State Nor. Col., 84-85; Am. Nor. Col., 85-88; applied math., George Washington, 00-07; *math.*, Navy Dept., 00-; Director, 'Nautical Almanac' Office, 01-07. Celestial mechanics; orbits of satellites.
- Hart, Prof. Edward**, Easton, Pa. **Chemistry*. Doylestown, Pa., Nov. 18, 54. B.S., Lafayette, 73; fellow, Hopkins, 76-77, Ph.D., 78. Asst. chem., Lafayette, 74-75, tutor, 75-76, adj. prof., 77-82, *prof.*, 82-, *dean*, Pardee Sci. Dept., 09-Ed., 'Jour. Anal. Chem.', 87-93; consulting chemist. John Scott medal and premium. A.A. (sec'y, C, 89, v. pres, 93); Chem. Soc. (ed, 'Jour.', 92-01); Electrochem. Soc.; Chem. Eng.; Min. Eng.; Franklin Inst.; Ceramic Soc.; Chem. Gesell. Volumetric analysis; new processes for the manufacture of nitric and hydrochloric acids; the nitrosulphobenzoic acids; alloys of glucinium; electric combustion; manufacturing chemistry.
- Hart, Prof. Edwin Bret**, University of Wisconsin, Madison, Wis. *Chemistry*. Sandusky, Ohio, Dec. 25, 74. B.S., Michigan, 97; Marburg and Heidelberg, 00-01. Asst. chemist, N. Y. Agr. Exp. Sta., Geneva, 97-02; assoc. chemist, 02-06; *prof. agr.-chem.*, Wisconsin, and *chemist*, Wis. Exp. Sta., 06- A.A.; Chem. Soc.; Soc. Biol. Chem. Animal nutrition; protein decomposition products; dairy chemistry; plant and animal chemistry; chemistry of cheese ripening; nutrient value of organic nutrients from various plant sources; organic phosphorus compounds of plants.
- Hart, Prof. George H.**, University of California, Berkeley, Calif. *Veterinary science*. Philadelphia, Pa., Oct. 10, 83. D.V.M., Pennsylvania, 03; M.D., George Washington, 08. Asst. bacter. and path., bur. animal indust., U. S. Dept. Agr., 03-08, field worker, 08-10; city veterinarian, Los Angeles, Calif., 10-17; *assoc. prof. vet. science*, California, 17- Vet. Med. Ass.; Calif. Acad. Animal pathology, bacteriology and immunology; dairy bacteriology.
- Hart, Prof. J(ames) N(orris)**, Orono, Maine. *Mathematics, Astronomy*. Willimantic, Maine, May 22, 61. B.C.E., Maine, 85, C.E., 90, hon. Sc.D., 08; M.S., Chicago, 97. Instr. math. and drawing, Maine, 87-90, *prof. math. and astron.*, 91-, *dean*, 03- A.A.; Math. Soc.; Astron. Soc.
- Hart, Prof. T(heodore) Stuart**, 160 W. 59th St., New York, N. Y. *Medicine*. Farmington, Conn., Feb. 25, 69. A.B., Yale, 91, A.M., 93; M.D., Columbia, 95. Instr. *clin. med.*, Columbia, 03-09, *assoc.*, 09-13, *asst. prof.*, 13- Visiting physician, Seton Hosp., N. Y. City, 01-11; Presb. Hosp., 11-; Briddon medal, 04; cardiovascular consultant, U.S.A. Aviation Exam. Board, 17-18. A.A.; Am. Physicians; Am. Med. Ass.; Soc. Clin. Invest.; Harvey Soc.; Ass. Prev. Heart Disease (v. pres). Disorders of the cardiovascular system; abnormalities of metabolism.
- Harte, Prof. Richard H(ickman)**, 1503 Spruce St., Philadelphia, Pa. *Surgery*. Rock Island, Ill., Oct. 23, 55. M.D., Pennsylvania, 78. Surgeon and later *emer. surgeon*, Pa. Hosp., 94-; surgeon, Orthop. Hosp., 04; adj. prof. surg., Pennsylvania, 04. Fel. Surg. Ass.; Phila. Col. Physicians (treas.). Epiphysal separations in bones; perforation of intestines following typhoid fever; hemorrhage in typhoid fever.
- Harter, Dr. L(eonard) L(ee)**, U. S. Department of Agriculture, Washington, D. C. *Botany*. Moulton, Iowa, Feb. 2, 75. A.B., Nebraska, 03, A.M., 05; Ph.D., George Washington, 17. Scientific asst., U. S. Dept. Agr., 04-06, asst. physiologist, 06-08, asst. pathologist, 08-12, *pathologist*, 12- A.A.; Bot. Soc.; Phytopath. Soc.; Wash. Bot. Soc. Life history of fungi; storage rot of fungi.
- Hartley, Carl**, Instituut voor Plantenziekten, Buitenzorg, Java. *Botany*. Lincoln, Nebr., April 7, 87. A.B., Nebraska, 07, A.M., 09; Ph.D., California, 20. Asst. plant path., W. Va. Exp. Sta., 07; plant ecol., Minn. Geol. and Nat. Hist. Surv., 08; scientific asst., bur. plant indust., U. S. Dept. Agr., 09-10, asst. pathologist, 11-14, forest pathologist, 14-19; *pathologist*, Inst. voor Plantenziekten, Java, 19- A.A.; Phytopath. Soc.; Wash. Bot. Soc. Non-parasitic tree diseases; diseases of forest nursery stock; soil disinfection.
- Hartley, C(harles) P(ickney)**, 3420 Center St., N. W., Washington, D. C. *Agriculture*. Osgood, Ind., July 7, 70. B.S., Kansas State, 92, M.S., 99. Asst. hort., Kansas State, 97-99; asst. physiologist, U. S. Dept. Agr., 99-06, *physiologist in charge of corn investigations*, 06- A.A.; Wash. Bot. Soc. Plant breeding and physiology; premature pollination; improvement in yields per acre of corn crop; corn breeding and culture; crop rotation; methods of corn improvement, of corn breeding and of increasing the yield.
- Hartley, Ralph V(inton) L(yon)**, 556 Park Ave., East Orange, N. J. *Electrical engineering*. Spruce, Nev., Nov. 30, 88. A.B., Utah, 09; B.A., Oxford, 12, B.Sc., 13. Instr. physics, Nevada, 09-10; *research engineer*, West. Elec. Co., 13- Elec. Eng.; assoc. Physical Soc.; Radio Eng. Telephony; telegraphy; use of vacuum tubes in communication.
- Hartman, Prof. Carl G.**, University Station, Austin, Tex. *Embryology, Physiology*. June 3, 79. A.B., A.M., Texas, 04, Ph.D., 15. Co. supt. pub. instr., Austin, Tex., 04-09; prof. biol., Sam Houston State Nor. Inst., 09-12; instr. and later *assoc. prof. zool.*, Texas, 12- Fellow, Wistar Inst., 17-18. A.A.; Soc. Zool. Habits of solitary wasps; embryology of the opossum; physiology of reproduction in mammals.
- Hartman, Prof. Frank A(lexander)**, 24 High St., Buffalo, N. Y. *Physiology*. Gibbon, Nebr., Dec. 4, 84. A.B., Kansas, 05, A.M., 09; Ph.D., Washington (Seattle), 14. Teacher science, high sch., Beardstown, Ill., 06; head, dept. biol., Wichita, Kans., 06-08; instr. biol., Queen Anne High Sch., Seattle, 09-14; Austin teaching fellow *physiol.*, Harvard Med. Sch., 14-15; lecturer, Toronto, 15-18, asst. prof., 18-19; *prof.*, Buffalo, 19- A.A.; Physiol. Soc. Endocrinology.
- Hartman, Dr. L(eon) W(ilson)**, 215 Maple St., Reno, Nev. *Physics*. Downsview, N. Y., June 18, 76. B.S., Cornell, 98, A.M., 99; Frazer fellow, Pennsylvania, 02-03, Ph.D., 03, Tyndale fellow (Göttingen), 03-04. Asst. physics, Cornell, 00-01; prof., Kansas State, 01-02; instr.,

Cornell, 04-05; asst. prof, Utah, 05-06, assoc. prof, 06-09; *prof, Nevada*, 09- A.A.; Physical Soc; Illum. Eng. Soc; Utah Acad. Pyrometry; spectrophotometric studies on Nernst lamp glowers and on mixtures of acetylene and hydrogen; acetylene; the radiation from black bodies in air; conduction and convection losses of black filaments in air; visibility in the blue end of the spectrum.

Hartmann, Dr. M(iner) L(ouis), 3006 McKoon Ave, Niagara Falls, N. Y. *Physical chemistry*. Hutchinson, Kans, July 14, 89. B.S, Arizona, 11; Ph.D, Harvard, 15. Asst. instr. chem, Illinois, 11-12; Austin teaching fellow, Harvard, 12-14; instr. physical chem, Missouri, 14-15; prof. chem, S. Dak. Sch. Mines, 15-18; *director, research lab, Carborundum Co*, 18- Chem. Soc; Electrochem. Soc. Theoretical electrochemistry; chemistry and metallurgy of tungsten; atomic weights; electric furnaces; refractories; abrasives.

Hartnagel, C(hris) A(ndrew), State Museum, Albany, N. Y. *Geology*. Newark, N. Y, Sept. 5, 74. B.S, Union, 98; Ph.B, N. Y. State Nor. Col, 00; fellow, Columbia, 04-05, A.M, 05. Examiner science, State Educ. Dept, N. Y, 00-01; N. Y. Geol. Surv, 01-02; teacher, high schools, Hornell and Niagara Falls, N. Y, 02-04; asst. econ. geol, N. Y. *Geol. Surv*, 05-08, geol, 08-20, *asst. state geologist*, 20- Curator stratigraphy, N. Y. State Museum. A.A.; Paleont. Soc; Geol. Soc. Economic geology; stratigraphy; stratigraphy of the Silurian of New York; Clinton iron ores; geology of western New York.

Hartness, James, Springfield, Vt. *Metal working*. Schenectady, N. Y, Sept. 3, 61. Pub. schools. *Pres, Jones J. Lamson Machine Co*, 02- A.A. (sec'y, D); Mech. Eng; Astron. Soc; British Inst. Mech. Eng. Machine building; the flat turret lathe.

Harts, Col. W(illiam) W(right), U. S. A, War Department, Washington, D. C. *Civil and military engineering*. Springfield, Ill, Aug. 29, 66. Grad, U. S. Mil. Acad, 89; Eng. Sch. of Application, 92; Army War Col, 12; A.M, Princeton, 13. *Officer, corps of engineers, U.S.A*, 89- Rowland prize, Civil Eng; Telford medal, London Inst. Civil Eng. Chevalier Légion d'honneur; ordre de Léopold; K.C.M.G; officier ordre de Danilo II. Hon. mem. Am. Inst. Archit. Waterway engineering; building and park construction.

Hartson, Prof. Louis D(unton), Grinnell, Iowa. *Psychology*. Anamosa, Iowa, Nov. 24, 85. Ph.B, Grinnell, 08; Pd.M, N. Y. Univ, 09; Columbia, 09-10; Ph.D, Clark, 11. Instr. *psychol. and educ*, Grinnell, 11-13, asst. prof, 13-16, *assoc. prof*, 16- Instr, French Army, 18-19. Psychol. Ass; Soc. Col. Teachers Educ. Social and educational psychology.

Hartwell, Dr. Burt L(aws), Kingston, R. I. *Chemistry, Plant physiology*. Littleton, Mass, Dec. 18, 65. B.S, Boston, 89; M.S, Mass. Col, 00; Ph.D, Pennsylvania, 03. Asst. chemist, Mass. Exp. Sta, 89-91; first asst. chemist, *R. I. Exp. Sta*, 91-03, assoc. chemist, 03-07, *chemist*, 07-, *director*, 12-, *agronomist*, 13-, *prof. agr. chem*, R. I. Col, 08- A.A.; Chem. Soc; Soc.

Prom. Agr. Sci; Soc. Agron; Agr. Chem. Separation of rare elements by organic bases; effect of sodium on plant growth and composition; poultry nutrition; plant nutrition and toxicology; crop-rotation; soil acidity; optimum nutrient requirements of crops; availability of fertilizer materials and soil amendments.

Hartwell, Dr. John A(ugustus), 27 E. 63d St, New York, N. Y. *Medicine*. Sussex, N. J, Sept. 27, 69. Ph.B, Yale, 89, M.D, 92. Demonstrator anat. and asst. prof. physiol, *med. col*, Cornell, 98-09, *clin. prof. and assoc. prof. surg*, 09-; *director Cornell div, Bellevue Hosp*. Consulting surgeon, Lincoln Hosp, N. Y. City, 97-; Mem. Hosp; Lawrence Hosp; United Hosp. Fel. Surg. Ass; Col. Surg; Soc. Clin. Surg; Soc. Exp. Biol; N. Y. Acad. Med.

Hartzell, Albert, Iowa State College, Ames, Iowa. *Entomology*. Easton, Pa, Sept. 2, 91. B.S, Cornell, 16, M.S, 17. Fellow, *Iowa State*, 17, asst. *entom*, 17, *instr*, 18- Field asst, Pa. State, 17. Ass. Econ. Entom; Iowa Acad. Chigger mites; leaf hoppers.

Hartzell, F(rederick) Z(eller), 321 W. Main St, Fredonia, N. Y. *Entomology*. Easton, Pa, Dec. 11, 79. A.B, Lafayette, 05; A.M, Cornell, 09. Field asst; div. zool, Pa. Dept. Agr, 06-08; asst. entomologist, *N. Y. Exp. Sta, Geneva*, 09-12, *assoc. entomologist*, 12- A.A.; Entom. Soc; Ass. Econ. Entom; Chem. Soc. Economic entomology; insect control; grape insects; variation and growth in insects.

Hartzell, Dr. J(oseph) Culver, Blue Ash, Ohio. *Chemistry, Metallurgy*. New Orleans, La, Sept. 10, 70. B.S, Chattanooga, 92, M.S, 95; Harvard, summer, 96; Hopkins, 96-98; Yale, 98-99, M.S, 99; M.D, Columbia, 01; Munich, summer, 03, Ph.D, 04; Pisa, 03-04. Prof. geol, Ill. Wesleyan, 99-04; geol. and chem, Pacific (Calif), 04-10; consulting engineer, 10-13; Ill. Malleable Iron Co, 13-14; research, 14-18; chief chemist, Cincinnati Milling Machine Co, 18-20; *metallurgist*, Dalton Adding Machine Co, 20; *Vietor Safe and Lock Co*, 20- A.A.; Chem. Soc; Soc. Steel Treating; Am. Mus. Nat. Hist. Conditions of fossilization; upper Devonian of Europe and North America; the geochemistry of the waters of Santa Clara Valley, Calif; metallography; heat treatment and composition of high-speed steels.

Harvey, Dr. Basil C(oleman) H(yatt), University of Chicago, Chicago, Ill. *Anatomy*. Watford, Ont, Jan. 16, 75. A.B, Toronto, 94, M.D, 98; licentiate, N. S. Nor. Col, 95. *Anat. anat*, Toronto, 95-97; *Chicago*, 01-02, assoc, 02-04, instr, 04-08, asst. prof, 08-11, assoc. prof, 11-17, *prof*, 17- Officer, M.C, 17-19. A.A; Ass. Anat. Gastric mucosa; hypophysis.

Harvey, Prof. E(dmund) Newton, Guyot Hall, Princeton, N. J. **Physiology, Biological chemistry*. Germantown, Pa, Nov. 25, 87. B.S, Pennsylvania, 09; Ph.D, Columbia, 11. Instr. *physiol*, Princeton, 11-16, *asst. prof*, 16- Mem. Carnegie Institution exped. to Great Barrier Reef, 13-14. A.A; Soc. Nat; Physiol. Soc; Soc. Exp. Biol; Soc. Biol. Chem. Light production by animals; permeability of cells; oxidation; rate of nerve impulse.

- Harvey, Mrs. E(dmund) Newton (Dr. Ethel Browne)**, Princeton, N. J. *Biology*. Baltimore, Md., Dec. 14, 85. A.B. Goucher, 06, fellow, 06-07; A.M. Columbia, 07, Ph.D. 13; fellow by courtesy, California, 14-15; Sarah Berliner fellow, 14-15. Instr. science, Bennett Sch., Millbrook, N. Y. 08-11; asst. biol. Princeton, 12-13; instr. biol. Dana Hall, Wellesley, Mass. 13-14; asst. histol. med. col. Cornell, 15-16. Soc. Nat. Experimental zoology; cytology.
- Harvey, Prof. E(dward) Maris**, Oregon Agricultural College, Corvallis, Oregon. *Plant physiology*. Galena, Kans. March 20, 88. A.B. Friends, 10; Ph.D. Chicago, 14. Acting prof. biol. William and Mary, 11-12; scientific asst. bur. plant indust. U. S. Dept. Agr. 14-18; *prof. hort. research, Oregon Col.* 19- Research asst. desert lab. Carnegie Institution, summer, 12. A.A.; Bot. Soc.; Ecol. Soc.; Chem. Soc. Horticulture; plant ecology and nutrition; physiological chemistry; transpiration; metabolism; nitrate-carbohydrate ratio in fruit trees.
- Harvey, Dr. Frederic A(ddison)**, Semet-Solvay Co, Syracuse, N. Y. *Physics*. Kellogg, Iowa, June 3, 82. B.S. Grinnell, 04; Whiting fellow, California, 08-09, Ph.D. 09. Instr. physics, Grinnell, 09-10; Syracuse, 10-11, asst. prof. 11-14, assoc. prof. 14-16; *physicist, Solvay Co.* 12-A.A.; assoc. Physical Soc.; Chem. Soc. Atmospheric radioactivity; electrical conductivity of solutions; pyrometry; refractories.
- Harvey, Prof. Le Roy H(arris)**, Western State Normal School, Kalamazoo, Mich. *Botany*. Fayetteville, Ark. Sept. 25, 79. B.S. Maine, 01, M.S. 05; Ph.D. Chicago, 08. *Prof. biol.* Morningside, 03-04; Yankton, 04-07; *Mich. West. State Nor. Sch.* 08- Instr. biol. Chicago, summers, 08, 17. A.A.; Bot. Soc.; Ecol. Soc.; Mich. Acad. (v. pres, 17, pres, 18). Plant ecology.
- Harvey, Prof. Nathan A(lbert)**, 1029 Ellis St, Ypsilanti, Mich. *Psychology, Pedagogy*. Toledo, Ill. 60. Illinois, 90; A.B. Ill. Wesleyan, 96, Ph.D. 00. Teacher zool. high sch. Kansas City, Mo. 90-96; head, dept. science, State Nor. Sch. Superior, Wis. 96-00; v. principal, Chicago Nor. Sch. 00-04; *prof. pedag.* Mich. State Nor. Col. 04- A.A.; Psychol. Ass.; Mich. Acad. Principles of teaching; elementary psychology; zoology; fresh water sponges of St. Louis Bay; individual differences.
- Harvey, Dr. R(odney) B(eecher)**, University of Minnesota, Minneapolis, Minn. *Plant physiology*. Monroeville, Ind. May 26, 90. Ph.C. Purdue, 12; B.S. Michigan, 15; Ph.D. Chicago, 18. Asst. botanist, Eli Lilly and Co, 12-13; asst. bot. Michigan, 15; microanalyst, bur. plant indust. U. S. Dept. Agr. 15-19, physiologist, 19-20; *asst. prof. plant physiol.* Minnesota and Exp. Sta. 20- A.A.; Bot. Soc.; Chem. Soc.; Wash. Bot. Soc.; Wash. Acad. Absorption of electrolytes; enzymes of respiration; physiological reactions of protoplasm to low temperature.
- Harvey, Dr. Samuel Clark**, Yale University, New Haven, Conn. *Surgery*. Washington, Conn. Feb. 12, 86. Ph.B. Yale, 07, M.D. 11; Alonzo Clark fellow, Columbia, 12-13. Instr. path. Columbia, 12-13; asst. physician, Loomis Sanatorium, 13-14; house officer, surg. Peter Bent Brigham Hosp. 14-15, Arthur Tracy Cabot fellow in charge, lab. surg. research, Harvard, 15-16, asst. surg. Peter Bent Brigham Hosp. 16-17; lieut. capt. and major, M.C. 17-19; *surgeon, New Haven Hosp.* 19-, instr. surg. Yale, 19-20; *asst. prof.* 20- A.A. Experimental surgery.
- Harwood, Margaret**, Maria Mitchell Observatory, Nantucket, Mass. *Astronomy*. Littleton, Mass. March 19, 85. A.B. Radcliffe, 07; A.M. California, 16. Computer, Harvard Col. Observatory, 07-12; research fellow, *Nantucket Maria Mitchell Ass.* 12-16, *director, observatory*, 16-Astron. Soc. Faint equatorial stars; variability of asteroids, especially Eros.
- Haseman, Prof. Charles**, University of Nevada, Reno, Nev. *Mathematics*. Linton, Ind. Sept. 27, 80. A.B. Indiana, 03, A.M. 06; Ph.D. Göttingen, 07. *Asst. math.* Indiana, 05-06, instr. 07-08, asst. prof. 08-09; assoc. prof. Nevada, 09-10, *prof.* 10- A.A.; Math. Soc.; Math. Ass.; Math. Verein; Circolo Mat. di Palermo. Integral equations and the theory of functions; applications of integral equations.
- Haseman, Dr. John D(iedrich), Jr.**, Linton, Ind. *Zoology*. Linton, Sept. 14, 87. A.B. Indiana, 05, A.M. 07; Ph.D. Columbia, 13. Ind. Univ. zool. exped. to Cuba, 05-06; Carnegie Inst. Tech. zool. exped. to S. Am. 08-10; private zool. exped. to S. Am. 12-13.
- Haseman, Prof. L(eonard)**, 617 Lee St, Columbia, Mo. *Entomology*. A.B. Indiana, 05; A.M. 07; Ph.D. Cornell, 10. Asst. entom. and zool. Florida, 05-06; entom. Missouri, 06-08; insect morph. Cornell, 08-10; instr. entom. Missouri, 10-19, *prof.* 19- A.A.; Entom. Soc.; Ass. Econ. Entom.
- Haseman, Dr. Mary Gertrude**, Linton, Ind. *Mathematics*. Linton, March 6, 89. A.B. Indiana, 10; Ph.D. Bryn Mawr, 17. Math. Ass. Knots with a census of the amphichierals with twelve crossings.
- Haseman, Prof. W(illiam) P(eter)**, 1531 W. 32d St, Oklahoma City, Okla. *Physics*. Linton, Ind. May 4, 78. A.B. Indiana, 03, A.M. 04; fellow, Pennsylvania, 05-07, Ph.D. 07. Instr. physics, Indiana, 04-05, asst. prof. 07-09; prof. Oklahoma, 09-19. Director, Okla. State Bur. Standards. Physical Soc.
- Haskell, Prof. E(ugene) E(lwin)**, Cornell University, Ithaca, N. Y. *Civil engineering*. Holland, N. Y. May 10, 55. B.C.E. Cornell, 79, C.E. 90. With Mississippi River Surv. 80-85; U. S. Coast and Geod. Surv. 85-93; principal asst. engineer, U. S. Lake Surv. 93-06; *prof. exp. hydraul.* Cornell, 06-21, *emer. prof.* 21-, dean, col. civil eng. Cornell, 06-21. A.A.; Civil Eng.; Soc. Test. Materials; Eng. Educ.; Cornell Soc. Eng.; Detroit Eng. Soc.
- Haskell, Prof. M(ellen) W(oodman)**, P. O. Box 3, Berkeley, Calif. *Mathematics*. Salem, Mass. March 17, 63. A.B. Harvard, 83, A.M. 85; Ph.D. Göttingen, 89. Instr. math. Michigan, 89-90; asst. prof. California, 90-94, assoc. prof. 94-06, *prof.* 06- Exchange prof. math. Columbia, 16. A.A.; Math. Soc.; Math. Verein; Circolo Mat. di Palermo. Modern analytic geometry; singularities of plane curves; groups of

collineations; application of group theory to geometry.

Haskell, Dr. R(oyal) J(oyslin), U. S. Department of Agriculture, Washington, D. C. *Plant pathology*. Rochester, Mass., Jan. 27, 90. B.S., Dartmouth, 12; Ph.D., Cornell, 17. Asst. plant path., Cornell, 12-13; instr., 13-17; path. inspector, *bur. plant indust.*, U. S. Dept. Agr., 17-18, asst. plant pathologist, 18- A.A.; Phytopath. Soc. Potato tuber rots in New York; seed treatment of oats; U. S. plant disease survey.

Haskins, Dr. Charles Nelson, Dartmouth College, Hanover, N. H. **Mathematics*. New Bedford, Mass., May 7, 74. B.S., Mass. Inst. Tech., 97; M.S., Harvard, 99, A.M., 00, Ph.D., 01; Göttingen, 01-02. Asst. physics, Mass. Inst. Tech., 97-98, instr. *math.*, 02-03; Cornell, 04-06; asst. prof., Illinois, 06-09; *Dartmouth*, 09- A.A.; Math. Soc.; Eng. Educ. Theory of differential forms; invariant theory of differential forms.

Haskins, Dr. Howard D(avis), University of Oregon Medical School, Portland, Oregon. *Physiological chemistry*. Springfield, Mass., April 25, 71. A.B., Michigan, 92; M.D., Western Reserve, 95. Asst. prof. org. chem. and biochem, med. dept. Western Reserve, 07-11, assoc. prof., 11-15; *prof. biochem. med. sch.*, Oregon, 15- Physiol. Soc.; Soc. Biol. Chem.; Chem. Soc.; Am. Med. Ass. The chemistry of carbamates; methods for estimating carbamates and urea; metabolism; solvent power of urine; hydrogen ion concentration of urine and blood.

Hasselbring, Dr. Heinrich, U. S. Department of Agriculture, Washington, D. C. *Botany*. Flint, Mich., Jan. 12, 75. B.S., Cornell, 99; Ph.D., Chicago, 05. Asst. bot., Cornell, 99-01; first asst. hort., N. Y. Exp. Sta., 01-02; plant pathologist, Illinois, 02-03; asst. bot., Chicago, 03-07; chief botanist, Cuban Exp. Sta. Santiago, 07-09; *plant physiologist, bur. plant indust.*, U. S. Dept. Agr., 09- Plant pathology and physiology.

Hassler, Dr. J(asper) O(le), 425 Lahoma Ave., Norman, Okla. *Mathematics*. Harviell, Mo., May 14, 84. A.B., William Jewell, 07; M.S., Chicago, 13, Ph.D., 15. Instr. *math.*, high sch., Douglas, Ariz., 07-11; Kansas, 11-12; Englewood High Sch., Chicago, Ill., 12-17; Crane Junior Col., 17-20; *assoc. prof.*, Oklahoma, 20- Ed. math. problems, 'Sch. Sci. and Math.' Math. Soc.; Circolo Mat. di Palermo. Projective differential geometry.

Hastings, Prof. C(harles) S(heldon), 248 Bradley St., New Haven, Conn. **Physics*. Ph.B., Yale, 70, Ph.D., 73. Instr. *physics*, Yale, 71-73; *assoc. prof.*, Hopkins; *prof.* and later *emer. prof.*, Yale, 84- Nat. Acad.; A.A.; Physical Soc.; Philos. Soc.

Hastings, Prof. E(dwin) G(eorge), 1715 Adams St., Madison, Wis. *Agricultural bacteriology*. Austinburg, Ohio, Aug. 11, 72. B.S., Ohio State, 98; M.S., Wisconsin, 99. Instr. *bacter.*, Wisconsin, 02-05, asst. prof., 05-09, *assoc. prof.*, 09-13, *prof. agr. bacter.* and *bacteriologist*, Exp. Sta., 13- A.A.; Soc. Bact.; Pub. Health Ass.; Int. Live Stock Sanit. Ass. Dairy bacteriology.

Hastings, John B(eazley), 4209 Council St., Los Angeles, Calif. *Mining engineering*. Liverpool,

England, May 21, 58. Min. Eng.; Geol. Soc. Mining geology.

Hastings, Dr. T(homas) W(ood), 777 Madison Ave., New York, N. Y. *Internal medicine*. St. Louis, Mo., Sept. 29, 73. A.B., Hopkins, 94, M.D., 98. House officer, Hopkins Hosp., 98-99; surgeon, Hosp. Ship, 'Maine,' 99-01; instr. *clin. path.*, med. col., Cornell, 01-06, *prof.*, 06-18. Substitute *clin. pathologist*, Presbyterian Hosp., 02-04; asst. visiting physician, Cornell Med. Col. Dispensary, 01-07; Bellevue Hosp., 08-; consulting staff, Nassau Co. and St. Bartholomew's Hospitals; major, M.R.C., 17-18. A.A.; Am. Med. Ass.; Ass. Path. and Bact.; N. Y. Acad. Med. Clinical medicine; clinical laboratory methods; non-parasitic elephantiasis; albuminuria; early diagnosis of syphilis; the cerebro-spinal fluid; tuberculin therapy in orthopedic surgery; malignant endocarditis due to *Micrococcus zymogenes*, n. sp.; standardization of hemoglobinometers; opsonic index in tubercle bacillus infections; infections of respiratory tract; complement fixation for *Streptococcus* and *Gonococcus* in arthritis; *Bacillus coli communis*; the acute bacillus.

Hatai, Dr. Shinkishi, Wistar Institute of Anatomy, Philadelphia, Pa. *Neurology*. Kominato, Japan, March 3, 77. Grad. Tohokugakuin, Sendai, Japan; Ph.D., Chicago, 02. Asst. biol., First High Sch., Tokyo, Japan, 98-99; instr., Cincinnati, 00-01; asst. *neur.*, Chicago, 02-06; *assoc.*, Wistar Inst., 06-10, instr., 10-14, asst. *prof.*, 14-19, *prof.*, 20- Ass. Anat.; Physiol. Soc.; Soc. Biol. Chem.; Soc. Exp. Biol. Physiology of the nervous system; the endocrine organs.

Hatch, Dr. Laura, Smith College, Northampton, Mass. *Geology*. Chicago, Ill., 84. A.B., Vassar, 06; M.S., Chicago, 11, Bryn Mawr fellow, 12-13, Ph.D., 16. Teacher physiog., East Aurora High Sch., Aurora, Ill., 08-10; instr. *geol.*, Wellesley, 11-12; asst., Barnard, Columbia, and exten. lecturer, Columbia, 14-16; instr., Smith, 16-18, asst. *prof.*, 19- Mem. Int. Geol. Cong.; geol. exped. to Alaska, 13. Fel. Am. Geog. Soc. Geography; physiography; geographic factors in agriculture; marine terraces; glaciers of Mt. Jefferson.

Hatcher, Dr. Rob(ert) A(nthony), 414 E. 26th St., New York, N. Y. *Pharmacology*. New Madrid, Mo., Feb. 6, 68. Ph.G., Phila. Col. of Pharmacy, 89; M.D., Tulane, 98. Prof. *mat. med.*, Cleveland Sch. of Pharmacy, 99-04; instr. *pharmacol.*, med. col. Western Reserve, 00-04; *med. col.*, Cornell, 04-06, asst. *prof.*, 06-08, *prof. pharmacol. and mat. med.*, 08- A.A.; Physiol. Soc.; Soc. Exp. Biol.; Am. Med. Ass.; Pharmaceut. Ass.; Soc. Pharmacol.; Soc. Biol. Chem.; Harvey Soc. Strychnine; strophanthus.

Hatfield, Dr. William D(urrell), Highland Park, Mich. *Chemistry*. Jacksonville, Ill., July 7, 92. B.S., Ill. Col., 14; M.S., Illinois, 16, Ph.D., 18. Asst. chemist and bacteriologist, Ill. State Water Surv., 15-18; asst. *prof. org. and phys. chem.*, Mont. Col., 19-20; *supt. filtration*, Highland Park, Mich., 20- Second lieut., U.S.A., 18-19. Chem. Soc.; Soc. Bact.; Water Works Ass. Sanitary chemistry and bacteriology; water; sewage; fertilizing value of activated sludge.

Hathaway, Prof. Arthur S(tafford), Rose Polytechnic Institute, Terre Haute, Ind. **Mathematics, Physics*. Keeler, Mich, Sept. 15, 55. B.S, Cornell, 79; Hopkins, 80-84, fellow, 82-84. Instr. math, Friends High Sch, Baltimore, 79-80; Cornell, 85-89, asst. prof, 89-91; prof, Rose, 91-20. Reporter and ed, 'Lord Kelvin's Baltimore Lectures,' and Nat. Conf. of Electricians, 84; prof. math, summer sch, Chicago, 99. A.A.; Math. Soc; fel. Ind. Acad. Theory of numbers; quaternions; mathematical physics; motion of three bodies; continuous transformations in quaternions; early history of the calculus.

Hatt, Prof. W(illiam) K(endrick), La Fayette, Ind. *Civil engineering*. A.B, New Brunswick, 87, A.M, 93, Ph.D, 01; C.E, Cornell, 91. Prof. civil eng, New Brunswick, 91-92; instr, Cornell, 92-93; assoc. prof, *Purdue*, 93-95, applied mechanics, 96-01, prof, 01-06, *civil eng*, 06- Town engineer, W. Lafayette, Ind, 94-95; res. engineer, Columbia City, Ind, 98; with road material lab, U. S. Dept. Agr, 02-03, engineer in charge timber tests, U. S. Forest Service, 03-06; chief engineer, Ind. Flood Commission, 14-15. Fuertes gold medal, Cornell, 03. Civil Eng; Soc. Test. Mat; Eng. Educ; Railway Eng; Ind. Acad; Ind. Eng. Soc. (pres, 07); Int. Ass. Test. Mat. Engineering; structural materials.

Haughwout, Prof. Frank G(oddard), Bureau of Science, Manila, P. I. *Protozoology*. New York, N. Y, Oct. 22, 77. Columbia, 09-13. Assoc. prof. med. zool, Univ. Philippines, 14-15, prof. and chief of dept, 15-17, prof. protozool. and parasitol, and chief, dept parasitol, 17-20. Consulting protozoologist and head, dept. parasitol, Philippine Gen. Hosp, 15-20; ed, 'Proc. Manila Med. Soc,' 17-18; co-editor, 'Philippine Jour. Sci,' 18-; protozoologist and head, div. parasitol, Bur. Science, P. I, 19- A.A.; Am. Med. Ass; Soc. Trop. Med; N. Y. Acad; Far East. Ass. Trop. Med. Tropical medicine; animal parasites; helminths in the intestinal tract.

Haupt, Dr. A(rthur) W(ing), St. Lawrence University, Canton, N. Y. *Botany*. Milwaukee, Wis, Aug. 9, 94. B.S, Chicago, 16, fellow, 18-19, Ph.D, 19. Scientific asst, U. S. Dept. Agr, 18; prof. *biol*, Carthage, 19-20; *St. Lawrence*, 20-A.A.; Ill. Acad. Morphologic botany; bryophytes.

Haupt, Prof. Lewis M(uhlenberg), Cynwyd, Pa. *Civil engineering, Physical geography*. Gettysburg, Pa, March 21, 44. Harvard, 63; grad, U. S. Mil. Acad, 67; hon. M.S, Pennsylvania, 83; Sc.D, Muhlenberg, 05; LL.D, Pa. Col, 15. U. S. engineer, Lake Surv, 67; in charge, Fifth Mil. District, Tex, 69; asst. engineer, Fairmount Park, Phila, 69; first asst. examiner, U. S. Patent Office, 72; instr. math. and civil eng, Pennsylvania, 72-75, prof. civil eng, 75-92; asst, U. S. Lighthouse Service, 74; U. S. Coast and Geod. Surv, Pa, 75-80; *consulting engineer*, 92-; pres, *Reaction Jetty Co*, 02- Sec'y, bur. of awards, Centennial Expos, 76; asst. judge, dept. transport, Paris Expos, 89; gold medal, Paris Expos, 00; delegate and commissioner from Pa. to Nicaragua Canal Convention, New Orleans, 92; mem. Nicaragua Canal Commission, 97; Isthmian Canal Commission, 99-02;

pres, Cauca-Colombia R. R. Arbitration Commission, 97; director, Ches. and Del. Canal; consulting engineer, Ohio and Lake Erie Ship Canal. Magellanic premium, 87; medal and diploma, Nat. Export Expos, 99; Elliott Cresson medal and diploma, Franklin Inst, 01; gold medal, La. Purchase Expos, 04. A.A.; Civil Eng; Min. Eng; Philos. Soc; Civil Service Ass; Franklin Inst; Phila. Geog. Soc; Phila. Eng. Club (pres). Physical laws of bar formation and current and wave action; designs for automatic bar removal; reclamation; conservation of public utilities; water ways; reaction jetty; reclamation of alluvial coasts.

Hausman, Dr. L(eon) A(ugustus), Cornell University, Ithaca, N. Y. *Zoology*. New Haven, Conn, Nov. 9, 88. A.B, Cornell, 14, A.M, 16, Ph.D, 18. *Instr. geol*, Cornell, 14-16, *biol*, 16- Invertebrate zoology; protozoology; structure of mammalian hairs; glaciology.

Hausmann, Prof. Erich, Polytechnic Institute, Brooklyn, N. Y. *Physics, Electrical engineering*. Solingen, Germany, Feb. 27, 86. E.E, Brooklyn Polytech, 08; M.S, N. Y. Univ, 10, Sc.D, 11. Instr. physics and elec. eng, *Brooklyn Polytech*, 08-12, asst. prof, 12-15, assoc. prof, 15-18, *prof. physics*, 18- Sec'y, faculty, Brooklyn Polytech, 17- A.A.; fel. Elec. Eng; assoc. Physical Soc; Eng. Educ; Brooklyn Inst. (v. pres, 09-). Electrical communication, machinery, transmission and traction; wave propagation along conductors.

Havard, Col. Valery, U. S. A, Fairfield, Conn. *Medicine*. Compiègne, France, Feb. 18, 46. Grad, Inst. Beauvais, France, 65; M.S, Manhattan, 69; M.D, Univ. and Bellevue Hosp. Med. Col, 69. Entered M.C, U.S.A, 74; chief surgeon, military forces, Cuba, 98-01, 06; med. mil. attaché, Russian Army, Manchuria, 04-05; chief surgeon, Dept. of the East, 05-06; pres, Army Med. Sch, and in charge, library and museum, 06-10, retired, 10; restored to active duty, in charge reorganization of med. dept. of Army and Navy, Havana, Cuba, 17- Am. Med. Ass; Ass. Mil. Surg. (pres, 07). Military hygiene; medical and economic botany.

Havenhill, Prof. L. D, 1539 Vermont St, Lawrence, Kans. *Pharmaceutical chemistry*. New-ark, Ill, April 5, 70. Ph.C, Michigan, 93, Ph.M, 94; B.S, Kansas, 03. Asst. prof. pharmacy, Kansas, 99-08, *prof. pharmaceut. chem*, 08- Mem. tenth decennial committee of revision of the U. S. Pharmacopoeia. A.A.; Chem. Soc. (v. pres, Kans. City sect, 11-13, pres, 14); Pharmaceut. Ass. (v. pres, 13, 14); Kans. Acad. (v. pres, 16, 17, pres, 18); hon. mem. Kans. Pharmaceut. Ass. Pharmacy; standardization for official drugs.

Hawes, Austin F, Box 517, South Bend, Ind. *Forestry*. Danvers, Mass, March 17, 79. A.B, Tufts, 01; M.F, Yale, 03. Asst, U. S. Forest Service, 03-04; state forester, Conn, 04-09; prof. forestry, Vermont, and state forester, 09-17; exten. specialist forestry, U. S. Forest Service, 17-20; *forester, Nat. Ass. Wood Turners*, 20- Asst, Fuel Ad, 18. Soc. Foresters (treas, 18-). Silviculture; forest mensuration; forestry in New England.

- Hawk, Prof. P(hilip) B(ovier)**, Jefferson Medical College, Philadelphia, Pa. **Physiological chemistry*. East Branch, N. Y., July 18, 74. B.S., Wesleyan, 98, M.S., 00; Yale, 01; Ph.D., Columbia, 03. Asst. physiol. chem., Columbia, 01-03; demonstrator, med. sch., Pennsylvania, 03-07; *prof.*, Illinois, 07-12; *physiol. chem. and toxicol.*, Jefferson Med. Col., 12- Mem. Am. committee, Int. Cong. Alimentary Hygiene, Brussels, 10; committee physiol. chem., Ninth Int. Cong. Applied Chem., N. Y. City, 12. A.A.; Chem. Soc. (chairman, Ill. sect, 12, asst. ed., 'Abstracts'); Am. Med. Ass.; Physiol. Soc.; Soc. Biol. Chem.; Soc. Exp. Biol.; Soc. Animal Nutrition; Philos. Soc.; Wash. Acad.; Columbia Biochem. Ass. (hon. pres); Ass. Wesleyan Chemists (pres). Metabolism; animal acids; food and nutrition; fasting; water drinking.
- Hawkes, Dr. H(erbert) E(dwin)**, Columbia University, New York, N. Y. **Mathematics*. Templeton, Mass., Dec. 6, 72. A.B., Yale, 96, Ph.D., 00; Göttingen, 01-02. Asst. prof. math., Yale, 98-10; *prof.*, Columbia, 10, *dean of col.*, 18- Math. Soc.; Math. Verein. Hypercomplex numbers.
- Hawkesworth, Rev. Alan S(pencer)**, Naval Proving Grounds, Indian Head, Md. *Mathematics*. New Orleans, La., Aug. 10, 67. Church Missionary Col., London; ordained, 92. English chaplain, São Paulo and Santos, Brazil, 90-94; rector, Georgetown, St. Vincent, B. W. I., 94; Episcopal 'Church of the Messiah,' Pittsburgh, 05-17; *mathematician*, staff of chief of naval ordnance, U.S.N., 17-20, *Naval Proving Grounds*, 20- Int. Cong. Math., Rome, 08. A.A.; Math. Soc.; Wash. Soc. Eng.; Wash. Philos. Soc.; life fel. Royal Soc. Arts; Circolo Mat. di Palermo. Exterior and interior ballistics and ordnance; geometrical conics; conicoids; higher plane curves; Assyrian and Babylonian cuneiform; philosophy.
- Hawkins, Dr. A(lfred) C(ary)**, 421 S. Grant Ave., Wilmington, Del. *Geology*. Sewaren, N. J., June 15, 87. B.S., Columbia, 09; A.M., Princeton, 12; Ph.D., Brown, 16. Asst. geol., Princeton, 10-12; instr., Brown, 12-16; oil geologist, 16-18; *crystallographer*, E. I. duPont de Nemours and Co., 18- A.A. Mineralogy; crystallography.
- Hawkins, Dr. Lon A(drian)**, U. S. Department of Agriculture, Washington, D. C. *Botany*. La Motte, Iowa, May 30, 80. B.S., Morningside, 06; fellow, Ohio State, 06-07; Ph.D., Hopkins, 13. Asst. biol., Morningside, 04-06; scientific asst., *bur. plant indust.*, U. S. Dept. Agr., 07-14, *plant physiologist*, 14- A.A.; Bot. Soc.; Phytopath. Soc.; Chem. Soc.; Wash. Acad.; Wash. Bot. Soc. Plant pathology and physiology; the physiology of fungi and of fruit and vegetable storage.
- Hawley, Dr. Ira Myron**, Cornell University, Ithaca, N. Y. *Entomology*. Canandaigua, N. Y., June 7, 84. A.B., Michigan, 09; Ph.D., Cornell, 16. Instr. biol., Bradley Polytech, 11-12; asst. *econ. entom.*, Cornell, 13-16; *investigator*, 16- A.A. Economic entomology; insects injurious to hops and beans.
- Hawley, Dr. L(ee) F(red)**, Forest Products Laboratory, Madison, Wis. *Chemistry*. Steam-
burg, N. Y., Feb. 12, 82. A.B., Cornell, 03, A.M., 05, Ph.D., 07. Asst. chem., Cornell, 02-04, instr., 04-07; *chemist*, U. S. Forest Service, 07-13; forest products dept., A. D. Little, Inc., 13-15; *Forest Products Lab.*, 16- Chem. Soc. Thallium; white lead; wood distillation and extraction; turpentine; rosin; wood waste.
- Hawley, Prof. R(alpha) C(hipman)**, 360 Prospect St., New Haven, Conn. *Forestry*. Atlanta, Ga., March 5, 80. A.B., Amherst, 01; M.F., Yale, 04. Forest asst., U. S. Forest Service, 04-05; asst. state forester, Mass., 05-06; instr., asst. prof. and later *prof. forestry*, Yale, 06- Forester, New Haven Water Co., 07- Soc. Foresters. Silviculture; pine plantations in New England.
- Haworth, Prof. E(rasmus)**, 1503 Massachusetts St., Lawrence, Kans. **Geology, Mineralogy*. Warren Co., Iowa, April 17, 55. B.S., Kansas, 81, M.S., 84; A.M., Ph.D., Hopkins, 88. *Prof. nat. science*, Penn (Iowa), 83-92; *geol. and miner.*, Kansas, 92- State geologist, Kans. Geol. Surv., 95-16; with U. S. Geol. Surv., 88, 96, 03, 04; Mo. Geol. Surv., 89-92; mem. Kans. State Irrig. Board, 95-96. A.A.; Geol. Soc.; Kans. Acad. (pres, 08). Irrigation and water supplies; Kansas geology; oil and gas geology of mid-continental field.
- Hay, Dr. O(liver) P(erry)**, 1211 Harvard St., N. W., Washington, D. C. **Paleontology*. Jefferson Co., Ind., May 22, 46. A.B., Eureka, 70, A.M., 73; Sheffield Sci. Sch., Yale, 76, 77; Ph.D., Indiana, 84; Chicago, 93-95. Prof. nat. science, Eureka, 70-73; zool. and geol., Butler, 83-92; asst. curator, Field Museum Nat. Hist., 95-97; research work, U. S. Nat. Museum, 97-00; asst. and assoc. curator, dept. vert. paleont., Am. Museum Nat. Hist., 00-07; collaborator, *Carnegie Institution*, 02-06, research assoc., 12-16, *assoc.*, 17- Asst., Ark. Geol. Surv., 84-88; Ind. Geol. Surv., 91-94; assoc. ed., 'Am. Geol.', 02-05; delegate, Int. Zool. Cong., Berne, 04. A.A.; Paleont. Soc. (sec'y, 04); Wash. Biol. Soc.; Wash. Geol. Soc.; Ind. Acad. (pres, 91). Living and fossil vertebrates; Pleistocene paleontology and geology; early man in America.
- Hay, Prof. W(illiam) P(erry)**, Kensington, Md. *Zoology*. Eureka, Ill., Dec. 8, 72. B.S., Butler, 91, M.S., 92. Instr. zool., Cent. High Sch., Washington, D. C., 92-98; head, dept. biol., Washington high schools, 98-00; prof. nat. hist., Howard, 00-08; head, dept. biol. and chem., *Washington high schools*, 08- Asst. zool., George Washington; lecturer, Georgetown. A.A.; Fisheries Soc.; Wash. Acad. (v. pres, 16); Wash. Biol. Soc. (v. pres, 07-, pres, 16); Wash. Entom. Soc.; Wash. Biol. Field Club (pres, 03). Life histories and relations of North American Crustacea; Astacidae of North America.
- Hayden, Prof. Ada**, Iowa State College, Ames, Iowa. *Botany*. Ames, Aug. 14, 84. B.S., Iowa State, 08, Ph.D., 18; fellow, Washington (St. Louis), 09-10, M.S., 10. Asst. *bot.*, Iowa State, 07-08, instr., 10-18. asst. *prof.*, 18- A.A.; Bot. Soc.; Ecol. Soc.; Iowa Acad. Ecology; taxonomy; morphology; algae; vascular plants; weeds.
- Hayden, Prof. Horace Edwin, Jr.**, Richmond, Va. *Zoology*. Wilkes-Barre, Pa., Jan. 6, 84. A.B., Princeton, 05; A.M., Virginia, 07, 07-10; fel-

- low, Vanderbilt, 07-08. Asst. geol, Vanderbilt, 07-08; master, Jefferson Sch, Charlottesville, Va, 09-10; instr. *biol.* Tex. Col, 10-12, asst. prof, 12-17, assoc. prof, 17-18; instr, N. Y. Univ, 18; acting prof, William and Mary, 18-19; *prof.* Richmond, 19- A.A.; *Micros. Soc.* Aquatic oligochaetes; parasitic worms.
- Hayes, Dr. Albert O(rión)**, Geological Survey of Canada, Ottawa, Can. *Geology.* Granby, Que, March 16, 82. B.Sc, McGill, 08, M.Sc, 10; Ph.D, Princeton, 14. Junior geologist, *Can. Geol. Surv.* 13-16, *geologist*, 17- In charge geol. investigation of iron ore deposits of Newfoundland for Princeton, 11-12. *Geol. Soc.*; *Can. Min. Inst.* Iron ore, manganese, coal and salt deposits.
- Hayes, Prof. E(dward) C(ary)**, 1005 Nevada St, Urbana, Ill. *Sociology.* Lewiston, Maine, Feb. 10, 68. A.B, Bates, 87, A.M, 90; Berlin; Ph.D, Chicago, 02; LL.D, Grinnell, 20. Prof. econ. and sociol, Miami, 02-07; *prof. and head, dept. sociol.* Illinois, 07- See'y, sect. social psychol, World's Cong. Science, La. Purchase Expos, 04; pres, Ill. Conf. Charities and Corrections. A.A.; *Sociol. Soc.* (advisory ed. and mem. exec. committee); assoc. Inst. Int. de Sociol. Psychology of customs and institutions; evolution of conscience codes.
- Hayes, Prof. E(llen)**, Wellesley, Mass. *Astronomy.* Granville, Ohio, Sept. 23, 51. A.B, Oberlin, 78. Teacher math, Wellesley, 79-83, assoc. prof, 83-88, prof, 88-97, applied math, 97-04, astron, 04-16, retired, 16. A.A. Definitive orbit of minor planet, No. 267; calculus with applications.
- Hayes, Dr. Hammond Vinton**, 84 State St, Boston, Mass. *Physics.* Madison, Wis, Aug. 28, 60. A.B, Harvard, 83, A.M, Ph.D, 85; Mass. Inst. Tech, 84-85. Elec. engineer, Am. Bell Telephone Co, 85-02; chief engineer, *Am. Telephone and Telegraph Co*, 04-07, *consulting engineer*, 07- Elec. Eng; Am. Acad.
- Hayes, Prof. H(arvey) C(ornelius)**, Naval Experiment Station, Annapolis, Md. *Physics.* North Fenton, N. Y, Nov. 2, 77. A.B, Harvard, 07, A.M, 08, Ph.D, 11. Asst. physics, Harvard, 08-11, instr, 11-13; prof, Swarthmore, 13-18; research, anti-submarine devices, U.S.N. Exp. Sta, New London, Conn, 18-19; physicist, *U.S.N.* 19-20, *sound aid*, 21- Instr. physics, Harvard, summers, 08-13. Physical Soc. Cooling curves; the magnetic susceptibility of water; a rate-flow meter; sap flow and sap pressure; the magnetic properties of tin-bismuth alloys.
- Hayes, Prof. H(erbert) K(endall)**, University Farm, St. Paul, Minn. *Agriculture.* North Granby, Conn, March 11, 84. B.S, Mass. Col, 08; M.S, Harvard, 11. Special agent, tobacco investigation, U. S. Dept. Agr, 08-09; asst. agronomist, Conn. Exp. Sta, 09-11, plant breeder, 11-14; assoc. prof. *plant breeding*, Minnesota, 15-18, *prof.* 19- A.A.; *Soc. Nat.*; *Soc. Agron.* Economic and genetic plant breeding.
- Hayes, Dr. J(oseph) W(anton)**, City Hall Square Building, Chicago, Ill. *Psychology.* A.B, Amherst, 03; Ph.D, Chicago, 11. Instr. psychol, Chicago, 11-13, asst. prof, 13-18; camp psychologist, surgeon general's div, U.S.A., 17-19; *director, industrial personnel*, The Scott Co, 19- A.A.; *Psychol. Ass.* Experimental and industrial psychology; industrial personnel.
- Hayes, Dr. Mary H(olmes) S(tevens)**, Laboratory of Social Hygiene, Bedford Hills, N. Y. *Psychology.* Rochester, N. Y, Feb. 11, 84. A.B, Wisconsin, 04; Ph.D, Chicago, 10. Psychologist, Juvenile Psychopathic Inst, Chicago, 10-11; *assoc. psychologist*, *Lab. of Social Hygiene*, 15- A.A.; *Psychol. Ass.* Neurology; cutaneous after-sensation; corpus striatum of embryonic rat; mental tests applied to criminal women.
- Hayes, Prof. S(amuel) P(erkins)**, South Hadley, Mass. *Psychology.* Baldwinville, N. Y, Dec. 17, 74. A.B, Amherst, 96; B.D, Union Theol. Sem, 02; A.M, Columbia, 02; fellow, Clark, 02-03; Cornell, 05-06, Ph.D, 06. Assoc. prof. *psychol.* Mt. Holyoke, 06-09, *prof.* 09- Director psychol. research, Pa. Inst. Instr. of Blind, 16-; Perkins Inst. Instr. of Blind, 19- A.A.; *Psychol. Ass.*; Ass. Prof. Edwardian revivals; affective qualities; color blindness; psychology and pedagogy of the blind.
- Hayes, Stephen Q(uentin)**, 410 East End Ave, Pittsburgh, Pa. *Electrical engineering.* Washington, D. C, Dec. 17, 73. A.B, Georgetown, 92; E.E, Hopkins, 94. *Elec. engineer*, *Westinghouse Elec. and Mfg. Co*, 94- With corps engineers, U.S.A., 19. Mem. Int. Elec. Cong, St. Louis, 04; Turin, 10. Elec. Eng. Station design; power transmission.
- Hayford, Prof. John F(illmore)**, Northwestern University, Evanston, Ill. **Geodesy.* Rouses Point, N. Y, May 19, 68. C.E, Cornell, 89; Sc.D, George Washington, 18. Computer, U. S. Coast and Geod. Surv, 89-91; asst. astronomer, Mex. Boundary Surv, 92-93; aid and asst. U. S. Coast and Geod. Surv, 94-95; instr. civil eng, Cornell, 95-98; computer and asst, U. S. Coast and Geod. Surv, 98-99, inspector geod. work and chief of computing div, 00-09; *director, col. eng.* Northwestern, 09- Mem. Costa Rica-Panama Boundary Commission, 13; research assoc, Carnegie Institution, 12- Nat. Acad; A.A. (see'y, A, 99, gen. sec'y, 06, v. pres, 09); *Philos. Soc.*; *Astron. Soc.*; *Physical Soc.*; *Civil Eng.*; *Eng. Educ.* (pres, 19); *West. Soc. Eng.*; *Wash. Philos. Soc.* (see'y, 01-04, pres, 07). Geodetic astronomy; American geodesy.
- Hayhurst, Prof. E(mery) R(oe)**, Ohio State University, Columbus, Ohio. *Hygiene.* St. Louis, Mo, June 28, 80. A.B, Illinois, 03, A.M, 05, M.D, 08; Ph.D, Chicago, 16. Instr. physiol, Illinois, 03-08, asst. prof. clin. diagnosis, 10-12; director, occupational disease clinic, Rush Med. Col, 11-12, fellow, Sprague Mem. Inst, Chicago, 11-13; asst. prof. *hygiene and director dispensaries*, Ohio State, 16-20, *prof. and head, dept. public health and sanitation*, 20- Univ. of Ill. physiol. exped. to Pike's Peak, 03; health officer, Maywood, Ill, 10-13; pathologist, univ. hosp, Chicago, 10-13; chief, occupational disease surv, Ohio, 13-15; director and consultant, div. indust. hygiene, Ohio State Dept. Health, 15-; surgeon, U. S. Pub. Health Service (reserve), 18- Pub. Health Ass. (see'y, chairman and counselor, sect. indust. hygiene); Am. Med. Ass.; Econ. Ass. Physiology; hematology; medicine; occupational dis-

- cases; public health; industrial and school hygiene; housing.
- Haynes, Miss C(aroline) C(oventry)**, Highlands, N. J., and 16 E. 36th St, New York, N. Y. *Botany*. New York, N. Y., April 13, 58. Student, N. Y. Bot. Garden, 02-07, 09-10. Bot. Soc; Torrey Bot. Club; Sullivant Moss Soc. Taxonomy of some of the Hepaticae; revision of genus *Sphaerocarpos*.
- Haynes, Prof. E(li) S(tuart)**, Beloit College, Beloit, Wis. *Astronomy*. Trenton, Mo., July 12, 80. A.B., Missouri, 05, A.M., 07; fellow, California, 11-12, Ph.D., 13. Asst. math, Missouri, 05-06, Gould asst, Laws Observatory, 06-07, asst. astron., 07-08, instr., 08-11, in charge, 09-11; instr. *astron.*, California, 12-13; Kellogg fellow, Lick Observatory, 13-14; assoc. prof., Beloit, 14-15, prof., 15- A.A.; Astron. Soc; Math. Ass; Soc. astron. de France. Stellar photometry and spectroscopy; orbits of comets and asteroids.
- Haynes, Dr. Irving S(amuel)**, 107 W. 85th St, New York, N. Y. *Surgery*. Saranac, N. Y., Aug. 29, 61. Ph.B., Wesleyan, 85; M.D., N. Y. Univ., 87. Intern., Bellevue Hosp., 87-88; demonstrator anat., N. Y. Univ., 89-94, adj. prof., 94-98; *visiting surgeon, Harlem and Red Crose Hospitals*, 95-; *prof. applied anat., med. col. Cornell*, 98- Asst. attending surgeon, Chambers St. Hosp., 88-90; N. Y. Orthop. Hosp., 91-99. Ass. Anat.; Am. Med. Ass; N. Y. Surg. Soc; N. Y. Acad. Med. Anatomy.
- Haynes, Rowland**, 3034 E. Overlook Road, Cleveland Heights, Ohio. *Psychology*. A.B., Williams, 02; A.M., Clark, 05. Asst. prof. psychol., Minnesota, 11; field sec'y, Am. Playground and Recreation Ass., 11-16; *director*, N. Y. War Camp Community Service, 16-19; *recreation council, Cleveland*, 19- Psychol. Ass. Playground activities; recreation surveys.
- Haynes, Prof. Winthrop P(errin)**, 1420 Ohio St, Lawrence, Kans. *Geology*. Hyde Park, Mass., Sept. 6, 87. A.B., Harvard, 10, A.M., 12, Ph.D., 14. Asst. *geol.*, Harvard, 08-16; instr., Radcliffe, 11-14; Wellesley, 14-16; asst. prof., Kansas, 16-18, *assoc. prof.*, 19- Mem. Shaler Mem. exped. to S. Am., 08; instr. in charge, Harvard Summer Sch. of Geol. expeditions to Mont., 13, N. B. and Que, 14, Colo., 16; second lieut., Air Service, 18-19. Paleont. Soc; fel. Am. Geog. Soc; Ass. Petrol. Geol. Structural, stratigraphic and economic geology.
- Hays, Dr. I. Minis**, 266 S. 21st St, Philadelphia, Pa. *Medicine*. Philadelphia, July 26, 47. A.B., Pennsylvania, 66, M.D., 68, A.M., 69. Ed., 'Am. Jour. Med. Sciences,' 69-90; 'Med. News,' Int. Med. Cong., Phila., 76 (sec'y gen.). Emer. mem. Am. Physicians; Philos. Soc. (sec'y); Am. Acad; Phila. Col. Physicians; Phila. Geog. Soc.
- Hays, W(illet) M(artin)**, West Chester, Pa. *Agriculture*. Eldora, Iowa, Oct. 18, 59. B.Agr., Iowa State, 85, M.Agr., 97. Asst. agr., Iowa State, 86; assoc. ed., 'Prairie Farmer,' 87; asst. agr., Minnesota, 88-89, prof., 90-91; N. Dak. Col., 92-93; prof. agr. and v. director, Exp. Sta., Minnesota, 94-04; Asst. Sec'y of Agr., 05-13; adviser to minister agr. Argentina, 13-14; to Univ. of Tucuman, 14-15; *farmer*, 15- A.A.; Soc. Prom. Agr. Sci; Soc. Hort. Sci. Plant and animal breeding; farm economics; farm management; agricultural and vocational education.
- Haythorn, Dr. Samuel R(eese)**, Singer Research Laboratory, Pittsburgh, Pa. *Pathology*. Danville, Ill., Sept. 10, 80. M.D., Michigan, 04; fellow, Pittsburgh, 12-13. Asst. path. and gynec., Michigan, 04-06; pathologist, Mass. State Hosp., 06-08; intern and asst., Boston City Hosp., 08-09; asst. path., Harvard Med. Sch., 09-10; instr. path., Pittsburgh, 10-11; asst. prof., 11-13; pathologist, Allegheny Gen. Hosp., 13-15; *director, Singer Research Lab*, 15- A.A.; Col. Physicians; Ass. Path. and Baet; Am. Med. Ass; Pittsburgh Acad. Med; Int. Ass. Med. Museums; Path. Gesell. Bacteriology; histological effects of smoke; tuberculosis of large arteries; epithelial metaplasia; trinitrotoluene poisoning.
- Hayward, Prof. Carle R(eed)**, Massachusetts Institute of Technology, Cambridge, Mass. *Metalurgy*. Yankton, S. Dak., Oct. 27, 80. B.S., Mass. Inst. Tech., 04. Instr. science, Bellows Acad., Fairfax, Vt., 04-06; *mining eng. and metal*, Mass. Inst. Tech., 06-10, *asst. prof.*, 10- Min. Eng. Metallography; constitution of copper-nickel sulphids with freezing points, microstructures, etc.
- Hayward, Dean Harry**, Narberth, Pa. *Agriculture*. Lewistown, N. Y., May 19, 69. B.S.A., Cornell, 94, M.S.A., 01. Asst. instr. and asst. prof. dairy husbandry, Pa. State, 94-02; prof. animal and dairy husbandry, N. H. Col., 02-03; asst. chief, dairy div., U. S. Dept. Agr., 03; organizer and director, dept. agr., Mt. Hermon Sch., 03-06; *director, Del. Exp. Sta.*, 06-, *dean, dept. agr., Del. Col.*, 10-, *director, agr. exten. service*, 14- Director, col. agr., A. E. F. Univ., Beaune, 19; mem. agr. staff, N. W. Ayer and Son. A.A. Animal husbandry.
- Hazard, Daniel L(yman)**, U. S. Coast and Geodetic Survey, Washington, D. C. *Terrestrial magnetism*. Narragansett Pier, R. I., Aug. 26, 65. A.B., Harvard, 85. *Computer*, Mass. Topog. Surv. Commission, 89-92; *U. S. Coast and Geod. Surv.*, 92- Mem. Geophys. Union. A.A. (mem. gen. committee, 16); Am. Geog. Soc; Wash. Acad; Wash. Philos. Soc. (cor. sec'y); Wash. Soc. Eng.
- Hazeltine, Prof. L(ouis) A(ian)**, 1024 Hudson St, Hoboken, N. J. *Electrical engineering*. Morristown, N. J., Aug. 7, 86. M.E., Stevens, 06. Tester, Gen. Elec. Co., 06-07; asst. *elec. eng.*, Stevens, 07-08, instr., 08-13, asst. prof., 13-17, *prof.*, 17- Consulting engineer, Navy Yard, 18-19. Elec. Eng; Radio Eng; Electrochem. Soc; Am. Gas Ass; Eng. Educ; assoc. Physical Soc; N. Y. Elec. Soc. Electron tubes; electrolysis.
- Hazen, Allen**, 30 E. 42d St, New York, N. Y. *Water supply*. Hartford, Vt., Aug. 23, 69. Sc.D., N. H. Col., 77; Dartmouth, 17; Mass. Inst. Tech. In charge, Exp. Sta., State Board of Health, Mass., 88-93; *practising civil engineer*, Boston, 94-97; *N. Y. City*, 97- Rowland prize, Civil Eng., 00, Norman medal, 14. Am. Water Works Ass; Civil Eng; Chem. Soc; Public Health Ass; New Eng. Water Works Ass; New Eng. Soc. Eng; Appalachian Mt. Club. Public water supplies.
- Hazen, Miss Anna Putnam**, 68 Washington Square, New York, N. Y. *Zoology*. Wilder, Vt.,

- Sept. 22, 72. B.L. Smith, 95; M.S. Dartmouth, 97; Bryn Mawr, 97-99, fellow, 98-99. Teacher biol., N. H. Nor. Sch., 99-00; asst. zool., Smith, 00-03; *teacher biol., high sch., N. Y. City, 03*-Bacteriologist, base hosp., Camp Lee, Va. Development of the coxal gland in *Limulus*; gastrulation in *Amphioxus*; regeneration of sea-anemones.
- Hazen, Dr. Tracy E(liot)**, Barnard College, Columbia University, New York, N. Y. *Botany*. Jericho Center, Vt., July 4, 74. A.B. Vermont, 97; A.M., Columbia, 99, Ph.D., 00. Director, Fairbanks Museum Nat. Science, St. Johnsbury, Vt., 01-02; asst. *bot., Columbia, 02-03*, tutor, 03-07, instr., 07-10, *asst. prof., 10-* A.A.; Bot. Soc.; Torrey Bot. Club (assoc. ed., 07-12); New Eng. Bot. Club; Vt. Bot. Club. Algae, chiefly Chlorophyceae.
- Hazlett, Prof. Olive C(lie)**, Mount Holyoke College, South Hadley, Mass. *Mathematics*. Cincinnati, Ohio, Oct. 27, 90. A.B., Radcliffe, 12; M.S., Chicago, 13, Ph.D., 15. Assoc. *math.*, Bryn Mawr, 16-18; *asst. prof., Mt. Holyoke, 18*-A.A.; Math. Soc.; Math. Ass. Linear algebras; modular invariants.
- H'Doubler, Dr. F(rancis) T(odd)**, 221 Brooks St., Madison, Wis. *Mathematics, Medicine*. Beloit, Kans., April 22, 87. A.B., Wisconsin, 07, fellow, 08-10, A.M., 08, Ph.D., 10, 11-12; Chicago, 12; Univ. Philippines, 12-13; M.D., Harvard, 15, fellow, 15, 19-20. Asst. prof. math., Miami, 10-11; intern., Peter Bent Brigham Hosp., 15-16; lieutenant, M.C., 16-18. Special agent, U. S. Bur. Vital Statistics, 10. Math. Soc.; Statist. Ass. Functional equations; statistics; goitre.
- Head, Dr. Geo(rge) Douglas**, Donaldson Building, Minneapolis, Minn. *Medicine*. Elgin, Minn., Sept. 10, 70. B.S., Minnesota, 92, M.D., 95; Hopkins, 98-00; Vienna, 03; Edinburgh, 09. Asst. med., *Minnesota, 97*, instr. clin. med. and micros., 98-02, prof., 02-09, *assoc. prof. med., 09-* A.A.; Am. Med. Ass.; Minn. Acad. Med. (pres., 16). Diagnostic value of tuberculin; relation of experimental eosinophilia to protein sensitization.
- Headden, Prof. W(illiam) P(arker)**, Fort Collins, Colo. *Chemistry*. Red Bank, N. J., Sept. 21, 50. A.B., Dickinson, 72, A.M., 75; Ph.D., Giessen, 74; Sc.D., Colorado, 19. Asst., chem. lab., Pennsylvania, 74-76; prof. chem., Md. Col., 80-84; Denver, 84-89; S. Dak. Sch. of Mines, 89-91, dean, 92-93; *prof. chem., Colo. Agr. Col., 93*-Colo. Sci. Soc. Mineralogy; analytical and agricultural chemistry; radiation; mineral waters; digestion; occurrence and formation of nitrates in soils and on rocks.
- Headlee, Prof. T(homas) J**, Experiment Station, New Brunswick, N. J. *Entomology*. Headlee, Ind., Feb. 13, 77. A.B., Indiana, 03, A.M., 04; Ph.D., Cornell, 06. Teacher, grade and high schools, 95-02; instr. zool., Ind. Biol. Sta., summer, 05; asst. entomologist, N. H. Exp. Sta., 06-07, assoc. entomologist, 07; prof. entom. and zool., Kansas State, and entomologist and zoologist, Agr. Exp. Sta., 07-12; *prof. entom., Rutgers, entomologist, N. J. Exp. Sta., and state entomologist, N. J. Dept. Agr., 12-* A.A.; Ass.
- Econ. Entom. Economic entomology; relation of climate to insect life.
- Heagey, Dr. Francis (Wenger)**, 808 Brandeis Theatre Building, Omaha, Nebr. *Anatomy*. Bareville, Pa., June 20, 84. A.B., Princeton, 08; M.D., Columbia, 12. Instr. *anat., Columbia, 15*; *asst. prof., Creighton, 16-* A.A.; Ass. Anat. Anatomy of the central nervous system.
- Heald, Prof. F(rederick) D(eForest)**, Washington State College, Pullman, Washington. **Botany*. Midland City, Mich., July 23, 72. B.S., Wisconsin, 94, fellow, 94-96, M.S., 96; Ph.D., Leipzig, 97. Prof. biol., Parsons, 97-03; adj. prof. plant physiol., Nebraska, 03-05, assoc. prof. bot., sch. of agr., 05-06, prof. agr. bot., 06-08; bot., Texas, 08-12; pathologist, Chestnut Tree Blight Commission and agent forest path., 12-14; *prof. plant path., Wash. State, and pathologist, Exp. Sta., 15-17, head of dept., 18-* Instr. bot. and zool., summer sch., Wisconsin, 94; collaborator, bur. plant indust., U. S. Dept. Agr., 05-08, expert, 09, collaborator, 15-; assoc. ed., 'Phytopath.', 11-17, 20-; state botanist and assoc. chief, Nebr. State Insect Pest and Plant Disease Bur., 07-08. A.A.; Soc. Nat.; Forestry Ass.; Bot. Soc.; Phytopath. Soc. (pres., Pacific div., 19); Am. Geog. Soc.; Micros. Soc. (pres., 12); Wash. State Hort. Soc.; Wash. State Grain Growers Ass.; Nebr. Hort. Soc.; Tex. Acad.; Int. Ass. Bot. Plant pathology; black rot of apples due to *Sclerotinia fructigena*; diseases of cottonwood due to *Elfvigia megaloma*; ergot and ergotism; phylogeny of bacteria; cedar rust fungus; bud rot of carnations; mold of maple syrup; *Diplodia zeae*; *Urnula geaster*; whitening of the mountain cedar; plant disease survey of Austin-San Antonio area; dissemination of fungi causing diseases; chestnut tree blight; apple fire blight; bunt, or stinking smut of wheat; tomato blight; oat smut; potato diseases.
- Healy, Dr. William**, 40 Court St., Boston, Mass. *Medicine, Psychology*. Buckinghamshire, England, Jan. 20, 69. A.B., Harvard, 99; M.D., Rush Med. Col., 00; Vienna, Berlin, London, 06-07. Physician, Wis. State Hosp., 00-01; instr. gynec., Northwestern, 01-03; instr. and assoc. prof. nervous and mental diseases, Chicago Polyclinic, 03-16; *director, Judge Baker Foundation, 17-* Director, Juvenile Psychopathic Inst., Chicago, 09-17; instr. psychol., Harvard, summers, 12, 13; mem. Chicago Vice Commission; lecturer, Chicago Sch. of Civics. Psychol. Ass.; Neur. Ass.; Psychopath. Ass.; Am. Med. Ass.; Ass. Clin. Criminol. Mental tests; social offenders; types of delinquents; causation of delinquency, mental defectives and aberrational adolescents; psychology of testimony.
- Heaps, Dr. C(laude) W(illiam)**, Rice Institute, Houston, Tex. *Physics*. Kewanee, Ill., Oct. 4, 87. B.S., Northwestern, 09; Ph.D., Princeton, 12. Instr. *physics, Missouri, 12-14*; *Rice Inst., 14-* Physical Soc. Resistance of metals and crystals in magnetic fields; magnetostriction; conductivity of flames.
- Heard, Dr. James D(elavan)**, Diamond Bank Building, Pittsburgh, Pa. *Medicine*. Pittsburgh, Jan. 9, 70. M.D., Pennsylvania, 91. House physician, German Hosp., Phila., 91-92; assoc. prof.

med, Pittsburgh, 09-12, *prof*, 12- Am. Physi-
cians; Gastro-Enterol. Ass; Pittsburgh Acad.
Med. (v. pres, 09). Internal medicine; diseases
of the heart.

Heath, Prof. Eugene Schofield, 78 W. North Ave,
Atlanta, Ga. *Botany*. Richmond Dale, Ohio,
Feb. 9, 80. A.B. Ohio Wesleyan, 06; fellow,
Nebraska, 10, 11-12; A.M., 12; California. Asst.
prof. bot, State Nor. Sch, Peru, Nebr, 10-11;
assoc. prof, Pomona, 12-14; head, biol. dept,
high sch. and junior col, Fresno, Calif, 14-16;
asst. bot, California, 16-18; *asst. prof. biol*,
Oglethorpe, 19- Lecturer bot, Col. Holy Names,
17; acting prof. biol, Georgia, summer, 18.
A.A.; Paleont. Soc; Calif. Bot. Soc. (first v.
pres, 17). Paleobotany; plant physiology; eco-
nomic botany; horticulture.

Heath, Dr. Fred H(arvey), University of Wash-
ington, Seattle, Wash. *Chemistry*. Warner, N.
H, Feb. 25, 83. B.S. New Hampshire Col, 05;
Ph.D, Yale, 09. Asst. chem, Yale, 06-09; instr.
theoretical chem, Mass. Inst. Tech, 09-10; gen.
and anal. chem, Case, 10-11; anal. and physical
chem, Wesleyan, 11-12; gen. and anal. chem,
North Dakota, 12-14, *asst. prof*, 14-16; *chem*,
Washington (Seattle), 16- Chemist, N. Dak.
Biol. Sta, summers, 14-16. Chem. Soc. (pres,
Puget Sound sect, 19). Analytical and physical
chemistry; secret and spy inks; selenium must-
ard gas; phosphorescent materials.

Heath, George L(incoln), Hubbell, Mich. *Chem-
istry, Metallurgy*. Montreal, Can, April 3, 66.
B.S. Mass. Inst. Tech, 88. Asst. instr. sanit.
chem, Mass. Inst. Tech, and analyst, Mass.
Board of Health, 88-89; chemist, N. Y. Tartar
Works, 90; *chemist and metallurgist, Cal. and
Hecla Smelting Works*, 90- Chem. Soc; Min.
Eng; Soc. Test. Mat. Analysis of copper, its
ores and alloys.

Heath, Prof. Harold, Palo Alto, Calif. **Zoology*.
Veal, Ind, June 5, 68. A.B. Ohio Wesleyan,
93; Harrison fellow, Pennsylvania, 96-98, A.M.,
Ph.D, 98; Sc.D. Ohio Wesleyan, 19. Instr, Ohio
Wesleyan, 90-93; prof. biol, Pacific, 93-94;
instr. *invert. zool*, *Stanford*, 94-96, asst. prof.
98-01, assoc. prof, 01-09, *prof*, 09- Teacher
invert. zool, Hopkins Seaside Lab, 95-00; acting
naturalist, 'Albatross,' U. S. Fish Commission,
Alaska salmon investigations, 03, Calif. coast,
04, Japan, 06. Soc. Zool; Calif. Acad; West.
Soc. Nat. Anatomy and embryology of mol-
lusks; anatomy and embryology of the chitons
of the west coast of North America; anatomy
of some Pacific pteropods; Selenogasters; the
later development of chitons; cephalopods of
Hawaii, Alaska and the California coast; the
Amphineura of Alaska and the California coast.

Heatley, Margaret, Box 1176, Johannesburg, Cape
Colony, S. Africa. *Botany*. Rawtenstall, Eng-
land, Oct. 20, 85. A.B. Wellesley, 08, A.M.,
13. Teacher, Washington Sch, Tiverton, R. I.
08-09; science, Sayre Col, 09-10; asst. bot,
Wellesley, 10-12, instr, 12. Teacher English,
Maria-Martha Tochterheim, Germany, 10. A.A;
Fern Soc; Vt. Bird and Bot. Club; Boston Soc.
Nat. Hist. Embryology; flora of Martha's
Vineyard.

Hebard, Morgan, Philadelphia Academy of Nat-
ural Sciences, Philadelphia, Pa. *Entomology*.
Cleveland, Ohio, Feb. 23, 87. A.B. Yale, 10.
*Independent research worker, Phila. Acad. Nat.
Sciences*, 02- Fel. Entom. Soc; Am. Entom.
Soc. (cor. sec'y, 16-); hon. mem. Soc. entom. de
France. Orthoptera.

Hebb, Prof. T(homas) C(arlyle), 1246 12th Ave,
Vancouver, B. C. *Physics*. Bridgewater, N. S.,
Dec. 22, 78. B.A. Dalhousie, 00, M.A. 01, B.Sc.
02; Ph.D, Chicago, 04. Acting head, dept.
physics, Dalhousie, 04-05; instr. physics, high
sch, St. Louis, 05-06; research work, Westing-
house Elec. and Mfg. Co. and Am. Telephone
and Telegraph Co, 06-07; prof. physics and
chem, North. State Nor. Sch, Mich, 07-16; asst.
prof. physics, *British Columbia*, 16-18, assoc.
prof. and acting head of dept, 18-20, *prof. and
head of dept*, 20- A.A; Physical Soc. Freezing
point depressions; velocity of sound; specific
heats; ionization potentials; low voltage arcs.

Hebden, John C(alder), 52 E. 41st St, New York,
N. Y. *Chemistry*. Colgate, Wis, Dec. 22, 62.
A.B. Brown, 85, 01-03. Chemist and dyer, Nat.
and Providence Worsted Mills and Silver Spring
Bleachery, 85-87; resident agent, Wm. J. Mathe-
son and Co. and Cassella Color Co, 87-04; tech-
nician, A. Klipstein and Co, 04-09; v. pres,
F. E. Atteaux and Co, 09-10; Franklin Process
Co, 10-13; Fed. Dyestuffs and Chem. Co, 15-17;
chem. engineer. Chem. Soc; Chem. Eng; Soc.
Chem. Indust; Soc. de Chim. indust. Organic
chemistry; dyes and intermediates; bleaching;
dyeing and printing machinery; textiles.

Hecht, Prof. Selig, Creighton University, College
of Medicine, Omaha, Nebr. *Physiology*. Aus-
tria, Feb. 8, 92. B.S. Col. City of N. Y, 13;
Ph.D, Harvard, 17. Pharmacologist, bur. chem,
U. S. Dept. Agr, 13-14; *asst. prof. physiol*,
Creighton, 17- Scientific asst, Bur. Fisheries,
summers, 12, 13. A.A; Chem. Soc. Sensory
physiology; effect of light and chemicals on
sensory responses of animals.

Heck, Prof. Robert C(ulbertson) H(ays), Rutgers
College, New Brunswick, N. J. *Mechanical en-
gineering*. Heckton Mills, Pa, Oct. 30, 70.
M.E. Lehigh, 93. Instr. mech. eng, Lehigh, 93-
03, asst. prof, 03-07, *prof. exp. eng*, 07-08;
mech. eng, Rutgers, 08- Mech. Eng; Eng.
Edu. Applied thermodynamics and mechanics;
the properties of steam; the steam engine and
other steam motors; a steam table.

Heckel, Dr. Edward B(althasar), 719 Jenkins
Building, Pittsburgh, Pa. *Ophthalmology*.
Pittsburgh, Jan. 30, 65. A.B. Allegheny, 87,
A.M., 89; M.D. Bellevue Med. Col, 90. Instr.
ophthal, Pittsburgh, 92-12; *practising ophthal-
mologist*. Trustee, Allegheny. A.A; Ophthal.
Soc; Acad. Ophthal. and Oto-Laryngol; Am.
Med. Ass; Col. Surg; Pittsburgh Acad. Med.
(pres, 98).

Hecker, Dr. Charles (Henry), 405 East End Ave,
Pittsburgh, Pa. *Chemistry*. Cincinnati, Ohio,
May 15, 86. Ch.E. Cincinnati, 09, A.M., 11,
Ph.D, 13. Asst. chem, Cincinnati, 08-13; instr,
Illinois, 13-16; asst. prof. chem. eng, Wiscon-
sin, 16-17; prof, Florida, 17-18; *research en-
gineer, Westinghouse Elec. and Mfg. Co*, 18-

- A.A.; Chem. Soc.; Electrochem. Soc. Chemical engineering; derivatives of hydroxylamin; catalysis; oils and fats; electrochemical synthesis; electrical insulating materials.
- Hedenburg, Dr. Oscar F(red)**, Mellon Institute, Pittsburgh, Pa. *Chemistry*. Webster, Mass, May, 83. A.B. Wesleyan, 09, A.M. 11; Ph.D. Chicago, 15. Instr. chem, Chicago, 13-16; fellow, *Mellon Inst*, 16- Chem. Soc. Organic chemistry.
- Hedgcock, Dr. Geo(rge) G(rant)**, U. S. Department of Agriculture, Washington, D. C. *Phytopathology*. Augusta, Ill, Oct. 5, 63. B.S. Nebraska, 99, fellow, A.M. 01; Ph.D. Washington (St. Louis), 06. Principal pub. schools, Oak, Nebr, 91-93; Ruskin, Nebr, 93-95; asst. bot, Nebraska, 99; scientific aid, *bur. plant indust*, U. S. Dept. Agr, 01, asst. path, 02-08, *pathologist*, 03- A.A.; Bot. Soc.; Phytopath. Soc.; Wash. Bot. Soc.; Wash. Biol. Soc. The relation of the physiological water in the soil to that in plants; Thorea; new apparatus for phytopathological work; proof of the identity of Phoma and Phyllosticha on the sugar beet; Colletotrichum on agaves; Sclerotinia on cauliflower; crown gall; stem tumors on apple and quince; wood-staining fungi; mistletoe and fungous diseases of forest trees and shrubs, especially rusts attacking conifers.
- Hedges, Dr. C(harles) C(leveland)**, College Station, Tex. *Chemistry*. Walton, Ky, Sept. 22, 84. B.S. Kentucky, 06; A.B. Cornell, 08, Ph.D. 12. Asst. instr. chem, Cornell, 06-08, instr. 08-12; assoc. prof, *Tex. Col*, 12-13, *head, dept. chem. and chem. eng*, 13- Chem. Soc. Agricultural chemistry; chemical engineering; analysis of insecticides.
- Hedges, Miss Florence**, U. S. Department of Agriculture, Washington, D. C. *Plant pathology*. Lansing, Mich, Aug. 24, 78. A.B. Michigan, 01. Asst. bot, Michigan, 01-02; asst. expert, *lab. plant path, bur. plant indust*, U. S. Dept. Agr, 02, scientific asst, 03-09, *asst. pathologist*, 09- A.A.; Phytopath. Soc. Bacteriology; bacterial diseases of plants; diseases of corn, peas and beans; citrus trees.
- Hedrick, Dr. E(arle) R(aymond)**, University of Missouri, Columbia, Mo. **Mathematics*. Union City, Ind, Sept. 27, 76. A.B. Michigan, 96; Shattuck scholar, Harvard, 97-98, A.M. 98, Morgan fellow, 98-99, Parker fellow, 99-01; Ph.D. Göttingen, 01; Paris, 01. Instr. *math*, high sch, Sheboygan, Wis, 96-97; Sheffield Sci. Sch, Yale, 01-03; *prof, Missouri*, 03- Mem. div. physical science, Nat. Research Council. A.A.; Math. Ass. (pres, 16); Math. Soc. (v. pres, 16); Math. Verein; Soc. math. de France; Circolo Mat. di Palermo. Differential equations; calculus of variations; characteristics of differential equations; derivatives over assemblages; functions of real variables.
- Hedrick, Dr. Henry B(enjamin)**, 3240 S St, N. W, Washington, D. C. *Mathematical astronomy*. Georgetown, D. C, July 22, 65. A.B. George Washington, 86; Ph.D. Yale, 15. Asst. 'Nautical Almanac,' 86-00, senior asst, 00-08; asst. astron, Yale, 09-18; with Carnegie Institution, 18-20; on *technical staff, ordnance dept*, U.S.A., 20- A.A.; Astron. Soc. Positions and proper motions of the stars; a fundamental catalogue of 1607 zodiacal stars; new tables of the moon.
- Hedrick, Prof. U(lysses) P(rentiss)**, Geneva, N. Y. *Horticulture*. Cedar Rapids, Iowa, Jan. 15, 70. B.S. Mich. Agr. Col, 93, M.S. 95; Se.D. Hobart, 13. Asst. hort, Mich. Agr. Col, 93-95; horticulturist and botanist, Oregon Col, 95-97; Utah Col, 97-99; *horticulturist*, Mich. Agr. Col, 99-05; N. Y. *Exp. Sta, Geneva*, 05- A.A.; Soc. Hort. Sci; Pomol. Soc.; Soc. Prom. Agr. Sci. Pomology; tree and small fruit breeding.
- Hefferan, Dr. Mary**, University of Chicago, Chicago, Ill. *Bacteriology*. Eastmanville, Mich, June 24, 73. A.B. Wellesley, 96, A.M. 98; fellow, Chicago, 99-02, Ph.D. 03. Curator, *bacter. museum*, Chicago, 03-04, *asst. and curator*, 04- Variation; grafting (zoology); red chromogenic organisms; agglutinative relations in a group of non-pathogenic organisms; B. bulgaricus; an unusual bacterial grouping; Anopheles in Michigan.
- Hegner, Dr. R(obert) W(illiam)**, 218 Hawthorn Road, Roland Park, Md. **Zoology*. Decorah, Iowa, Feb. 15, 80. B.S. Chicago, 03, M.S. 04; Ph.D. Wisconsin, 08. Asst. zool, Chicago, 05-07; prof. biol, State Nor. Sch, River Falls, Wis, 07; asst. zool, Wisconsin, 07-08; instr, Michigan, 08-10, asst. prof, 10-18; assoc, *Hopkins*, 18-19, *assoc. prof, in charge, dept. med. zool*, 20- Collector in Mexico with Prof. W. L. Tower, 03; Hopkins delegate, Royal Inst. Pub. Health, Brussels, 20. A.A.; Soc. Nat; Soc. Zool. The germ cell cycle in insects; cytoplasmic localization in insect eggs; genetics of Protozoa; parasitic Protozoa.
- Heidelberger, Dr. Michael**, Rockefeller Institute, New York, N. Y. *Chemistry*. New York, April 29, 88. B.S. Columbia, 08, A.M. 09, Ph.D. 11; Eidgen. Tech. Hochschule, Zürich, 11-12. Fellow, *Rockefeller Inst*, 12-13, *asst. chem*, 13-17, *assoc*, 17- Asst. chem, Stevens, supplementary term, 09; Columbia, summers, 09, 11. Chem. Soc. Organic chemistry; sodium-uranium compounds; volumetric determination of cerium; phthalones in the quinazoline series; cyclooctatetraene; chemotherapy.
- Heilbrunn, Dr. L(ewis) V(ictor)**, University of Michigan, Ann Arbor, Mich. *Zoology*. Brooklyn, N. Y, Jan. 24, 92. A.B. Cornell, 11, fellow, 12-13; Ph.D. Chicago, 14. Asst. zool, Chicago, 13-14, assoc, 14-16; instr. histol, col. med, Illinois, 16-17; lieut, air service, A.E.F., 17-19; *instr. zool, Michigan*, 19- A.A.; Soc. Zool. Artificial parthenogenesis; mitosis; anesthesia.
- Heilman, Prof. J(acob) D(aniel)**, State Teachers College, Greeley, Colo. *Psychology*. Lehigh Co, Pa, Sept. 6, 75. A.B. Muhlenberg, 03; fellow, Pennsylvania, 06, Ph.D. 08. Asst. psychol. clinic, and lecturer child study, Pennsylvania, 07; asst. prof. *educ. psychol*, Colo. State Teachers Col, 08-10, *prof*, 10- Educational psychology; personnel; native capacity.
- Heimberger, Prof. H(arry) V(irl)**, Fennville, Mich. *Biology*. Howard City, Kans, March 31, 80. A.B. DePauw, 11; A.M. Illinois, 15. Instr. biol, DePauw, 11-13; asst. zool, Illinois, 13-16; instr. and later asst. prof. biol, Hamline, 16;

fruit farmer. Asst. zool. Puget Sound Marine Sta., summer, 15. Ecol. Soc.; Micros. Soc.; Ind. Acad. Animal ecology.

Heinemann, Dr. P(aul) G(ustav), Woodworth, Wis. *Bacteriology*. Manchester, England. B.S. Chicago, 04, Ph.D., 07. Asst. bacter, Chicago, 06-07, 08-09; asst. and business manager, serum div, Sprague Mem. Inst. Chicago, 07-17; *director lab, U. S. Standard Products Co*, 17- A.A.; Ass. Path. and Bact.; Soc. Bact.; Pub. Health Ass. Milk; substitute for potato as a culture medium; *Bacillus bulgaricus*; concentration of antitoxins; Rocky Mountain spotted fever; Oppler bacillus.

Heinicke, Dr. A(rthur) J(ohn), Cornell University, Ithaca, N. Y. *Pomology*. St. Louis, Mo, Oct. 23, 92. B.S.A., Missouri, 13, A.M., 14; Ph.D., Cornell, 16. Instr. *pomol*, Cornell, 14-17, asst. prof., 17-20, *prof.*, 20- A.A.; Soc. Hort. Sci. Rest period, sap, and freezing of tissue in plants; abscission of flowers and young fruits in apple.

Heise, George W(illiam), Fremont, Ohio. *Chemistry*. Milwaukee, Wis, June 27, 88. B.S., Wisconsin, 09, M.S., 12, fellow, 12-13. Asst. and instr. chem, Grinnell, 09-10; DePaul, 10-11; Wisconsin, 11-13; physical chemist and chief of sect, Bur. Science, P. I., 13-17; instr. chem, Wisconsin, 18; *research chemist, Nat. Carbon Co*, 19- Capt, Q.M.R.C., 17, C.W.S., 18-19. Chem. Soc. Physical and inorganic chemistry; electrochemistry; photochemistry; chemical equilibrium; water supply; radioactivity; corrosion; nitrogen fixation.

Heiser, Dr. Victor G(eorge), 61 Broadway, New York, N. Y. *Sanitation*. Pa, 73. M.D., Jefferson Med. Col, 97, Sc.D., 11; Naples Zool. Sta. U. S. Pub. Health Serv, 98-15; chief quarantine officer and director of health, Philippine Islands, 03-15; *director for the East, Int. Health Board, Rockefeller Foundation*, 15- Special investigator plague, Egypt and Europe, 99; immigration, Can, 01; govt. representative, various int. med. congresses. A.A.; Am. Med. Ass; Pub. Health Ass; Far Eastern Ass. Trop. Med; P. I. Med. Ass. (pres, 05). Cholera; leprosy.

Heising, Raymond A, Western Electric Co, 463 West St, New York, N. Y. *Physics*. E.E., North Dakota, 12; M.S., Wisconsin, 14. *Research physicist, West. Elec. Co*, 14- A.A.; Elec. Eng; Physical Soc; Radio Eng. Radio communication; audion oscillators.

Heisler, Dr. John Clement, 3829 Walnut St, Philadelphia, Pa. *Anatomy, Embryology*. Jersey Shore, Pa, Feb. 27, 62. Ph.G., Phila. Col. Pharmacy, 83; M.D., Pennsylvania, 87. *Prosector anat*, Pennsylvania, 89-97; *prof, Medico-Chirurg*. Col, Phila, 97-16; *Pennsylvania*, 16- Instr. diseases of chest, Phila. Polyclinic; asst. demonstrator anat. and curator, Wistar and Horner Museum, Pennsylvania, different periods, 89-97. Ass. Anat; Am. Med. Ass; Phila. Col. Physicians. Relational anatomy; dissections; embryology.

Hektoen, Dr. L(udvig), 637 S. Wood St, Chicago, Ill. **Pathology*. Westby, Wis, July 2, 63. A.B., Luther, 83, A.M., 96; M.D., Col. Physicians and Surg, Chicago, 87; Berlin, Prague and Upsala, 94-96; M.D., Rush Med. Col, 96; hon. M.D., Christiania, 11; Sc.D., Michigan, 13; Wisconsin,

16. *Prof. path, Rush Med. Col*, 98-; *Chicago*, 00-, *head, dept. path*, 14-; *director, McCormick Inst. for Infectious Diseases*, 01- Pathologist, Cook Co. Hosp, 89-03; coroner's physician, Cook Co, Ill, 90-94; lecturer path, Rush Med. Col, 90-92; *prof. path, Col. Physicians and Surg*, Chicago, 92-94; morbid anat, Rush Med. Col, 95-98; Middleton-Goldsmith lecturer, N. Y. Path. Soc, 06; lecturer, Harvey Soc, 10; Herter lecturer, Univ. and Bellevue Med. Col, 12; Harrington lecturer, Buffalo, 12; Cutter lecturer, Harvard Med. Sch, 17; ed, 'Jour. of Infectious Diseases,' 04-; mem. Ill. Commission to Investigate Diseases of Occupation, 08- Nat. Acad; A.A. (v. pres, 07); Ass. Path. and Bact. (pres, 02); emer. mem. Am. Physicians; Soc. Exp. Biol; Am. Med. Ass; Soc. Pharmacol; Soc. Exp. Path; Therapeut. Soc; Chicago Med. Soc. (pres, 20); Chicago Path. Soc. (pres, 98-02); Chicago Inst. Med; for. mem. Norwegian Med. Soc; for. mem. Swedish Med. Soc. Pathological anatomy and bacteriology; immunology.

Heldt, Tho(mas) J(ohannes), U. S. P. H. S. Hospital No. 37, Waukesha, Wis. *Neurology, Psychiatry*. Buckeye, Iowa, Aug. 8, 83. A.B., Missouri, 10, A.M., 12; M.D., Hopkins, 16. Asst. anat, Missouri, 10-13, instr, 13-14; Greene's western salmon expd, Bur. Fisheries, 11; asst, Psychiat. Inst, Ward's Island, N. Y. City, 16-17; major, M.C, 17-19; *clinical director, hosp. No. 37 for psychoneurotics, U. S. P. H. S.*, 19- A.A.; Ass. Anat; Ass. Study Int. Secretions. Neurocytology; neuropsychiatry.

Heller, Dr. A(mos) A(rthur), Chico, Calif. *Botany*. Danville, Pa, March 21, 67. A.B., Franklin and Marshall, 92, A.M., 97, Sc.D., 11. Field agent, U. S. Dept. Agr, 92; instr. bot, Minnesota, 96-98; in charge, Vanderbilt expd. of N. Y. Bot. Garden, Porto Rico, 98-99; asst. botanist, Nev. Exp. Sta, and instr. bot, Nevada, 08-10, asst. prof, 10-13; *teacher, Chico High Sch*, 17- Systematic botany, especially the genus *Lupinus*.

Heller, Edmund, U. S. National Museum, Washington, D. C. *Zoology*. Freeport, Ill, May 21, 75. A.B., Stanford, 01. Asst. U. S. Biol. Surv. of Alaska, 00; field naturalist, Field Museum Nat. Hist, 01-08; curator mammals, museum vert. zool, California, 08-11; naturalist, Rainey African Exped, 11-12; Nat. Geog. Soc. and Yale Peruvian Exped, 15-16; Am. Museum Nat. Hist. Exped, China and Tibet, 17-18; war photographer, Siberia, 18-19; chief, Cape to Cairo African Exped, 19-20. Mem. Hopkins Galapagos expd, 98-99; Field Museum Nat. Hist. expd. E. Africa, 05-06; naturalist, Roosevelt African expd, 09-10. Soc. Mammal; Explorers Club; Wash. Biol. Soc; cor. mem. Phila. Acad. Systematic mammalogy; Galapagos ichthyology, herpetology, ornithology and mammalogy; African game animals.

Helm, Dr. Emerson B(eunette), 843 E. Boulevard, Cleveland, Ohio. *Chemistry*. Cleveland, Sept. 29, 93. B.S., Florida, 15; Ph.D., Hopkins, 18. *Chemist, Gabauer Chem. Co*, 18- With C.W.S., U.S.A., 18. Physical and organic chemistry.

Helmholz, Prof. H(enry) F(rederic), Mayo Clinic, Rochester, Minn. *Pediatrics*. Chicago, Ill, Aug. 24, 82. B.S., Wisconsin, 02; M.D., Hopkins, 06,

- fellow, 06-07. Asst. prof. med, Rush Med. Col, 11-19, mem. Sprague Mem. Inst, Chicago, 14-20; *prof. pediat, Minnesota, 20-* Ed, 'Am. Jour. Diseases of Children.' *Pediat. Soc; Soc. Pharmacol; Ass. Path. and Bact. Duodenal ulcer; pyelitis.*
- Helmick, Dr. Homer H(enry)**, 622 N. Clinton St, Defiance, Ohio. *Physical chemistry.* Defiance, April 4, 90. A.B, Defiance, 09, A.M, 10; Ph.D, Chicago, 18. Assoc. prof. chem, Wheaton, 11-12, prof, 12-15; asst, Chicago, 15-18; second lieut, Sanit. C, 18-20. Chem. Soc; Ill. Acad. Radioactivity; determination of thorium; radioactive constants of actinium.
- Hemenway, Prof. Ansel F(rancis)**, 634 Headley Ave, Lexington, Ky. *Botany.* Eugene, Oregon, Oct. 13, 78. A.B, Oregon, 02, A.M, 04; Harvard, 09; Ph.D, Chicago, 12. Supt. of schools, dist. 86, Spokane, Wash, 05-08; Austin teaching fellow, Harvard, 09-11; *prof. biol, Transylvania, 12-* Prof. biol, Oregon, summers, 10, 11; asst. pathologist, cereal investigations, U. S. Dept. Agr, summers, 18, 19. A.A; Bot. Soc; Phytopath. Soc. Plant anatomy; anatomy and physiology of phloem.
- Hemingway, Dr. E(arle) Heaton**, Hopewell, Va. *Chemical engineering.* North Haven, Conn, June 20, 93. Ph.B, Yale, 13, Ph.D, 16. Research chemist, Calco Chem. Co, 16-17; research engineer, Watertown Arsenal, 19-20; with *Tubize Artificial Silk Co, 21-* Lieut, U.S.A, 17-19.
- Hemmeter, Prof. John C(onrad)**, 739 University Parkway, Baltimore, Md. *Medicine.* Baltimore, April 25, 63. Baltimore City Col, 83; M.D, Maryland, 84, hon. Sc.D; Ph.D, Hopkins, 90; LL.D, St. John's (Md), 05. Physician in charge, Bay View Asylum, Baltimore, 86-88; *prof. clin. med, med. dept, Maryland, 03-* Smithsonian fellow, Int. Biol. Inst, Naples, 13; mem. Cong. Internal Med, Germany. Regent, Maryland. A.A; Royal Soc. Arts; Physiol. Gesell; Leop.-Carol. Acad; Royal Imp. Soc. Austrian Physicians. Physiology and pathology of the digestive organs; physiological foundations of piano technique; history of physiology and medicine.
- Hempelmann, Dr. Theodore C(arl)**, 2021 S. Grand Ave, St. Louis, Mo. *Pediatrics.* St. Louis, Mo, 85. M.D, Washington (St. Louis), 08. *Instr. clin. pediat, Washington (St. Louis), 11-* Am. Med. Ass; Child Hygiene Ass. Tuberculosis in childhood.
- Henchman, Miss Annie P(arker)**, Station for Experimental Evolution, Cold Spring Harbor, L. I, N. Y. *Zoology, Embryology, Histology.* Jamaica Plain, Mass, March 22, 52. Radcliffe, 84-90. A.A; Soc. Nat; Soc. Zool. Nervous system of *Limax maximus*; development of hooks in *Pectinatella*.
- Henderson, Prof. Archibald**, Chapel Hill, N. C. *Mathematics.* Salisbury, N. C, June 17, 77. A.B, North Carolina, 98, A.M, 99, Ph.D, 01; summer sch, Chicago, 01, fellow, 02-03, Ph.D, 15; Cambridge, Berlin, Paris, 10-11; hon. D.C.L, Univ. of the South, 17. Instr. math, *North Carolina, 98-02*, assoc. prof, 02-08, prof. pure math, 08-20, head, dept. math, 20- Math. Soc; N. C. Acad; Elisha Mitchell Sci. Soc; Circolo Mat. di Palermo. Twenty-seven lines upon the cubic surface; modern geometry.
- Henderson, Prof. E(rnest) N(orton)**, 179 St. James Place, Brooklyn, N. Y. *Psychology.* La Salle Co, Ill, Dec. 17, 69. Ph.B, California, 90, A.B, 93, A.M, 94; Ph.D, Columbia, 03. Teaching fellow in philos, California, 92-95; principal, high sch, Woodland, Calif, 95-97; instr. psychol, State Nor. Sch, Chico, Calif, 97-01; assoc. prof. pedag, *Adelphi, 02-03*, prof. educ. and psychol, 03-09, *philos, educ. and psychol, 09-* Psychol. Ass; Philos. Ass; Soc. Col. Teachers Educ. Memory for connected trains of thought; principles of education.
- Henderson, G(eorge) R**, 1920 Chestnut St, Philadelphia, Pa. *Mechanical engineering.* Philadelphia, Jan. 14, 61. Grad, Lauderbach Acad, Phila, 76. Railway draftsman, asst. supt. and supt, 83-03; *consulting mech. engineer, 04-* Lecturer, Brooklyn Polytech, 06; eng. for Pa. for Fuel Ad, 17-19. Mech. Eng; Master Mechanics Ass; Master Car Builders; Franklin Inst; Phila. Eng. Club; N. Y. R. R. Club. Locomotive operation; cost of locomotive operation.
- Henderson, Judson Pulford**, Dominion Observatory, Ottawa, Can. *Astrophysics.* Toronto, Can, March 2, 91. B.A, Toronto, 14, M.A, 15, fellow, 16-19. Asst. astron, Toronto, 14-15; *asst. astronomer, Dominion Observatory, 19-* Asst. tech. instr. radiography, Toronto. A.A; Astron. Soc; Royal Astron. Soc. Can; Can. Inst. Astronomy; radiotelegraphy; ultra violet spectrum; zinc arc in quartz tube; hot cathode and vapor ionization criteria; spectroscopic binaries.
- Henderson, Prof. Junius**, University of Colorado, Boulder, Colo. *Paleontology, Conchology.* Marshalltown, Iowa, April 30, 65. A.B, Colorado, 08. *Curator, museum, Colorado, 03-*, prof. nat. hist, 09- A.A; Paleont. Soc; Ornith. Union; Wilson Ornith. Club; Soc. Mammal; Soc. Ichthyol. and Herp; Ass. Mus; Wash. Biol. Soc; London Malacol. Soc. Invertebrate paleontology; ornithology.
- Henderson, Prof. L(awrence) J(oseph)**, 4 Willard St, Cambridge, Mass. *Chemistry.* Lynn, Mass, June 3, 78. A.B, Harvard, 98, M.D, 02; Strasbourg, 02-04. Lecturer *biol. chem, Harvard, 02-03*, instr, 03-10, asst. prof, 10-19, *prof, 19-* Nat. Acad; A.A; Soc. Nat; Chem. Soc; Physiol. Soc; Soc. Biol. Chem; Am. Acad. Biological chemistry; physical chemistry; the physico-chemical structure and organization of the body.
- Henderson, Dr. L(awrence) M(elvin)**, University of Minnesota, Minneapolis, Minn. *Physical chemistry.* Northwood, Iowa, July 24, 89. A.B, St. Olaf, 10; A.M, Chicago, 11, Ph.D, 16. Asst. chem, Chicago, 15-16; *asst. prof, Minnesota, 16-* A.A; Chem. Soc. Radio-activity; ratio of mesothorium one to thorium in thorium minerals.
- Henderson, Miss L(ena) B(ondurant)**, University of Tennessee, Knoxville, Tenn. *Botany.* New Orleans, La, Dec. 28, 80. B.S, Tennessee, 08; fellow, Cold Spring Harbor. Teacher biol, Cent. High Sch, Knox Co, Tenn, 08-12; *asst. prof. bot, Tennessee, 12-* Teacher bot. and zool, Summer Sch. of South. A.A; Bot. Soc. Plant pathology.

- Henderson, Dr. Margaret Wasson**, 3317 N. Smedley St, Philadelphia, Pa. *Botany*. Philadelphia, Sept. 29, 91. B.S. Pennsylvania, 12, A.M., 13, Ph.D., 19. Research asst, Carnegie Institution, 13-15; *curator herbarium, bot. dept., Pennsylvania*, 16- Morphology; relationship of ericaceous saphrophytes to typical Ericaceae.
- Henderson, Dr. M(artin) P(erry)**, Brigham Young University, Provo, Utah. *Plant pathology*. Clifton, Idaho, Dec. 29, 74. A.B., Utah, 11; fellow, Wisconsin, 13-14, Ph.D., 14. Instr. bot. and zool. Acad, Preston, Idaho, 04-09; asst. bot. Utah, 10-11; Wisconsin, 11-13; plant pathologist, South. Oregon Exp. Sta. and pathologist, Jackson Co, 14-15; *prof. biol., Brigham Young*, 15- A.A.; Phytopath. Soc; Bot. Soc. The black-leg disease of cabbage.
- Henderson, Dr. Velyien E(wart)**, University of Toronto, Toronto, Can. *Pharmacology, Physiology*. Cobourg, Can, 77. B.A., Toronto, 99, M.B., 02, M.A., 02. Demonstrator physiol, Pennsylvania, 02-03; *Toronto*, 04-07, lecturer *pharmacy and pharmacol.*, 07-12, *prof.*, 12- Major, C.E.F., 16-19. A.A.; Soc. Pharmacol; Physiol. Soc; London Physiol. Soc. Pathology of tabes; physiology of the kidney; pharmacology of ergot.
- Henderson, Prof. William D**, University of Michigan, Ann Arbor, Mich. *Physics*. Ingersoll, Can, Nov. 27, 66. A.B., Michigan, 03, A.M., 04, Ph.D., 06. Instr. physics, *Michigan*, 03-05, asst. prof., 06-09, assoc. prof., 09-19, *director, exten.*, 19- Assoc. mem. Physical Soc. Electrochemistry; concentration cells; thermoelectromotive force of silver and of cadmium amalgams; heat of dilution of zinc amalgams.
- Henderson, Prof. W(illiam) E(dwards)**, Ohio State University, Columbus, Ohio. *Chemistry*. Wilkesburg, Pa, Jan. 29, 70. A.B., Wooster, 91, A.M., 94; fellow, Hopkins, 96-97, Ph.D., 97. Prof. nat. science, Emporia, 91-93; chem, Ohio (Athens), 97-99; asst. prof., *Ohio State*, 99-01, assoc. prof., 01-08, *prof. inorg. and physical chem.*, 08- A.A. (see'y, council, 15, gen. sec'y, 16); Chem. Soc. (see'y, inorg. and physical chem. sect, 17, chairman, 18). Chlorids of p-nitroorthosulphobenzoic acid; decomposition of diazo-compounds with sulphur dioxide; action of anhydrous aluminum chlorid on unsaturated compounds; hydrolysis of ethyl acetate by neutral salt solutions; action of sulphurous acid on sulphids of iron, zinc and manganese; a lead standard cell; thionic acids and their salts.
- Henderson, Dr. Yandell**, Yale Medical School, New Haven, Conn. **Physiology*. Louisville, Ky, April 23, 73. A.B., Yale, 95, Ph.D., 98; Marburg and Munich, 99-00. Asst. physiol. chem, *Yale*, 98-99, instr. *physiol.*, 00-02, asst. prof., 02-11, *prof.*, 11- Consulting physiologist, Bur. Mines, 13-, in charge, physiol. div, war gas investigations, 17-19; chairman, med. research board, Air Service. A.A.; Physiol. Soc; Soc. Biol. Chem; Soc. Pharmacol; Am. Med. Ass. (see'y, sect. path. and physiol, 10, chairman, 11); London Physiol. Soc. Physiology of the circulation; biochemistry of respiration; pharmacology of gases.
- Hendren, Prof. L(inville) L(aurentine)**, Athens, Ga. *Physics*. Carey, N. C, March 3, 79. A.B., Trinity (N. C), 00, A.M., 01; Ph.D., Columbia, 05. Asst. physics, Columbia, 02-05; adj. prof. *applied math.*, Trinity (N. C), 05-08; *prof.*, *Georgia*, 08- A.A.; assoc. mem. Physical Soc. Radioactivity.
- Hendrick, Ellwood**, 139 E. 40th St, New York, N. Y. **Chemistry*. Albany, N. Y, Dec. 19, 61. Zürich, 78-81. Supt, Albany Aniline and Chem. Works, 81-84; in business, 84-15; *mem. staff, Arthur D. Little Co*, 17-; *consulting ed., 'Chem. and Metal. Eng.'*, 18- Chem. Soc. (councilor, 18, 19, 20); Soc. Chem. Indust. (mem. exec. committee, N. Y. sect, 19, 20); N. Y. Chemists Club (pres, 18-20); Soc. Chim. indust. (mem. council, 19, 20). Popular chemistry.
- Hendrickson, Prof. A(rthur) H(oward)**, 331 Hilgard Hall, Berkeley, Calif. *Horticulture*. Grand Rapids, Mich, Feb. 2, 90. B.S., Mich. Agr. Col, 13; M.S., Cornell, 19. Asst. *pomol., California*, 13-15, instr., 15-17, *asst. prof.*, 17-; exchange prof., Cornell, 18-19. Soc. Hort. Sci. Pomology; pollination; pruning; irrigation.
- Hendrix, Prof. B(yron) M(urray)**, 36th and Pine Sts, Philadelphia, Pa. *Physiological chemistry*. Preble Co, Ohio, May 16, 86. B.S., Ohio State, 09; Ph.D., Yale, 15. Asst. agr. chem, Ohio State, 09-10; asst. chemist, bur. chem, U. S. Dept. Agr., 10-13; instr. *physiol. chem.*, *Pennsylvania*, 15-19, *asst. prof.*, 19- Chem. Soc.
- Hendrixson, Prof. W(alter) S(cott)**, Grinnell, Iowa. *Chemistry*. Felicity, Ohio, Jan. 11, 59. B.S., Union Christian Col, 82; A.M., Harvard, 89, Ph.D., 93; Berlin and Göttingen, 94-95. Instr. chem. and physics, Antioch, 83-88; asst., Harvard, 90; *prof. chem.*, *Grinnell*, 90- Assoc. prof. chem, Iowa, summer, 02; lecturer, Illinois, 17. Chem. Soc. (pres, Iowa sect); Iowa Acad. (pres). Titration of iodids.
- Henmon, Prof. V(ivian) A(llen) C(harles)**, University of Wisconsin, Madison, Wis. *Psychology, Education*. Centralia, Wis, Nov. 27, 77. A.B., Bethany (Kans), 95, A.M., 99; fellow, Columbia, 04-05, Ph.D., 05. Principal schools, Lincoln, Mo, 95-97; asst, Bethany (Kans), 98, instr. pedag, 98-00, prof. pedag. and psychol, 00-05; lecturer psychol, Columbia, 05-07; prof. psychol. and educ, Colorado, 07-10; assoc. prof. *educ.*, *Wisconsin*, 10-12, *prof.*, 12-, *director, sch. educ.*, 16- Acting dean, col. lib. arts, Colorado, 09-10; capt, Air Service, Sig. R. C, 17-19, major, 19- A.A. (v. pres, L, 19); Psychol. Ass. Psychology of learning; reaction time; the time of perception as a measure of differences in sensations; sex differences in color-perception; relation of time of judgment to its accuracy; standard tests in foreign languages; tests of aptitude for aviation.
- Hennen, Ray V**, Morgantown, W. Va. *Geology*. St. Cloud, W. Va, June 18, 75. A.B., West Virginia, 00, B.S., 01. Engineer, Carter Oil Co, 01-02; engineer and chief clerk, W. Va. Geol. Surv., 02-07, asst. geologist, 07-18; consulting geologist, 18-19; *chief geologist, Transcontinental Oil Co*, 19- Chief geologist, Standard Oil Co. petrol. exped. to S. Am., 13. A.A.; Geol. Soc; Ass. Petrol. Geol. Oil and gas geology.

- Hennings, Prof. A(lbert) E(dward)**, University of British Columbia, Vancouver, B. C. *Physics*. Barrington, Ill, Oct. 31, 81. A.B, A.M, Lake Forest 04; Ph.D, Chicago, 14. Instr. science, high sch, Houghton, Mich, 04-05; math, Whitman, 05-06; *physics*, Univ. High Sch, Chicago, 07-12; asst. prof, Saskatchewan, 13-17, prof, 17-18; *asst. prof*, Chicago, 18-19; *British Columbia*, 19- A.A; Physical Soc. Contact E.M.F. and photoelectric properties of metallic surfaces; determination of 'H' for ordinary metals; temperature coefficient of contact E.M.F.
- Henny, D(avid) (Christiaan)**, Spalding Building, Portland, Oregon. *Civil engineering*. Arnhem, Holland, Nov. 15, 60. C.E, Polytech, Delft, Holland. Chief engineer and gen. manager, Excelsior Wooden Pipe Co, 93-02; Redwood Mfg. Co, 02-05; supervising engineer, Pacific Dist, U. S. Reclamation Service, 05-09; *consulting engineer*, 09- Civil Eng. Hydraulics; behavior and friction of water; building materials.
- Henrici, Prof. Arthur T**, 130 Arthur Ave, S. E, Minneapolis, Minn. *Bacteriology*. Economy, Pa, March 31, 89. M.D, Pittsburgh, 11. Pathologist, St. Francis Hosp, Pittsburgh, 12-13; asst. prof. *bacter. and immunol*, Minnesota, 13-20, *assoc. prof*, 20- Research asst. mouth infections, Nat. Dental Ass, 14-17; capt, U. C, 17-19. Ass. Path. and Bact; Soc. Bact; Int. Ass. Med. Mus. Dental diseases; Streptococci; focal infections; fungous parasites of man; nitrogen-fixing bacteria of legumes.
- Henricksen, H(enrick) C(hristian)**, Federal Building, San Juan, P. R. *Agriculture*. N. Bork, Denmark, April 28, 69. B.Agr, Copenhagen, 90. Asst, U. S. Tropical Garden, Miami, Fla, 00-03; horticulturist, P. R. Agr. Exp. Sta, 03-06; manager, W. I. Agr. Bur, German Kali Works, 06-13; *specialist farm management*, P. R. Exp. Sta, 16- A.A. Tropical horticulture.
- Henroteau, Dr. F(rançois) C(harles)**, Dominion Observatory, Ottawa, Can. *Astronomy*. Ans, Belgium, Feb. 23, 89. Sc.D, Brussels, 11; fellow, Lick Observatory. Asst. astronomer, Royal Observatory, Belgium, 11; prof. math, Belgium, 12-14; astronomer, Stonyhurst Observatory, England, 14-16; Detroit Observatory, 16-17; Lick Observatory, 17-18; Allegheny Observatory, 18-19; *in charge stellar spectroscopy*, Dominion Observatory, 19- Fel. Royal Astron. Soc. Astrophysics; stellar spectroscopy; solar physics; mathematics.
- Henry, Prof. A(lfred) J(udson)**, 1322 Columbia Road, Washington, D. C. *Meteorology*. New Bethlehem, Pa, Sept. 1, 58. George Washington, 85-86, 97-98. With U. S. Weather Service, 78-91; chief, div. meteorol. records, U. S. Weather Bur, 96-00, prof. meteorol, 00-17, *meteorologist*, 17- A.A; Ass. Geog; Wash. Acad. Weather forecasting; hydrology; climatology of the United States.
- Henry, A(rthur) M(alcolm)**, Tallahassee, Fla. *Plant pathology*. Columbia Co, Fla, Feb. 17, 88. B.S, Florida, 06; Wash. State, 14; Biltmore Forest Sch, 13. Asst. state chemist, Fla, 07-13; worker, citrus canker eradication, State Plant Board, Fla, 14-16, district inspector, 16; *asst. state chemist*. A.A; Chem. Soc. Chemistry; ripening of oranges.
- Henry, Prof. G(eorge) F(rederick)**, Fargo College, Fargo, N. Dak. *Physical chemistry*. Ainsworth, Iowa, Nov. 20, 70. B.S, Wash. State, 03; M.S, Northwestern, 15; Chicago, 15-16. Teacher science, high sch, Lewiston, Idaho, 03-06; prof. chem. and head, dept. science, Reid Christian Col, Lucknow, India, 06-14, v. pres, 12-14; *prof. physics and chem*, Mt. Union, 15-16; *Fargo*, 16-, *asst. dean*, 19- A.A; Chem. Soc; Ass. Prof; N. Dak. Acad; N. Dak. Polytech. Soc. Electrical conductivity in non-aqueous solutions.
- Henry, Prof. W(illiam) A(rnon)**, University of Wisconsin, Madison, Wis. *Agriculture*. Norwalk, Ohio, June 16, 50. Ohio Wesleyan, 68-69; B.Agr, Cornell, 80; hon. D.Agr, Illinois, 04; Sc.D, Vermont, 04; Mich. Agr. Col, 07. Prof. bot. and agr, Wisconsin, 80-82, agr, 83-07, director, Exp. Sta, 87-07, dean, col. agr, 92-07, *emer. prof*, 07- Assoc. ed, 'Hoard's Dairymen'; lecturer animal nutrition, California, 02. Animal nutrition and the rational feeding of live stock.
- Hensel, Prof. R(udolph) L(ouis)**, Kansas State Agricultural College, Manhattan, Kans. *Agronomy*. San Antonio, Tex, Oct. 27, 90. B.S, Iowa State, 13. Forest asst, U. S. Forest Service, 13-15; director, Santa Rita Exp. Sta, Tucson, Ariz, 16-19; *assoc. prof. pasture management*, Kansas State, 19- Ecol. Soc. Plant ecology as affected by grazing.
- Henshaw, Fred F(orbes)**, 606 Post Office Building, Portland, Oregon. *Hydraulics*. West Brookfield, Mass, May 21, 84. B.S, Mass. Col, 04. Draftsman, Brown Hoisting Machinery Co, 05; hydrographic aid, *water resources branch*, U. S. Geol. Surv, 05-06, junior engineer, 06-07, asst. engineer, 07-10, *district engineer*, Oregon, 10- Civil Eng. Stream gaging; water resources of Seward Peninsula, Alaska; surface water of the Columbia River basin; water power of the Cascade Range and of the Deschutes River.
- Henshaw, Henry W(etherbee)**, The Ontario, Washington, D. C. *Biology*. Cambridge, Mass, March 4, 50. Cambridge pub. schools. With Wheeler Govt. Surv, 72-80; Bur. Am. Ethnol, Smithsonian Inst, 80-93; ed, 'Am. Anthropologist,' 89-93; biol. surv, U. S. Dept. Agr, 05-10, chief, 10-16. A.A; fel. Ornith. Union (v. pres, 14); Wash Biol. Soc; Wash. Anthropol. Soc. Biology; ornithology; anthropology.
- Henshaw, Samuel**, 8 Fayerweather St. Cambridge, Mass. *Zoology*. Hon. A.M, Harvard, 03. Asst. entom. and librarian, *museum comp. zool*, Harvard, curator, 04-12, *director*, 12- Soc. Nat; Soc. Zool; Entom. Soc; Am. Acad. Entomology.
- Henwood, Prof. Abraham**, P. O. Box 41, Cynwyd, Pa. *Physical chemistry*. Philadelphia, Pa, Dec. 7, 71. B.S, Pennsylvania, 01, M.S, 16, hon. Sc.D, Muhlenberg, 17. Instr. chem, Drexel Inst, 92-05, prof, 05-18; research chemist, Hercules Powder Co, 18; *in charge, dept. chem*, Haverford, 18-19; *Central High School*, 19- Lecturer laundry chem, Y. M. C. A, Phila, 15. A.A;

Chem. Soc. (pres, Phila. sect, 17). Temperature of maximum density of aqueous solutions; concentration of alkaline hydroxid in soap test; niter cake in production of phosphates from apatite; oxidation of ammonia to nitric acid.

Hepburn, Dr. Joseph Samuel, Hahnemann Medical College, Philadelphia, Pa. *Chemistry*. Philadelphia, Aug. 25, 85. A.B. Cent. High Sch, Phila, 03, A.M. 08; B.S.(Chem), M.S. Pennsylvania, 07, 14-20; Temple, 09-12; fellow, Columbia, 12-13, Ph.D. 13; Medico-Chirurg. Col, Phila, 11-12. Scientific asst, U. S. Dept. Agr, 07-08, asst. chemist, 09-12, 13-20; *instr. chem, Hahnemann Med. Col, and chemist, Hering lab, 20-* Ed. committee, 'Biochem. Bul,' 12-; abstractor, 'Chem. Abstracts,' 15- Longstreth medal, Franklin Inst, 11. Third Int. Cong. Refrigeration. Chem. Soc; Agr. Chem; Franklin Inst. (see'y, sect. physics and chem, 09-); Soc. Biol. Chem; Phila. Acad; Phila. Physiol. Soc; Columbia Biochem. Ass. (hon. v. pres, 17). Biological chemistry; plant physiology; determination of nitrogen; fats and oils; dental caries; enzymes; cold storage; nutrition; drug proving.

Herd, Dr. L(ouis) A(nthyme), McGill University, Montreal, Can. *Electrical engineering*. Trouville, France, June 14, 72. B.S. McGill, 96, Ma.E. 02; E.E. Belgium, 03, Sc.D. 10. Assoc. prof. *elec. eng, McGill, 08-09, prof. and head of dept, 09-* Consulting engineer. Pres. Can. Committee, Int. Electrotech. Commission, London, 06; v. chairman, Montreal Tramways Commission. Officier d'Acad, 05. Elec. Eng. (hon. sec'y for Can); Can. Inst. Eng; London Inst. Elec. Eng. Predetermination of alternator characteristics and armature reaction in alternators; transmission line calculations; compounding of alternators; electrolysis of water mains by stray currents; current capacity of cables; losses in transmission lines and capacity effect at high voltages.

Hering, Dr. Carl, 1317 Spruce St, Philadelphia, Pa. **Electrical engineering*. Philadelphia, March 29, 60. B.S. Pennsylvania, 80, M.E. 87, hon. Sc.D. 12; Darmstadt, 83-84. Instr. math, physics, eng. and elec, Pennsylvania, 81, 83; Polytech, Darmstadt, 84; Pennsylvania, 87; *consulting elec. engineer, 87-* Official delegate and officer to int. congresses; mem. jury of awards at ten expositions. Officier de l'Instruction Pub, 89; Chevalier Légion d'honneur, 01. A.A; Physical Soc; Elec. Eng. (past pres): Electrochem. Soc. (past pres); Franklin Inst; Phila. Physics Club (past pres); Phila. Eng. Club (past pres); hon. mem. N. Y. Elec. Soc; Soc. Int. des Elec. (Am. delegate). Electrical engineering; electrochemistry; physics; relation of units; revisions of some physical laws; electrical furnaces.

Hering, Prof. D(aniel) W(ebster), New York University, New York, N. Y. **Physics, Mechanics*. Smithburg, Md, March 23, 50. Ph.B. Yale, 72, C.E. 78; fellow, Hopkins, 76-78; hon. Ph.D. Western Maryland, 95; LL.D. Pittsburgh, 07; N. Y. Univ. 16. Asst. engineer, Reading and Lehigh R. R, 73-74; Baltimore and Cumberland Valley R. R, 78-80; prof. math, Western Maryland, 80-84; physics, Pittsburgh, 84-85; N. Y. Univ, 85-16, dean, grad. faculty. 02-16, *emer. prof, 16-* A.A; Physical Soc; fel. N. Y. Acad.

(v. pres, 08, 09); Brooklyn Inst. (pres, dept. physics). Church acoustics; X-rays; compressed air; scientific vagaries.

Hering, Rudolph, 40 Lloyd Road, Montclair, N. J. *Hydraulic and sanitary engineering*. Philadelphia, Pa, Feb. 26, 47. Royal Polytech, Dresden, 67; Sc.D. Pennsylvania, 07. Asst. engineer, Prospect Park, Brooklyn and Fairmount Park, Phila, 68-71; U. S. Geol. Surv, Yellowstone Park, 72; Dept. Pub. Works, Phila, 73-86; chief engineer, Drainage and Water Supply Commission, Chicago, 86-88; *consulting engineer, 88-* Civil Eng. (v. pres); Pub. Health Ass. (pres); Am. Water Works Ass; West. Soc. Civil Eng; Franklin Inst; Am. Acad; Phila. Eng. Club (pres); Can. Soc. Civil Eng; British Inst. Civil Eng. Water supply and purification; sewerage and sewage disposal; refuse disposal.

Hermann, A(dam), 1350 Taylor Avenue, The Bronx, New York, N. Y. *Vertebrate paleontology*. Kreuznach, Germany, Aug. 25, 47. Preparator paleont, Peabody Museum, 76-92; chief preparator, dept. vert. paleont, Am. Museum Nat. Hist, 94-20. Hon. preparator, U. S. Geol. Surv, 94- Modern laboratory methods in vertebrate paleontology.

Hermes, Prof. W(illiam) B(rodbeck), 1424 Le Roy Ave, Berkeley, Calif. *Entomology*. Portsmouth, Ohio, Sept. 22, 76. B.S. Baldwin-Wallace, 02; Western Reserve, 05; A.M. Ohio State, 06; Austin fellow, Harvard, 07-08. Prof. commerce and principal, sch. commerce, Baldwin-Wallace, 02-05, instr. biol, Baldwin-Wallace, 04-05; teaching fellow, Ohio State, 05-06; acting head, dept. zool, Ohio Wesleyan, 06-07; asst. prof. entom, California, 08-12, parasitol, 12-15, *assoc. prof, 15-* Delegate, State of Calif. and Univ. of Calif, Int. Hygiene Exhibit, Dresden, 11. Capt. and major, Sanit. C. 18. A.A; Ass. Eeon. Entom; Ecol. Soc; Pub. Health Ass; Ohio Acad; Calif. Acad. Parasitology; ecology; rural sanitation; medical entomology; malaria-mosquito survey of California; mosquito and fly control; pajahuello tick; spinose ear tick; photic reactions of insects.

Herre, Albert (William) C(hristian Theodore), Bureau of Science, Manila, P. I. *Biology*. Toledo, Ohio, Sept. 16, 68. A.B. Stanford, 04, A.M. 05, Ph.D. 09. Asst. supt. schools, Springfield, Ill, 90-00; asst, Bur. Fisheries, 03-04; instr. biol, high sch, San Jose, Calif, 04-10; prof, Nevada, 10; v. principal, Fremont High Sch, Oakland, Calif, 10-12; prof. geog, State Nor. Sch, Bellingham, 15-17, biol, 17-19, director. sch. of hygiene, 19-20; *chief, dept. fisheries, Bur. of Science, Manila, 20-* A.A; Ecol. Soc; Sullivant Moss Chapter; West. Soc. Nat; Wash. Acad. Ichthyology; lichens, ecology.

Herreshoff, J(ohn) B(rown) Francis, 620 West End Ave, New York, N. Y. **Chemistry*. Bristol, R. I, Feb. 7, 50. A.M. Brown, 90. Prof. anal. chem, Brown, 69-72; supt, Laurel Hill Chem. Works, 76; v. pres, Nichols Copper Co. Chem. Soc; Soc. Chem. Indust; Mech. Eng. Industrial chemistry; improved process for manufacturing sulphuric acid.

Herrick, Prof. C(harles) Judson, University of Chicago, Chicago, Ill. **Comparative neurology*. Minneapolis, Minn, Oct. 6, 68. Denison, 86-89,

- M.S., 95; B.S., Cincinnati, 91; Ph.D., Columbia, 00. Instr. nat. science, Granville Acad., 91-92; *prof.*, Ottawa (Kans), 92-93; zool., Denison, 98-07; *neur.*, Chicago, 07-; Managing ed., 'Jour. Comp. Neur.', 94-; assoc. comp. neur., Path. Inst., N. Y. State Lunacy Commission, 97-01; major and in charge path., Army Med. Museum, Sanit. C., 18-19; mem. Brain Commission, Int. Ass. Academies. Nat. Acad.; A.A. (sec'y, F., 03-07, v. pres, 08); Soc. Nat.; Ass. Anat.; Soc. Zool. (sec'y-treas., 07); Physiol. Soc.; for. cor. Acad. Royale de Méd. de Belgique. Comparative neurology; nerve components of vertebrates; anatomy of brain of fishes and amphibians; evolution of the cerebral cortex.
- Herrick, Prof. Francis H (obart)**, Adelbert College, Cleveland, Ohio. **Zoology*. Woodstock, Vt., Nov. 19, 58. A.B., Dartmouth, 81; Ph.D., Hopkins, 88; hon. Sc.D., Pittsburgh, 96. Instr. *biol.*, *Western Reserve*, 88-91, *prof.*, 91- A.A.; Soc. Nat.; Soc. Zool. (v. pres, 07); mem. Ornith. Union; Fisheries Soc.; Wilson Ornith. Club; Ohio Acad.; Boston Soc. Nat. Hist. Development and morphology of Crustacea; habits and instincts of wild birds; origin and development of instincts.
- Herrick, Prof. Glenn W (ashington)**, Cornell University, Ithaca, N. Y. *Entomology*. Otto, N. Y., Jan. 5, 70. B.S.A., Cornell, 96; Harvard, 97. Teacher, pub. schools, 88-90; instr. Nat. Science Camp, Canandaigua, N. Y., 95-96; *prof. biol.*, Miss. Agr. Col., 97-08; entom., Tex. Col., 08-09; asst. *prof. econ. entom.*, Cornell, 09-12, *prof.*, 12-, *entomologist*, *Exp. Sta.*, 09- A.A.; fel. Entom. Soc.; Ass. Econ. Entom.; Wash. Biol. Soc. Economic entomology; life histories of mosquitoes of Mississippi; malaria; external parasites of domestic fowls; larch case-bearer; insect pests of pecans; fruit tree leaf roller; red clover and apple pests.
- Herrick, Dr. James B (ryan)**, 242 E. Walton Place, Chicago, Ill. *Medicine*. Oak Park, Ill., Aug. 11, 61. A.B., Michigan, 82, hon. A.M., 07; M.D., Rush Med. Col., 88. Intern., Cook Co. Hosp., 88-89; instr. *med.*, *Rush Med. Col.*, 90-94, adj. *prof.*, 94-00, *prof.*, 00- Attending physician, Presb. Hosp., Chicago, 98-; v. pres, McCormick Mem. Inst.; sec'y, board of trustees, Lewis Inst. Am. Physicians; Am. Med. Ass.; Chicago Soc. Int. Med. (first pres, 15). Diseases of heart and blood vessels.
- Herrick, Dr. Joseph C (awdell)**, St. Joseph's Seminary, Yonkers, N. Y. *Physiology*. Shelbyville, Ill., May 6, 74. A.B., Virginia, 96; fellow, Hopkins, 99-00, Ph.D., 00. Asst. *biol.*, Virginia, 96-97; instr. science and later *prof. biol.*, *St. Joseph's Sem.*, 00- A.A.; Anthropol. Ass. Nervous conductivity; mechanism of the odontophoral apparatus in *Sycotypus canaliculatus*.
- Herrick, Dr. W (illiam) W (orthington)**, 49 E. 53d St., New York, N. Y. *Medicine*. Sherman, Conn., Feb. 19, 79. A.B., Yale, 02, M.D., 05. Asst. *prof. med.*, Columbia; asst. physician, Roosevelt Hosp.; attending physician, Sloane Hosp.; consulting physician, Babies' and Nursery and Child's Hospitals; *practising physician*. Campbell medal, Yale, 05. A.A.; Am. Med. Ass.; N. Y. Acad. Med. Internal medicine.
- Herrmann, Richard**, Dubuque, Iowa. *Geology*, *Anthropology*. Chemnitz, Germany, March 10, 49. Pub. schools and private study. *Civil engineer*. Iowa Inst. Sci. and Art (sec'y); Herrmann Museum Nat. Hist. (founder). Mound-builders of the Mississippi Valley; pioneer lead mining in the western United States.
- Hersam, Prof. E (rnest) A.**, University of California, Berkeley, Calif. *Chemistry*, *Metallurgy*. Stoneham, Mass., March 9, 68. B.S., Mass. Inst. Tech., 91. Asst. chem., Mass. Inst. Tech., 91-92; *metal*, California, 92-94, instr., 94-96, asst. *prof.*, 96-02, *assoc. prof.*, 02- A.A.; Min. Eng.; Min. and Met. Eng.; Soc. Chem. Indust.; Min. and Metal. Soc. Metallurgy.
- Herschel, Clemens**, 2 Wall St., New York, N. Y. *Hydraulics*. March 23, 42. B.S., Harvard, 60. Hydraul. engineer, Holyoke Water Power Co., 79-89; engineer and supt., E. Jersey Water Co., 89-00; *consulting hydraul. engineer*, 00- Cresson gold medal, Franklin Inst. Civil Eng.; Boston Soc. Civil Eng.; London Inst. Civil Eng. Revolving draw bridges; water supply.
- Herschel, Prof. Winslow H (obart)**, Bureau of Standards, Washington, D. C. *Mechanical engineering*. Boston, Mass., Aug. 28, 73. A.B., Harvard, 96. Hydraul. engineer, 96-05; mech. engineer, 05-10; asst. *prof. mech. eng.*, Maine, 11-12, *assoc. prof.*, 12-13; asst. physicist, *Bur. Standards*, 13-18, *assoc. physicist*, 18- Soc. Test. Mat. Lubricants.
- Hersey, F (rank) Seymour**, 6 Maple Ave., Taunton, Mass. *Ornithology*. Taunton, May 26, 84. Mem. Ornith. Union; Cooper Ornith. Club; Nuttall Ornith. Club; Boston Soc. Nat. Hist.
- Hershey, O (scar) H.**, Crocker Building, San Francisco, Calif. *Geology*. Blue Rock, Pa., March 27, 74. High sch. Field asst., U. S. Geol. Surv., 04; examining mines, *western U. S. and in B. C.*, 05-; *mem. firm*, Burch, Hershey and White. A.A.; Geol. Soc. Glacial geology and physiography of northwest Illinois; stratigraphy and glacial geology of the Klamath region of California; economic geology of various districts in the western states.
- Herty, Dr. Cha (rle)s H (olmes)**, 1 Madison Ave., New York, N. Y. **Chemistry*, *Forestry*, *Editing*. Milledgeville, Ga., Dec. 4, 67. Ga. Mil. and Agr. Col., 80-84; Ph.B., Georgia, 86; Ph.D., Hopkins, 90; Berlin, 99; Zürich, 00. Asst. chemist, Ga. State Exp. Sta., 90-91; instr. chem., Georgia, 91-94, adj. *prof.*, 94-02; collaborator, *bur. forestry*, U. S. Dept. Agr., 01-02, expert, 02-04; with Chattanooga Pottery Co., 04-05; *prof. chem.*, North Carolina, 05-16, dean, sch. applied science, 08-11; *ed.*, 'Jour. Indust. and Eng. Chem.', 16- Physical director, Georgia, 93-99. A.A. (sec'y, C, 08); Chem. Soc. (councilor, pres, 15, 16); Soc. Chem. Indust.; Electrochem. Soc.; Eng. Educ.; Soc. Cotton Products Analysts; Forestry Ass.; Soc. Foresters; London Chem. Soc.; Soc. chim. indust.; Soc. chim. de France. Double halids; mixed double halids; constitution of inorganic compounds by physico-chemical methods; a new method of turpentine orcharding; rapid method for determination of oil in cottonseed products; oleo-resins.

- Hertzler, Dr. Arthur E(manuel)**, 1316 Rialto Building, Kansas City, Mo. *Pathology*. West Point, Iowa, July 26, 70. B.S., Southwest Kansas, 90; M.D., Northwestern, 94; Berlin, 99-02; Ph.D., Iowa Wesleyan, 02. Prof. gen. and surg. path., Univ. Med. Col., Kansas City, 02-09; assoc. prof. *surg.*, Kansas, 09-19, *prof.*, 19-A.A.; Ass. Anat.; Micros. Soc.; Am. Med. Ass.; Am. Acad. Med.; West. Surg. Ass. Anatomy and pathology of the peritoneum; etiology of epithelioma; pathology of the endocrine system.
- Hervey, Rev. A(lpheus) B(aker)**, Bath, Maine. *Botany*. Triangle, N. Y., March 31, 39. Grad. theol. dept., St. Lawrence, 61; hon. A.M., St. Lawrence, 78, hon. Ph.D., 87; A.M., Tufts, 83. Pastor, Universalist Church, Malone, N. Y., 61-62; Afton, N. Y., 62-64; Southbridge, Mass., 64-66; Peabody, Mass., 66-72; Troy, N. Y., 72-79; Taunton, Mass., 79-88; pres., St. Lawrence, 88-94; pastor, Universalist Church, Bath, Maine, 96-09. Lecturer, St. Lawrence; trustee, various pub. institutions. A.A.; Troy Sci. Soc. Cryptogamic botany; marine algae; vegetable histology.
- Hesler, Prof. L(exemuel) R(ay)**, University of Tennessee, Knoxville, Tenn. *Plant pathology*. Veedersburg, Ind., Feb. 20, 88. A.B., Wabash, 11; fellow, Cornell, 11-12, Ph.D., 14. Asst. bot., Wabash, 09-10; instr., plant path., Cornell, 12-14, asst. prof., 14-19; *prof. bot.*, Tennessee, 19-A.A.; Bot. Soc.; Phytopath. Soc. Fruit diseases.
- Hess, Dr. Alfred F(abian)**, 16 W. 86th St., New York, N. Y. *Medicine*. New York, Oct. 19, 75. A.B., Harvard, 97; M.D., Columbia, 01. *Clin. prof. pediat.*, Univ. and Bellevue Hosp. Med. Col., 15- A.A.; assoc. mem. Am. Physicians; Soc. Biol. Chem.; Ass. Path. and Bact.; Soc. Clin. Invest.; Soc. Exp. Biol.; Pediat. Soc. Tuberculosis; scurvy; rickets.
- Hess, Dr. C(harles) L(eonard)**, Davidson Building, Bay City, Mich. *Physiology, Pharmacology*. St. Peter, Minn., April 11, 87. Minnesota; B.S., Chicago, 10, M.S., 11; M.D., Northwestern, 14. Asst. pharmacol., Northwestern, 11-12, instr., 12-14, anat., 14-15; house physician, Cook Co. Hosp., 15-16; asst. bacter., Mayo Foundation, Minnesota, 16-17, fellow surg., 17-18. Am. Med. Ass.; Physiol. Soc. Blood lipase and diastase; blood sugar; glycolysis in blood and other tissues; isocalycanthin; hexamethylenamin; electrical wiring for laboratories; pain conduction in the spinal cord.
- Hess, Frank L**, 1221 Newton St., Brookland, Washington, D. C. *Geology*. Streator, Ill., Sept. 4, 71. A.B., Stanford, 03. Asst. assaying, Stanford, 01-03; field asst., U. S. Geol. Surv., 01-04, geol. aid, 04-06, asst. geologist, 06-11, *geologist*, 11-; *custodian rare metals and rare earths*, U. S. Nat. Museum, 18- Exped. to Bolivia, 19-20. A.A.; Min. and Metal. Eng.; Ass. Econ. Entom.; Wash. Geol. Soc. Gold and rare metal deposits; magnesite; gypsum; graphite.
- Hess, Henry**, Bailey Building, Philadelphia, Pa. *Mechanical engineering*. Darmstadt, Germany, Jan. 10, 63. German high schools. Draftsman, engineer, chief engineer, managing director, director gen., various technical establishments in U. S. and Germany; *pres.*, Hess-Bright Mfg. Co.; *Hess Steel Corp.* Lecturer, Columbia; jury of awards, La. Purchase Expos, 04. A.A.; Mech. Soc.; Soc. Automobile Eng.; Phila. Eng. Club; Schiffbautech. Gesell.; Eisenbahntechn. Verein. Ball bearings; ball and roller bearing design.
- Hess, Prof. Julius H(ays)**, 5717 Blackstone Ave., Chicago, Ill. *Pediatrics*. Ottawa, Ill., Jan. 26, 76. M.D., Northwestern, 99. Instr. *pediat.*, Northwestern, 08-13; asst. prof., *col. med.*, Illinois, 13-14, assoc. prof., 14-15, *prof. and head of div.*, 15- Am. Med. Ass.; Cent. States Pediat. Soc. Clinical pediatrics; infant feeding; poliomyelitis; tuberculosis.
- Hess, Dr. R(aymond)**, National Aniline and Chemical Co., Buffalo, N. Y. *Chemistry*. Iowa, Sept. 21, 89. A.B., Morningside, 12; A.M., Illinois, 14, Ph.D., 16. Asst. chem., Illinois, 12-16; research chemist, Sherwin Williams Co., 16-18; *senior research chemist*, Nat. Aniline and Chem. Co., 18- Manufacturer, org. chemicals, Illinois, summers, 14, 15. Chem. Soc. Organic chemistry; substitution in paraffin monobasic acids; correlation of ionization with structure; dyestuffs; intermediates.
- Hess, Prof. Walter N(orton)**, Greencastle, Ind. *Zoology*. Great Valley, N. Y., May 1, 90. A.B., Oberlin, 13; A.M., Cornell, 16, Ph.D., 19. Instr. zool., Pa. State, 13-15; asst. entom., Cornell, 15-17; *prof. biol.*, DePauw, 17- Bacteriologist, U. S. A., 18. A.A.; Entom. Soc.; Ind. Acad. Chordotonal organs of Cerambycidae; male stickleback kidney; Lampyridae.
- Hesse, Dr. Bernhard C(onrad)**, 25 Broad St., New York, N. Y. *Chemistry*. E. Saginaw, Mich., Oct. 3, 69. Ph.C., Michigan, 89, B.S., 93; fellow, Chicago, 93-96, Ph.D., 96. Asst. chem., Michigan, 90-93; research chemist, Badische Anilin u. Soda Fabrik, Ludwigshafen-on-Rhine, 96-06; consulting chemist, 06-16; *consulting mem.*, Gen. Chem. Co., 16- Sec'y, Eighth Int. Cong. Applied Chem., Washington and New York, 12. Chem. Soc. (chairman, N. Y. sect, 13). Industrial chemistry; chemical statistics, patents and economics; certified food colors; liquid chlorin; coal-tar dyes.
- Hesselberg, Dr. Cora**, 256 10th St., Dubuque, Iowa. *Bacteriology*. Orel, Russia, March 9, 84. M.D., Berne. Asst. city pathologist, St. Louis, 12-15; *state bacteriologist for Dubuque*, 19- Ass. Path. and Bact. Thyroid gland; transplantation of tissue.
- Hessert, Prof. William**, 547 Fullerton Ave., Chicago, Ill. *Surgery*. Chicago, 71. M.D., Northwestern, 92. *Prof. surg.*, Chicago Polyclinic and Hosp. Surgeon, Alexian Brothers Hosp.; Henrotin Mem. Hosp.; Grant Hosp. Col. Surg.; Am. Med. Ass.
- Hessler, Dr. John C(harles)**, Mellon Institute, Pittsburgh, Pa. *Chemistry*. Syracuse, N. Y., Nov. 27, 69. A.B., Chicago, 96, Ph.D., 99. Instr. science, Lake High Sch., Chicago, 90-92; chem., Hyde Park High Sch., Chicago, 92-99; Chicago, 99-07; *prof.*, James Millikin, 07-20, dean, 17-20; *asst. director*, Mellon Inst., 20- A.A.; Chem. Soc.; Ill. Acad. (treas., 07-14, pres., 17). Alkyl malonic nitriles and their derivatives; phenylmalonic nitrile; alkylation of cyanacetic ether; Conrad-Limpach reaction.

- Hessler, Dr. Robert**, Logansport, Ind. *Biology, Medicine*. Cincinnati, Ohio, 61. A.B., Indiana, 90, A.M., 93; M.D., Ind. Med. Col., 91. A.A.; Pub. Health Ass; Sch. Hygiene Ass; Meteorol. Soc; Ind. Acad. (pres, 06). Dust influences; euthenics.
- Heuer, Prof. George Julius**, Johns Hopkins Hospital, Baltimore, Md. *Anatomy*. Madison, Wis, Feb. 6, 82. B.S., Wisconsin, 03; M.D., Hopkins, 07. House officer, Hopkins Hosp, 07-08, asst. res. surgeon, 08-11, res. surgeon, 11-14, *assoc. prof. surg., Hopkins*. A.A.; Ass. Anat. Surgery.
- Heuse, Prof. Edward Otto**, 215 University Boulevard, Dallas, Tex. *Chemistry*. Madison, Ind, March, 79. B.S., Hanover, 00; M.S., Illinois, 07. fellow, 12-14, Ph.D., 14. Asst. chem., Illinois, 03-07; prof., Upper Iowa, 08-12; instr., Illinois, 14-15; prof. Monmouth, 15-18; *head of dept., South. Methodist*, 18- Chem. Soc. Physical and inorganic chemistry.
- Heuser, Dr. Chester H(enry)**, Johns Hopkins Medical School, Baltimore, Md. *Anatomy*. Fort Scott, Kans, Aug. 20, 85. A.B., Kansas, 08, A.M., 10; Ph.D., Harvard, 13. Teaching fellow zool., Kansas, 08-09, instr., 09-10; Austin teaching fellow histol. and embryol., Harvard Med. Sch., 10-13; fellow anat., Wistar Inst, 13-19; *assoc., Hopkins*, 19- Asst. prof. zool., Kansas, 12. A.A.; Soc. Nat; Ass. Anat. Embryology; cerebral ventricles; mammalian embryonic stomach.
- Heuser, Prof. Gustave Frederick**, Ithaca, N. Y. *Animal husbandry*. Buffalo, N. Y., July 6, 93. B.S., Cornell, 15, M.S.A., 16, Ph.D., 18. Instr. *poultry husbandry, Cornell*, 16-18, *asst. prof.*, 18- Poultry husbandry and nutrition.
- Hewes, Charles K.**, 2525 E. 37th St, Los Angeles, Calif. *Chemistry*. Quincy, Ill, June 3, 89. B.S., Illinois, 12, M.S., 14. Research chemist, Mex. Petrol. Corp, 14-16; *chief chemist, Gen. Petrol. Corp*, 16- Chem. Soc. Organic chemistry; petroleum technology.
- Hewes, Dr. L(amrence) I(sley)**, U. S. Bureau of Public Roads, Portland, Oregon. *Mathematics, Civil engineering*. Dover, N. H., Sept. 28, 76. B.S., Dartmouth, 98; Ph.D., Yale, 01. With Mass. Highway Commission, 97-99; asst. engineer, Elec. R. R., Essex Co, Mass, 99; inspector macadam road construction, Brookline, Mass, 00; prof. math., R. I. Col, 01-05; instr., Yale, 05-09; prof., Whitman, 09-10; *with U. S. Bur. Pub. Roads*, 10- Civil Eng; Math. Soc. Nomenclography; continuous groups (Lie); concrete aggregate mixes.
- Hewett, Donnel Foster**, U. S. Geological Survey, Washington, D. C. *Geology*. Irwin, Pa, June 24, 81. Met.E., Lehigh, 02; Yale, 09-11. Instr. metal. and miner., Lehigh, 02-03; mining engineer, Pittsburgh, 03-09; junior geologist, U. S. *Geol. Surv.*, 11-13, *assoc. geologist*, 13-18, *geologist*, 18- A.A.; Min. and Metal. Eng; Geol. Soc; Chem. Soc; Wash. Acad. Economic geology; metalliferous deposits; stratigraphy.
- Hewett, Dr. Edgar L(ee)**, School of American Research, Santa Fé, N. Mex. *Archeology*. Warren Co, Ill, Nov. 23, 65. Tarkio; Colo. State Nor. Sch; D.Sociol, Geneva, 08; LL.D., Arizona. Teacher, country schools, Mo; supt. schools, Fairfax, Mo; Florence, Colo; prof. hist. and lit, Tarkio; supt. training dept., Colo. State Nor. Sch, 94-98; pres, Normal Univ, N. Mex, 98-03; *director Am. archeol., Archeol. Inst. of Am*, 06-; *Sch. Am. Research*, 07-; *N. Mex. Museum*, 09-; *San Diego Museum*, 16- Director exhibits arts and sciences, Panama-Calif. Expos, 12-16; chairman, N. Mex. Board Hist. Service, 17-20; director, State Child Welfare Service, N. Mex, 17-20; *assoc. ed., 'Art and Archeol.'*, 17- A.A. (pres, southwest. div, 20); Archeol. Inst. (pres, San Diego sect, 16, sec'y, western societies, 19-); Anthropol. Ass; Ass. Mus; Am. Fed. Art (v. pres, 19-); Int. Cong. Americanists. Anthropology; American archeology and ethnology.
- Hewitt, Prof. Cha(rle)s E(lbert)**, Durham, N. H. *Electrical engineering*. Hanover, N. H., Nov. 8, 69. B.S., N. H. Col, 93, Sc.D., 20; M.M.E., Cornell, 95. Engineer and designer, Hyer Sheeham Elec. Motor Co, Newburgh, N. Y., 95-97; *prof. elec. eng., N. H. Col*, 08-, *dean eng.*, 12- Consulting engineer, 97; consulting expert educ, U.S.A., 20- Elec. Eng.
- Hewitt, Dr. Peter Cooper**, 18 E. 33d St. New York, N. Y. **Electrical and mechanical engineering*. New York, March 5, 61. Stevens; Columbia, hon. Sc.D., 03; Rutgers, 16. Mem. firm, Cooper, Hewitt and Co. and Cooper Hewitt Elec. Co; *director, various industrial concerns*. Engaged in experimental work; trustee, Cooper Union; House of Rest for Consumptives. Physical Soc; Elec. Eng; Naval Archit. and Marine Eng; Am. Geog. Soc; N. Y. Elec. Soc; N. Y. Gen. Soc. Mech. and Tradesmen. Mechanical appliances; Cooper Hewitt light; Cooper Hewitt rectifier; light.
- Hewlett, Dr. A(bion) W(alter)**, Stanford Medical School, San Francisco, Calif. *Medicine*. Petaluma, Calif, Nov. 27, 74. B.S., California, 95; M.D., Hopkins, 00. Asst. prof. med., Cooper Med. Col, 06-08; *prof. internal med., Michigan*, 08-16; *med., Stanford*, 16- A.A.; Am. Physicians; Physiol. Soc; Soc. Pharmacol; Soc. Exp. Path; Soc. Clin. Invest; Am. Med. Ass; Soc. Exp. Biol. Irregularities of the heart; blood flow in arm; pathological physiology.
- Hewlett, Prof. C(larence) W(ilson)**, University of Iowa, Iowa City, Iowa. *Physics*. Louisburg, N. C., July 29, 86. B.E., N. C. Col, 06; A.M., Hopkins, 11, Ph.D., 12. Magnetic observer, dept. terrestrial magnetism, Carnegie Institution, 12-13, asst. physicist, 13-14; instr. *physics*, Hopkins, 14-15; Johnston scholar, Hopkins, 15-16; prof., N. C. Col. for Women, 16-19; *asst. prof., Iowa*, 19- Carnegie Institution solar eclipse exped. to Ala, 18. Physical Soc. Complex sound waves; atmospheric electricity; radioactivity; high frequency sound waves; X-rays.
- Hewson, Dr. Addinell**, 2120 Spruce St. Philadelphia, Pa. *Anatomy, Surgery*. Philadelphia, Sept. 2, 55. A.B., Pennsylvania, 76, A.M., 79; M.D., Jefferson Med. Col, 79. Junior asst. surg. clinic, Jefferson Med. Col, 79-85, asst. demonstrator anat., 79-86, prosector, 86-89, chief asst. surg. clinic, 89-95, demonstrator anat., 89-02, asst. prof., 02-06; *prof., grad. sch. med., Pennsylvania*, 97- Dispensary surgeon, St. Mary's Hosp, 79-88; Episcopal Hosp, 88-05; surgeon, St. Timothy's Hosp, 95. Ass. Anat;

Am. Med. Ass; Col. Surg; Am. Acad. Surg; Path. and Obstet. Societies.

Heyl, Dr. Paul R(enno), Bureau of Standards, Washington, D. C. *Physics*. Philadelphia, June 30, 72. B.S. Pennsylvania, 94, Tyndale fellow, 94-96, Harrison fellow, 97-98, Ph.D., 99. Instr. math, Clinton Liberal Inst. Fort Plain, N. Y., 96-97; physics and math, Boys' High Sch, Reading, Pa., 98-02; physics, Cent. High Sch, Phila., 02-10; *physicist*, Commercial Research Co., 10-20; *Bur. Standards*, 20- Boyden premium, Franklin Inst., 07. A.A.; Physical Soc. Crystallization, under electrostatic stress, from a current-bearing electrolyte; heat capacity of a current-bearing conductor.

Heylar, Prof. J(ohn) P(utman), New Jersey Agricultural Experiment Station, New Brunswick, N. J. *Botany*. Claremont, N. H., May 3, 86. B.S. Vermont, 09, M.S., 12. Instr. bot. Vermont, 09-12; Rutgers, 12-15, asst. prof., 15-18, assoc. prof., 18-20, state seed analyst, *Exp. Sta.*, 12-20, *consulting state seed analyst*, 20-; *commercial work*, 20- Instr. bot. Vermont, summers, 09-12; sch. gardening, nature study and bacter, Rutgers, summers, 13-16. A.A.; Bot. Soc.; Phytopath. Soc.; Ass. Seed Anal. (see 'y-treas, 14-). Seeds; seed fungi.

Hibbard, Prof. H(erbert) Wade, 1307 Wilson Ave., Columbia, Mo. *Mechanical engineering*. Moulmein, India, Sept. 10, 63. A.B. Brown, 86, A.M., 99; M.E. Cornell, 91. R. I. Locomotive Works, 86-89; Pa. R. R., 91-94; chief mech. engineer, Lehigh Valley R. R., 94-95; asst. prof. machine design, Minnesota, 95-98; principal, sch. railway mech. eng. Sibley Col. Cornell, 98-09; *prof. mech. eng. Missouri*, 09- Expert, N. Y. State Civil Service Commission, summers, 04, 05, 08; N. Y. Cent. R. R., summer, 08; consulting engineer, Waterbury Tool Co., summer, 09. Sibley prize, 90. Mech. Eng; Eng. Educ; Ry. Master Mechanics Ass; Master Car Builders. Power plants; locomotives; cars; shop machinery; stationary boilers; aerial propellers; testing and experimental investigations.

Hibbard, Prof. P(aul) L(ewellyn), University of California, Berkeley, Calif. *Chemistry*. Port Huron, Mich., July 20, 66. B.S. Nebraska, 92. With sugar, starch and glucose factories, and anal. laboratories, 92-07; *asst. prof. agr. chem. California*, 08- A.A.; Chem. Soc. Agricultural chemistry; soil fertility; alkali soils.

Hibbard, Dr. R(ufus) P(ercival), Michigan Agricultural College, East Lansing, Mich. *Plant physiology*. New Haven, Conn., April 2, 75. A.B. Williams, 99; Harvard, summer, 01; Chicago, 02; Woods Hole, 03, 04, 06; fellow, Michigan, 04-06, Ph.D., 06. Teacher, Kiskiminitas Springs Acad., Saltsburg, Pa., 00-01; Blair Acad., Blairstown, N. J., 02-04; asst., Woods Hole, 03, 04; scientific asst., bur. plant indust., U. S. Dept. Agr., 06-08; bacteriologist and plant pathologist, Miss. Exp. Sta., 08-11; research asst. *plant physiol. Mich. Agr. Col.*, 11-13; *research assoc.*, 13- A.A.; Bot. Soc.; Soc. Bact.; Phytopath. Soc.; Chem. Soc. Biochemistry; plant nutrition; physiological balance in soil solution; concentration of electrolytes; toxicity of distilled water; influence of tension on the formation of me-

chanical tissue in plants; cotton diseases; toxic principle in cottonseed meal.

Hibbert, Dr. Harold, Yale University, New Haven, Conn. *Chemistry*. Manchester, England, Aug. 27, 77. B.S. Victoria (Eng.), 97, M.S., 00, Sc.D., 11; fellow, Inst. Chem., London, 04; Ph.D., Leipzig, 06. Instr. chem., Wales, 99-04; Tufts, 06-08; Imp. Col. Sci., London, 08-09; research chemist, E. I. du Pont de Nemours and Co., 10-14; fellow, Mellon Inst., 14-16; consulting and research chemist, 16-19; asst. prof. *chem. Yale*, 19-21, *assoc. prof.*, 21- A.A.; Chem. Soc.; Electrochem. Soc.; London Soc. Chem. Indust. Tautomerism; explosives; acetylene derivatives; pharmaceutical products; cellulose; aliphatic chemistry.

Hice, Richard R(oberts), Beaver, Pa. *Geology*. Beaver, Aug. 19, 65. B.S. Geneva (Pa.), 86, Sc.D., 10. *Sec'y, Topog. and Geol. Surv. Commission, Pa.*; state geologist, 09-19. A.A.; Geol. Soc.; Ceramic Soc. (v. pres, 10, pres, 16). Pre-glacial drainage systems; glacial geology; oil and gas.

Hickernell, Dr. Louis M(ax), 909 Walnut Ave., Syracuse, N. Y. *Zoology*. Saegerstown, Pa., March 5, 87. A.B. Allegheny, 10; A.M. Princeton, 14, Ph.D., 17. Instr. *zool. Syracuse*, 14-17, asst. prof., 17-20, *assoc. prof.*, 20- A.A.; Soc. Zool. Dessication among rotifers; digestive system of Hemiptera; cytology.

Hickerson, Prof. T(homas) F(elix), University of North Carolina, Chapel Hill, N. C. *Civil engineering*. Ronda, N. C., April 30, 82. Ph.B. North Carolina, 04, A.M., 07; B.S. Mass. Inst. Tech., 09. Teacher, Bingham Mil. Sch., Asheville, N. C., 04-05; instr. math, *North Carolina*, 05-09, assoc. prof. *civil eng.*, 10-20, *prof.*, 20- Highway engineer, N. C. Geol. and Econ. Surv., 10-14; chief engineer, surv. of Crest-of-the-Blue-Ridge Highway, summers, 11, 12. Civil Eng; Elisha Mitchell Sci. Soc. (v. pres, 17). Investment calculations; highway engineering; culverts and small bridges; substitutes for broken stone in road building; the Abney hand level; domestic water supplies.

Hicks, Edwin F(rancis), 4837 Fairmount Ave., Philadelphia, Pa. *Chemistry*. New York, N. Y., Jan. 19, 72. Columbia, 89-92; Mass. Inst. Tech., 92-94. Anal. and consulting chemist, 95-00; chemist, United Coke and Gas Co., 00-02; Asbestolith Co., 02-04; chem. engineer, 04-07; *chief chemist, Victor Talking Machine Co.*, 07- A.A.; Chem. Soc. (councilor, 14-); Electrochem. Soc.; Soc. Test. Mat.; Soc. Chem. Indust. Resins; varnish; oils; waxes.

Hicks, Prof. John Frederick Gross, Agricultural College, Corvallis, Oregon. *Chemistry*. Philadelphia, Pa., Aug. 31, 84. B.S. Pennsylvania, 06; M.S. Illinois, 16, Ph.D., 18. Instr. chem., Medico-Chirurg. Col., Phila., 06-07; Villa Nova, 07-08, assoc. prof., 08-09, prof., 09-10; asst. chemist, Barrett Co., 10-12; chief chemist, Modoc Co., 12-14; assoc. prof. *chem. Okla. Col.*, 14-15; asst., Illinois, 15-18; asst. prof., *Oregon Col.*, 18-19, *prof.*, 19- Chem. Soc. Alloys of less common metals; isolation of rare earth metals; electrolysis of fused salts.

Hicks, Dr. W(illiam) B(rooks), Solvay Process Co., Syracuse, N. Y. *Chemistry*. Pitts-

- burg, Tex, Sept. 12, 82. A.B, Texas, 06, fellow, 06-07, A.M, 08; fellow, Pennsylvania, 09-11, Ph.D, 11. Tutor chem, Texas, 07-08; head, science dept, high sch, Cleborne, Tex, 08-09; asst. chemist, bur. chem, U. S. Dept. Agr, 11-12; U. S. Geol. Surv, 12-17; assoc. chemist, 17-20; in charge, anal. research, *Solvay Process Co*, 20- Chem. Soc. Mineralogy; potassium; muds; action of salt solution on clay filters.
- Hickson, Dr. W(illiam) J(ames)**, Psychopathic Laboratory, Municipal Court, Chicago, Ill. *Psychology*. New York, N. Y, Jan. 21, 74. M.D, Pennsylvania, 00; A.B, Duquesne, 03; A.M, Pittsburgh, 06. Instr. anat, Pittsburgh, 04-06, chief, neurol. and psychiat. clinic, 06-09; asst. psychiat, Zürich, 10-11; neurol. dept, Berlin, 12; director, Med. Research Training Sch, Vine-land, N. J, 13; director, psychopath. lab, *City of Chicago*, 14- A.A; Am. Med. Ass; Zürich Psychoanal. Verein. Abnormal psychology; anthropometric intelligence correlations.
- Higbie, Prof. H(enry) Harold**, University of Michigan, Ann Arbor, Mich. *Electrical engineering*. New York, N. Y, 82. E.E, Columbia, 04. Asst. mech. eng, Columbia, 04-05; instr. mech. and elec. eng, Michigan, 05-07, elec. eng, 07-09, asst. prof, 09-11; head, elec. dept, Wentworth Inst, Boston, 11-13; prof. elec. eng, *Michigan*, 13- Elec. Eng. (past-chairman, Detroit-Ann Arbor sect); Eng. Educ; assoc. mem. Illum. Eng. Soc.
- Higgins, Dr. B(ascombe) B(ritt)**, Experiment, Ga. *Botany, Plant pathology*. Higgins, N. C, Feb. 7, 87. B.S, N. C. Col, 09, M.S, 10; Ph.D, Cornell, 13. Asst. bot, N. C. Col, 09-10; Cornell, 10-13; botanist, *Ga. Exp. Sta*, 13- A.A; Bot. Soc; Phytopath. Soc. Cow pea wilt; Cylindrosporium on stone fruits; morphology of Ascomycetes; plant diseases.
- Higgins, Dr. G(eorge) M(arsh)**, 714 W. Nevada St, Urbana, Ill. *Zoology*. Elk Grove, Ill, Dec. 19, 90. B.S, Knox, 14; A.M, Illinois, 16, fellow, 18-19, Ph.D, 19. Asst. zool, *Illinois*, 14-17, instr, 19- Lieut, U. S. A, 17-18. Vertebrate zoology.
- Higgins, Dr. Harold L(eonard)**, Cincinnati General Hospital, Cincinnati, Ohio. *Physiology*. Gloucester, Mass, March 26, 87. A.B, Harvard, 07; M.D, Hopkins, 19. Instr. chem, Swarthmore, 07-08; physiologist, nutrition lab, Carnegie Institution, 08-15; asst. pediat, Hopkins, 15-20; asst. prof. pediat, *Cincinnati*, 20- A.A; Physiol. Soc; Chem. Soc. Nutrition; effects of drugs and high percentages of oxygen on respiration and gaseous metabolism; determination of CO₂ in air.
- Higgins, J(ames) Edgar**, University of Porto Rico, San Juan, P. R. *Horticulture*. Wolfville, N. S, June 14, 73. B.A, Acadia, 95; diploma, N. S. Sch. of Hort, 95; M.S.A, Cornell, 98. In charge, dept. agr. and nature study, Honolulu Nor. Sch, 98-00; supervisor agr, pub. schools, Honolulu, 00-03; horticulturist, Hawaii Exp. Sta, 03-13; prof. hort, Univ. Porto Rico, 13-14; horticulturist, Hawaiian Exp. Sta, 14-20; prof. in charge, dept. agron. and hort, col. agr, *Univ. Porto Rico*, 20- Prepared Hawaii agr. exhibit, La. Purchase Expos, 04. A.A; Soc. Hort. Sci; Pomol. Soc. Tropical horticulture.
- High, M(arvin) (Merritte)**, Kingsville, Tex. *Entomology*. Starkville, Miss, Dec. 31, 84. B.S, Miss. Agr. Col, 07; Tex. Col, 09. Asst. entom, bur. entom, U. S. Dept. Agr, 09- A.A; Entom. Soc; Ass. Econ. Entom; Wash. Entom. Soc. Truck crop and stored product insects; arsenical sprays for insects.
- Higley, Dr. George O(swin)**, 244 N. Washington St, Delaware, Ohio. *Chemistry*. Near Columbus, Ohio, Aug. 19, 58. B.S, Michigan, 91, M.S, 93, Ph.D, 05. Instr. gen. chem, Michigan, 91-05; prof. chem, *Ohio Wesleyan*, 05- A.A; Chem. Soc. The action of metals on nitric acid; the halides of chromium; a new chemograph; the excretion of carbon dioxide resulting from bicycling; bread, beer and milk as foods; action of sodium acetone on ethyl chlorcarbonate; well water; urine analysis.
- Hildebrand, Dr. Joel H(enry)**, University of California, Berkeley, Calif. *Chemistry*. Camden, N. J, Nov. 16, 81. B.S, Pennsylvania, 03, Ph.D, 06; Berlin, 06-07. Asst. chem, Pennsylvania, 04-05, instr, 07-13; asst. prof, *California*, 13-17, assoc. prof, 17-18, prof, 18- Capt, ordnance R. C, 17; major and lieut. col, C. W. S, 18; director, lab, C. W. S, A. E. F; commandant, Exp. Field and A. E. F. Gas Sch. A.A; Chem. Soc. (pres, Calif. sect, 15-17). Physical chemistry; electro-analysis; spectra; hydrogen electrode; vapor pressures of metals and amalgams; revision of Trouton's rule; sea-water bittern; dissociation of alcohol; compounds of fluorin; theory of solubility.
- Hildebrand, Samuel F(rederick)**, U. S. Bureau of Fisheries, Washington, D. C. *Zoology*. Stendal, Ind, Aug. 15, 83. A.B, Ind. State Nor. Sch, 10; Indiana. Asst. zool, Field Museum Nat. Hist, 08-10; scientific asst, Bur. Fisheries, 10-14; director, U. S. Fisheries Lab, Beaufort, N. C, 14-18; U. S. Biol. Sta, Key West, Fla, 18-19; asst. in commissioner's office, Bur. Fisheries, 19- Mem. Smithsonian biol. surv. of Canal Zone. A.A; Fisheries Soc; Ecol. Soc; Wash. Biol. Soc. Systematic ichthyology; life histories and habits of fishes; fishes in relation to mosquito control.
- Hildebrandt, Dr. F(rank) M(errill)**, Mellon Institute, Pittsburgh, Pa. *Plant physiology, Biochemistry*. Baltimore, Md, Dec. 26, 88. A.B, Hopkins, 13, Ph.D, 17. Asst, Utah Forest Service Exp. Sta, 16-17; chemist, bur. plant industry, U. S. Dept. Agr, 17; fellow, *Mellon Inst*, 19- Lieut. and later capt, Sanit. C, 17-19. A.A; Ecol. Soc. Plant growth and climatic conditions; nutrition of yeast.
- Hildebrandt, Prof. T(heophil) H(enry)**, University of Michigan, Ann Arbor, Mich. *Mathematics*. Canal Dover, Ohio, July 24, 88. A.B, Illinois, 05; M.S, Chicago, 06, Ph.D, 10. Asst. math, Chicago, 08-09; instr, *Michigan*, 09-14, asst. prof, 14-20, assoc. prof, 20- A.A; Math. Soc. Functional calculus.
- Hilditch, Dr. Warren W(itherell)**, Hamot Hospital, Erie, Pa. *Chemistry*. Thompsonville, Conn, Oct. 5, 83. Ph.B, Yale, 05, Ph.D, 09; med. sch, Hopkins, 05-07. Instr. physiol. chem, col. med, Syracuse, 09-11; in charge, clin. laboratories, N. Y. City and Newark, N. J, 11-15; pathologist, Memorial Hosp, Orange, N. J, and director,

Graves Lab, 15-20; *pathologist, Hamot Hosp.*, 20- A.A.; Chem. Soc. Glycosuria; carbohydrate metabolism in relation to complete removal of thyroids and partial parathyroidectomy; influence of alcohol upon metabolism; acidosis; toxicity of organic acids.

Hill, Albert F(rederick), Osborn Botanical Laboratory, New Haven, Conn. *Botany*. Dresden, Germany, Sept. 4, 89. A.B, Dartmouth, 10; A.M, Harvard, 11. Asst. bot. Harvard, 11-13; *asst. curator, bot. collections, Yale, 14-*, *instr. bot.*, 18- A.A.; Bot. Soc; Ecol. Soc; New Eng. Bot. Club. Systematic and geographic botany; ecology.

Hill, Prof. Arthur E(dward), 66 Clinton Place, The Bronx, New York, N. Y. *Chemistry*. Newark, N. J, March 20, 80. B.S, N. Y. Univ, 01, M.S, 03; Ph.D, Freiburg, 03. Instr, high sch. Newark, N. J, 03-04; chem, N. Y. Univ, 04-05, asst. prof, 05-07, assoc. prof, 07-12, sec'y, sch. applied science, 06-20, *prof. chem. and director, chem. lab.*, 12- Prof, N. J. Col. Pharm, 06-19; research chemist, C. W. S., 18-19. A.A.; Chem. Soc. (councilor, N. Y. sect, 18-); N. Y. Chemists Club; Chem. Gesell. Aromatic aldehydes; sulphinic acids; modification of Volhard's method; analysis of sulphocyanates; determination of barium; solubility relations; adsorption; analytical standards; distribution law.

Hill, Prof. Arthur J(oseph), Yale University, New Haven, Conn. *Chemistry*. Meriden, Conn, April 21, 88. Ph.B, Sheffield Sci. Sch, 10; Ph.D, Yale, 13. Asst. instr. *org. chem, Sheffield Sci. Sch, Yale*, 10-13, instr, 13-17, *asst. prof.*, 17- Research chemist, C. W. S., 18. Chem. Soc. (v. pres, New Haven sect). Proteins; pyrimidins; synthetic drugs; dye intermediates.

Hill, Dr. Bruce V(ickroy), 2526 Hartzell St, Evanston, Ill. *Physics*. Kellogg, Iowa, Oct. 19, 72. Ph.B, Grinnell, 96; A.M, Nebraska, 98; Ph.D, Berlin, 02. Instr. physics, California, 03-05; acting prof. physics and elec. eng, Kansas, 05-07; *physicist, Chicago Telephone Co*, 07- Physical Soc; West. Soc. Eng. Applied electricity; accidental double refraction in colloids; calorimetric properties of the ferro-magnetic metals; magnetic and thermal behavior of alloys; alternating current measurements; time limit of sound discrimination; armor.

Hill, Dr. Charles, 6330 Kimbark Ave, Chicago, Ill. *Histology, Embryology*. Leland, Ill, June 27, 62. Grad, Mt. Morris, 84; B.S, Michigan, 91, M.S, 92; Ph.D, Northwestern, 99, M.D, 02. Prof. zool, Washington (Seattle), 92-98; asst. prof. histol. and embryo, Northwestern, 98-08; *pres, Chicago Med. Sch.*, 18- Acting prof. zool, Northwestern, 02-03. Soc. Nat; Am. Med. Ass. Embryology; histology and organography; epiphyses; development of vertebrate head.

Hill, Dr. Charles W(arren), 152 Kearny Ave, Perth Amboy, N. J. *Chemistry*. Clarion, Iowa, April 6, 84. A.B, Minnesota, 05; A.M, Wisconsin, 07, Ph.D, 10. Asst. chem, Wisconsin, 06-08, instr, 08-10; asst. director, research lab, Nat. Carbon Co, 10-13, Cleveland Research Lab, 13-15; asst. prof. chem, Syracuse, 15-16; research chemist, Westinghouse Elec. and Mfg. Co, 16-20; *gen. works manager, Atlantic Terra*

Cotta Co, 20- Chem. Soc; Electrochem. Soc; Ceramic Soc; Min. Eng. Non-ferrous foundry chemistry and metallurgy; rare earths; carbon manufacture; industrial laboratory organization; factory control.

Hill, Pres. David Spence, University of New Mexico, Albuquerque, N. Mex. *Psychology, Education*. Nashville, Tenn, Dec. 14, 73. A.B, Randolph-Macon, 97; Harvard, summer, 97; Washington (St. Louis), 01; fellow, Clark, 05-07, Ph.D, 07; LL.D, Kentucky, 16; Arizona, 20. Instr, Smith Acad, Washington (St. Louis), 97-04; Ralph Sellev night schools, St. Louis, Mo, 01-04; prof. hist. and philos. of educ, Peabody Col. Teachers, 07, psychol. and educ, 07-11; prof. elect. Tennessee, 11; prof, Tulane, 11-13; director, Bur. Educ. Research, New Orleans, 13-16; acting prof. educ, Wisconsin, 16-17; Illinois, 17-19; *pres, New Mexico*, 19- Prof, Montana, summer, 13; Cornell, 14; California, 16; Wisconsin, 17. A.A; Psychol. Ass; Ass. Clin. Psychol; Ass. Clin. Criminol; Nat. Soc. Study Educ; Nat. Soc. Vocational Educ; S. Soc. Philos. and Psychol. (pres, 15). Individual differences in children of the public schools; delinquency; industry and education; vocational education; educational research in public schools.

Hill, Prof. D(avid) U(pton), Acadia University, Wolfville, N. S. Can. *Chemistry*. St. Stephen, N. B, Feb. 24, 87. B.A, New Brunswick, 03; A.M, Yale, 11, Ph.D, 13. Asst. chem, Yale, 11-13, instr, 13-17; *prof, Acadia*, 17- Chem. Soc; Maritime Chem. Ass. Diffusion theory of reaction velocity.

Hill, Dr. Eben C(layton), Johns Hopkins Medical School, Baltimore, Md. *Roentgenology*. Baltimore, Md, Oct. 9, 82. A.B, Hopkins, 03, M.D, 07; Freiburg, 04, 06. Asst. anat, Hopkins, 07-08; lieut, M. C, 08-12, capt, 13; *roentgenologist, Vassar Hosp. and Dispensary, Poughkeepsie, N. Y.*, 13- A.A; Am. Med. Ass; Col. Physicians; N. Y. Acad. Med. Röntgenology applied to anatomical research.

Hill, Prof. Edwin A(rlston), 2246 Cathedral Ave, Washington, D. C. *Chemistry, Civil engineering*. New York, N. Y, Jan. 18, 50. A.B, Yale, 75, A.M, 02; law sch, Columbia, 76; M.S, George Washington, 01, Ph.D, 03. Lawyer, railway manager and civil engineer, 17 years; *asst. examiner, U. S. Patent Office*, 00-; instr. chem, *George Washington*, 01-05, *asst. prof.*, 05- Private sec'y to three Commissioners of Patents; asst. receiver, asst. attorney, asst. supt, etc, in railway service. A.A; Chem. Soc; assoc. mem. Civil Eng; West. Soc. Civil Eng; Ill. and Conn. Engineers Societies; Wash. Micros. Soc; Postal Micros. Club. Engineering; chemistry; stereo-chemistry; physical chemistry.

Hill, Prof. G(eorge) Albert, 61 Home Ave, Middletown, Conn. *Chemistry*. Worcester, Mass, March 22, 92. B.S, Worcester, 13; A.M, Harvard, 14, Ph.D, 17. Instr. chem, Harvard, 17-19; *assoc prof, Wesleyan*, 19- Chem. Soc. Organic chemistry; ketones; natural coloring matter.

Hill, George Andrews, U. S. Naval Observatory, Washington, D. C. *Astronomy*. Elizabeth, N. J, April 11, 58. George Washington, 87. Computer, U. S. Naval Observatory, 89-93, asst.

- astronomer, 93-20, *astronomer*, 20- U. S. eclipse exped, 00, Spain, 05. Astron. Soc. Variation of latitude; constants of nutation and aberration; star positions; longitude by wireless time signals.
- Hill, Dr. Geo(rge) R(ichard), Jr.**, 555 E. Fifth North St, Logan, Utah. *Botany*. Ogden, Utah, April 10, 84. B.S., Brigham Young, 07; B.S., Utah Col, 08; Ph.D., Cornell, 12. Asst. plant. physiol., Cornell, 10-11, instr., 11-12; research asst., Mo. Bot. Garden, 12-13; *botanist and plant pathologist*, Utah Col. and Exp. Sta, 13-, *director*, *sch. agr.*, 16- A.A.; Bot. Soc.; Phytopath. Soc.; Ecol. Soc.; Nat. Agr. Soc. Plant physiology and pathology; storage of fruits and vegetables; potatoes.
- Hill, Dr. H(ibbert) W(inslow)**, Institute of Public Health, London, Can. *Bacteriology*, *Public Health*. St. John, N. B., Sept. 16, 71. M.B., Toronto, 93, George Brown scholar, 93-94, M.D., 99; D.P.H., Hopkins, 95. Demonstrator bacter. and path., Toronto, 95; first asst. bacteriologist, Louisville filtration experiments, 96; biologist and later director, Brooklyn Water Lab, 96-98; chief, Bur. Sanit. Supervision of Brooklyn water shed, 97-98; director, bacter. lab, Boston Board of Health, 98-05; instr. bacter., Harvard, 03-05; asst. prof., Minnesota, 05-12; asst. director, Minn. State Board of Health, 05-09, epidemiologist, 09, director of div., 09-12; director, Inst. Pub. Health and chief, div. epidemiol., London, Ont., 12-18; prof. pub. health, Western, 12-18, dean of faculty, 16-18; exec. sec'y, Minn. Pub. Health Ass., 18-20; *director*, *Inst. of Pub. Health*, 20- First asst. Phila. Board of Health Lab, 96; inspector, State Board of Health, N. Y., 96-98; managing, and later assoc. ed., 'Am. Jour. Pub. Hygiene,' 00-04; ed., 'Minn. Health Jour'; capt, C. E. F., 16-18. Starr gold medal, Toronto, 99. A.A.; Soc. Nat.; Ass. Path. and Baet.; Soc. Baet.; Pub. Health Ass. (chairman, lab. sect., 07); Ass. Tuber; Am. Med. Ass.; Can. Med. Soc.; Toronto Path. Soc. (sec'y, 93); Boston Soc. Med. Sci. Morphology; bacteriology technique; epidemiology of typhoid and poliomyelitis; porous petri dishes, pressure filter for sera and hanging block.
- Hill, James M(adison)**, U. S. Geological Survey, Custom House, San Francisco, Calif. *Geology*. Chicago, Ill., Feb. 14, 84. B.S., Chicago, 06. *With U. S. Geol. Surv.*, 07- Min. and Metal. Eng.; Wash. Acad. Economic geology; platinum; bauxite; barytes.
- Hill, Prof. J(ohn) Ben(jamin)**, State College, Pa. *Botany*, *Genetics*. Lebanon, Ill., Dec. 12, 79. B.S.A., Missouri, 08; A.B., Cornell, 09; Ph.D., Chicago, 13. Asst. bot., Cornell, 07-09; instr., Pa. State, 09-11, asst. prof., 13-15, assoc. prof., 15-20, *prof.*, 20- Second lieut., Inf., 18. A.A.; Bot. Soc. Morphology and genetics; plant anatomy; anatomy of Lycopodium; morphology of hybrid embryos; microtechnic; species hybrids of *Digitalis*.
- Hill, Prof. John E(dward)**, Providence, R. I. *Civil engineering*. New York, N. Y., Nov. 9, 64. B.S., Rutgers, 84, M.S., 87, C.E., 92, hon. Sc.D., 05; M.C.E., Cornell, 95. Instr. *civil eng.*, Cornell, 90-94; instr., later assoc. prof. and *prof.*, Brown, 94- A.A.; Civil Eng.; New Eng. Water Works Ass. Shades, shadows and perspective; sanitation.
- Hill, John W(illmuth)**, Mitchell Building, Cincinnati, Ohio. *Hydraulic and sanitary engineering*. Covington, Ky., Oct. 10, 48. Cincinnati pub. schools. Planned and constructed in whole or in part over sixty systems of public water supply in the United States; chief engineer, bur. filtration, Dept. Pub. Works, Phila., 01-05; Cincinnati Water Works, 06-07. Mem. Ohio State Board of Health, 10-15. Gold medal, Cincinnati Indust. Expos., 74. Civil Eng.; Pub. Health Ass.; Am. Water Works Ass.; New Eng. Water Works Ass.; Franklin Inst. Construction of works of public water supply; economy in steam engines, boilers and fuels; value of water works properties and public utilities; filtration of public water supplies; interpretation of analytical data pertaining to domestic water supplies.
- Hill, Dr. J(oseph) Bennett**, 207 N. 35th St, Philadelphia, Pa. *Chemistry*. Philadelphia, Oct. 3, 91. B.S., Pennsylvania, 13, Ph.D., 16. *Lab. manager*, chem. dept, Barrett Co, 16- Chem. Soc.; Chem. Eng. Coal tar compounds; tungsten.
- Hill, Prof. R(euben) L(orenzo)**, 645 N. Eighth East St, Logan, Utah. *Chemistry*. Ogden, Utah, March 24, 88. B.S., Utah Col, 12; Ph.D., Cornell, 15. Instr. biol. chem., Cornell, 15-16; biochemist, bur. chem., U. S. Dept. Agr., 16; Md. Exp. Sta, 16-18; *prof. chem.*, Utah Col., and in *charge nutrition investigations*, Exp. Sta, 19- Nutrition officer, U. S. A., 18-19. Soc. Biol. Chem. Mammary development; milk secretion; metabolism; human nutrition.
- Hill, Robert Thomas**, Central Building, Los Angeles, Calif. **Geology, Geography, Sociology*. Nashville, Tenn., Aug. 11, 58. B.S., Cornell, 86; L.L.D., Baylor, 20. Asst. paleontologist, U. S. Geol. Surv., 86-88, asst. geologist, 88-89; geologist, Ark. Geol. Surv., 89; prof. geol., Texas, 89-91; geologist, U. S. Geol. Surv., 89-04; cooperating with Prof. A. Agassiz in West Indian exploration, 95. U. S. investigations of underground waters, 92; assoc. ed., 'Am. Geologist,' 90-; lecturer, Michigan, 02. A.A.; Geol. Soc.; Ass. Geog.; Min. Eng.; Am. Geog. Soc.; Seismol. Soc.; Wash. Biol. Geol. and Philos. Societies; Texas Acad.; Texas Hist. Soc.; Southern Hist. Soc.; Southwest. Geol. Soc. (pres). The basic geology, paleontology, physiography, commercial and social geography of Spanish America, with reference to continental evolution; geology of the Mexican Plateau, including southwestern United States; geology of the Windward Islands.
- Hill, Dr. Samuel S(mith)**, State Asylum for Insane, Wernersville, Pa. *Mental and nervous diseases*. Mercer Co, Pa., May 9, 68. M.D., Pittsburgh, 94. First asst. physician, *State Asylum for Insane*, Wernersville, 94-97, *physician-in-chief and supt.*, 97- A.A.; Medico-Psychol. Ass.; Am. Med. Ass.
- Hill, Prof. W(illiam) K(uhns)**, Carthage College, Carthage, Ill. *Chemistry*. Leechburg, Pa., Dec. 11, 57. A.B., Pennsylvania Col, 79, A.M., 82, hon. Sc.D., 10. *Prof. sci.*, Carthage Col, 84-93, *chem.*, 00- A.A.; Chem. Soc.
- Hillebrand, Prof. W(illiam) A(rthur)**, Stanford University, Calif. *Electrical engineering*. Per-

- rysburg, Ohio, Oct. 9, 82. A.B., Cornell, 05. With West. Elec. Co., 06-07; instr. *elec. eng.*, Stanford, 07-10, *asst. prof.*, 10- Assoe. Elec. Eng. Effect of voltage unbalancing on the capacity of polyphase motors; unbalancing in polyphase transformer connections.
- Hillebrand, W(illiam) F(rancis)**, 3023 Newark St., N. W., Washington, D. C. **Chemistry*. Honolulu, Hawaii, Dec. 12, 53. Cornell, 70-72; Heidelberg, 72-76, Ph.D., 75; Strasbourg, 76-77; Freiberg, 77-78; hon. Phar.D., Nat. Col. Pharmacy. Chemist, U. S. Geol. Surv., 80-08; *chief chemist*, Bur. of Standards, 08-; *prof. chem.* and physics, Nat. Col. Pharmacy, 93-10. Chandler medal, Columbia. Nat. Acad. A.A.; Chem. Soc. (assoc. ed., 'Jour.', 00-; reviewer, 02-06, assoc. ed., 'Jour. Indust. and Eng. Chem.', 09-16, asst. ed., 'Abstracts,' 07-10, pres, 06); Philos. Soc.; hon. mem. Colo. Sci. Soc.; Göttingen Gesell. Minerals, rocks and methods of analysis.
- Hilliard, Prof. C(urtis) M(orrison)**, Simmons College, Boston, Mass. *Bacteriology*. Dorchester, Mass., Aug. 5, 87. A.B., Dartmouth, 09; Mass. Inst. Tech., 10. Instr. biol. Col. City of N. Y., 10-12; *asst. prof. sanit. science*, Purdue, 12-14; *biol.*, Simmons, 14- A.A.; Soc. Bact.; Pub. Health Ass.; Mass. Ass. Boards of Health. Streptococci; water supply and purification.
- Hills, Dean J(oseph) L(awrence)**, University of Vermont, Burlington, Vt. *Agricultural chemistry*, *Agronomy*. Boston, Mass., March 2, 61. B.S., Mass. Col. and Boston, 81; hon. Sc.D., Rutgers, 03. Asst. chem., Mass. Exp. Sta., 81-84; N. J. Exp. Sta., 84-85; chemist, *Vt. Exp. Sta.*, 88-98, *director*, 93-; *prof. agr. chem.*, Vermont, 93-07, *agron.*, 07-; *dean, dept. agr.*, 98- Chemist, New Eng. Internal Revenue Lab. for Sugar Bounty work, 92; mem. Vt. State Board Agr. and Cattle Commission, 92-00; sec'y, State Board Agr. and Forestry, 09- A.A.; Soc. Prom. Agr. Sci.; Ass. Agr. Col. (sec'y-treas). Agricultural chemistry, particularly along dairying lines.
- Hills, R(ichard) C(harles)**, Ernest and Cranmer Building, Denver, Colo. *Geology*. Ewhurst, Surrey, England, Feb. 5, 48. Private study. *Geologist*, Colo. Fuel and Iron Co., 84-04; *Victor-Am. Fuel Co.*, 04- *Geologist*, U. S. Geol. Surv., 94-98; oil geologist, United Oil and other corporations; hon. curator geol. and miner., Colo. Museum Nat. Hist. A.A.; fel. Geol. Soc.; hon. fel. Colo. Sci. Soc. (pres, 88, 90); fel. London Geol. Soc. Tertiary beds of Huerfano River Basin; orographical and structural features of Rocky Mountain geology; Elmore, Spanish Peaks and Walsenburg folios; coals and coal fields of Rocky Mountains; growth of crystals.
- Hills, Dr. T(homas) L(awrence)**, 59 N. Prospect St., Burlington, Vt. *Bacteriology*. Burlington, Vt., Aug. 13, 90. Ph.B., Vermont, 13; M.S., Wisconsin, 14, Ph.D., 17. Asst. bacteriologist, Pa. State, 14-15; bacteriologist, Idaho Exp. Sta., 17-18; lieut. Sanit. C., 19-20; *director*, *West. Mich. Clin. Lab.*, Grand Rapids, Mich., 19- A.A.; Soc. Bact. Influence of Protozoa and nitrates on soil bacteria.
- Hills, Prof. T(homas) M(cDougall)**, Vassar College, Poughkeepsie, N. Y. *Geology*. Allegheny, Pa., Feb. 19, 81. Ph.B., Wooster, 02. *Prof. geol.*, Toledo, 09-10; *asst. prof.*, Ohio State, 10-20; *prof.*, Vassar, 20- Asst. geol., Chicago, summer, 06; in charge, dept. observation, sch. mil. aeronaut., Ohio State, 17-18. A.A.; Am. Geog. Soc.; Ohio Acad. (v. pres, 16). Geology of Muskingum County, Ohio; glacial geology of Bitterroot mountains, Montana.
- Hillyer, Prof. H(omer) W(intthrop)**, National Aniline and Chemical Co., Buffalo, N. Y. **Chemistry*. Waupun, Wis., Jan. 26, 59. Ripon, 78-79; B.S., Wisconsin, 82; Ph.D., Hopkins, 85. Asst. and instr. chem., later asst. *prof. org. chem.*, Wisconsin; in research dept., Gen. Chem. Co., 07-17; *Nat. Aniline and Chem. Co.*, 17- Chem. Soc. Derivatives of phenyl ether; phenoxozone compounds; aluminum alcohols; theory of the action of soap; electrolytic iodiform; dye-stuff intermediates; azo-chrom dyes.
- Hilpert, Dr. Willis S(tose)**, 9 S. Clinton St., Chicago, Ill. *Chemistry*. Chicago, 81. B.S., Chicago, 03, fellow, 04-06, Ph.D., 06. Color chemist, Sherwin-Williams Co., 06-08; chemist, Am. Med. Ass., 08-16; *director, lab. operations*, *Miner. Laboratories*, 16- A.A.; Chem. Soc.; Pharmaceut. Ass. Industrial chemistry.
- Hiltner, R(obert) S(ilver)**, 570 High St., Denver, Colo. *Chemistry*. Lincoln, Nebr., June 12, 73. B.S., Nebraska, 94, fellow, 94-96, A.M., 96. Asst. chemist, Nebr. Exp. Sta., 96-98; instr. chem., Nebraska, 98-03; chemist, office supervising architect, Treasury Dept., 03-06; chemist and examiner of drugs, U. S. Customs Service, Chicago, 06-07; chemist, U. S. Food and Drug Inspection Lab., Denver, Colo., 07-10, *chief*, 10-20; *director, Colo. inspection service*, *Nat. Canners Ass.*, 20- Chemist, Am. Beet Sugar Co., Chino, Calif., summer, 02. Chem. Soc. (sec'y and treas., Nebr. sect., 00, Colo. sect., 20); Agr. Chem. Sugar analysis; mineral chemistry; technical chemistry; food and drug analysis.
- Hilton, Dr. William A(twood)**, Pomona College, Claremont, Calif. *Zoology*. Vannetten, N. Y., June 27, 78. B.S., Cornell, 99, scholar, 99-00, fellow, 00-01, Ph.D., 02. Asst. zool., Cornell, 02; instr., Pomona, 05-06, asst. *prof.*, 06-07, assoc. *prof.*, 07-08; instr. *histol.*, Cornell, 08-11; *histol. and embryol.*, Minnesota, 11-12; *prof. zool.*, Pomona, 12- A.A.; Soc. Zool.; Ass. Anat.; Micros. Soc.; Entom. Soc. Central nervous system; human face; animal distribution.
- Hinds, Henry**, 1153 Laurel Ave., St. Paul, Minn. *Geology*. Helena, Mont., Oct. 12, 83. A.B., North Dakota, 06; Rhodes scholar, Oxford, 04-07, B.A., 06; fellow, Chicago, 07-08. Asst. N. Dak. Geol. Surv., 03; demonstrator, Oxford, 06-07; asst. geologist, Iowa Geol. Surv., 07; junior geologist, U.S. Geol. Surv., 07-10, assoc. geologist, 10-12, paleontologist, 12-13, *geologist*, 14-19; *Sinclair Oil and Ref. Co.*, 19- A.A.; Geol. Soc.; Wash. Acad.; Wash. Geol. Soc. Coal deposits of North Dakota, Montana, Iowa, Missouri and Virginia; geology of areas in Kansas, Missouri, Illinois and Virginia.
- Hinds, Prof. J(ohn) I(redelle) D(illard)**, 1718 West End Ave., Nashville, Tenn. *Chemistry*. Guilford Co., N. C., Dec. 13, 47. A.B., A.M., C.E., Cumberland, 73, LL.D., 00; Berlin, 80; Harvard, 82; hon. Ph.D., Lincoln. *Prof. physi-*

- cal science, Cumberland, 73-00; chem. and dean, Nashville, 00-11, acting chancellor, 09-12; Cumberland, 12-15; *chemist Tenn. Geol. Surv.*, 18- Teacher, summer schools and supt. of platform, Monteagle Assembly, 91-96. A.A.; Chem. Soc.; Tenn. Acad. (vice-pres, 12); Chem. Gesell. Inorganic chemistry; photometric analysis; qualitative analysis. [Died, 21.]
- Hinds, Dr. W(arren) E(lmer)**, Alabama Polytechnic Institute, Auburn, Ala. *Entomology*. Townsend, Mass, Sept. 20, 76. B.S, Boston and Mass. Col, 99; Ph.D, Mass. Col, 02. Expert asst, bur. entom, U. S. Dept. Agr, 01, special field agent, 02-07; *prof. entom, Ala. Polytech, and entomologist, Exp. Sta.*, 07- Lecturer entom, summer sch, Md. Col, 01. A.A.; Ass. Eeon. Entom; Wash. Entom. Soc. The Thysanoptera of North America; the Mexican cotton boll-weevil in Texas; control of insects attacking stored corn; fumigation for insect control.
- Hine, Prof. Ja(me)s S(tewart)**, Ohio State University, Columbus, Ohio. *Zoology*. Wauseon, Ohio, June 13, 66. B.S, Ohio State, 93. Instr. entom, Ohio State, 94-96, asst. prof, 96-02, *assoc. prof. zool. and entom*, 02- Ed, 'Ohio Jour. Science.' A.A; assoc. Ornith. Union; Entom. Soc; Ass. Eeon. Entom; Wash. Entom. Soc; Ohio Acad. Panorpidae of North America; Diptera; North American Tabanidae.
- Hines, Dr. Marion**, University of Chicago, Chicago, Ill. *Anatomy*. Carthage, Mo, June 11, 89. A.B, 13; Ph.D, Chicago, 17. Asst. anat, Chicago, 15-17, *assoc.*, 17-18, *instr.*, 18- Ass. Anat. Growth of the telencephalon in man.
- Hines, Prof. Murray Arnold**, 2205 Sherman Ave, Evanston, Ill. *Chemistry*. North Adams, Mass, Aug. 5, 76. A.B, St. Lawrence, 99, A.M, 01; A.B, Harvard, 01, A.M, 03, Ph.D, 06. Asst. chem. and Austin teaching fellow, Harvard, 02-06; chemist, Mallinckrodt Chem. Works, St. Louis, 06-07; asst. prof. chem, Northwestern, 07-16, *assoc. prof.*, 16-19, *prof.*, 19- A.A; Chem. Soc. Specific gravities of cadmium chlorid and cadmium bromid; atomic weights of cadmium, manganese and chromium.
- Hinman, Dr. Alice H(amlin)**, 1825 S. 24th St, Lincoln, Nebr. *Psychology*. Constantinople, Turkey, Dec. 20, 69. A.B, Wellesley, 93; Ph.D, Cornell, 97. Teacher, Abbot Acad, Andover, Mass, 90-92; *prof. psychol.*, Mt. Holyoke, 97; *instr.*, Nebraska, 98-99, *lecturer*, 02- Lecturer, Teachers' Institutes, Nebr. and S. Dak. West. Philos. Ass. Attention; rhythm; hypnotism; memory span in infancy and early childhood; development of voluntary attention in the years from one to five.
- Hinman, Prof. Jack J(ones)**, Jr, State University of Iowa, Iowa City, Iowa. *Chemistry*. Indianapolis, Ind, Oct. 14, 88. Purdue, 07-09; A.B, Butler, 11, M.S, 15; Iowa; Rennes, 19. Asst. chemist, Ind. State Board of Health, 06-11; city chemist, Indianapolis, 11-14; asst. director, Iowa State Epidemiol. Lab. and instr. water and sewage examination, Iowa, 14-15, *water bacteriologist and chemist, Iowa State Board of Health*, 15-; *asst. prof. epidemiol. and water bacteriologist, Iowa*, 18- Capt, Sanit. C, A.E.F, 18-19. A.A; Chem. Soc; Soc. Chem. Indust; Water Works Ass. (trustee, 18-21, sec'y, Iowa sect, 15-); Pub. Health Ass; Ind. Acad; Iowa Acad; Soc. Chim. indust. Sanitary biology; formaldehyde determination; milk; water purification and examination.
- Hinrichs, Dr. Gustavus (Detlef)**, 4106 Shenandoah Ave, St. Louis, Mo. **Chemistry*. Lunden, Germany, Dec. 2, 36. Copenhagen, 53-61. Prof. physical science, Iowa, 62-86; chem, Col. Pharmacy, St. Louis, 89-03; med. dept, St. Louis, 03-07. A.A. Molecular mechanics with esomical and other applications.
- Hinsdale, Dr. Guy**, Hot Springs, Va. *Medicine, Climatology*. Brooklyn, N. Y., Oct. 26, 58. A.B, Amherst, 78, A.M, 81; M.D, Pennsylvania, 81. Lecturer climat, Pennsylvania, 96-00; Medico-Chirurg. Col, Phila, 05-16. Boylston prize, Harvard, 98; Hodgkins prize, Smithsonian Inst, 14. A.A; Climat. Ass. (pres, 19); Neur. Ass; Am. Acad. Med; Phila. Col. Physicians (curator, 84-01); cor. fel, balneol. and climat. sect, Royal Soc. Med. Climatology; neurology; hydrotherapy; balneology.
- Hinton, Dr. William A(ugustus)**, 240 Longwood Ave, Boston, Mass. *Pathology, Bacteriology*. Chicago, Ill, Dec. 15, 83. B.S, Harvard, 05; M.D, Harvard, 12. *Instr. prev. med. and hygiene, Harvard Med. Sch.* Asst. director, biol. lab, Mass. State Dept. of Health; pathologist, Boston Dispensary. A.A; Am. Med. Ass; Pub. Health Ass. Serology of syphilis and gonococcus infections in relation to public health.
- Hintze, Prof. F(erdinand) F(riis)**, 580 Corona St, Denver, Colo. *Geology, Paleontology*. Big Cottonwood, Utah, Dec. 8, 81. A.B, Utah, 08, A.M, 11; Ph.D, Columbia, 13. Asst. chem, Utah, 06-08; *prof. physical sciences*, Weber Acad, Ogden, Utah, 08-09; asst. geol, Utah, 09-10, *instr. miner. and geol*, 10-11; paleont, Columbia, 11-13; asst. prof. geol, Lehigh, 13-18. Geologist, Wyo. State Geol. Surv, summer, 14. Geol. Soc; N. Y. Acad. Stratigraphy; physiography; economic geology; paleontology.
- Hipple, J(ohn) M(erton)**, Westinghouse Electrical and Manufacturing Co, Pittsburgh, Pa. *Electrical engineering*. Jefferson, Ohio, Oct. 22, 76. M.E, Ohio State, 98. Designing engineer, Westinghouse Elec. and Mfg. Co, 99-11, div. engineer. 11-20, *manager, motor eng. dept.*, 20- Elec. Eng. Motor engineering.
- Hirsch, Dr. Alcam**, 50 E. 41st St, New York, N. Y. *Chemistry*. Corpus Christi, Tex, 85. A.B, Texas, 07, M.S, 08, Ch.E, 09; Ph.D, Wisconsin, 11. Pres, Hirsch Laboratories, 11- Electrochemistry; electrometallurgy; pharmaceutical products.
- Hirsch, Dr. E(dwin) F(rederick)**, 9170 Pleasant Ave, Chicago, Ill. *Pathology*. Milwaukee, Wis, Aug. 18, 86. A.B, Northwestern, 10; A.M, Illinois, 11; Ph.D, Chicago, 14, M.D, Rush Med. Col, 16. Instr. path, Chicago, 14-17; *director, lab, St. Luke's Hosp.*, 19- In M. C, U. S. A. 17-19. Ass. Path. and Bact. Bacteriology.
- Hirschfelder, Dr. A(rthur) D(ouglas)**, University of Minnesota, Minneapolis, Minn. *Pharmacology*. San Francisco, Calif, Sept. 29, 79. B.S,

- California, 97; M.D., Hopkins, 03. Res. house officer, Hopkins Hosp, 03-04; asst. med, Cooper Med. Col, 04-05; voluntary asst. med, Hopkins, 05-06, instr, 06-08, assoc, Hopkins, and asst, Hopkins Hosp, 08-13; *prof. and director pharmacol, Minnesota, 13-* A.A.; assoc. mem. Am. Physicians; Soc. Pharmacol. (councilor, 15); Soc. Exp. Biol; Soc. Clin. Invest; Am. Med. Ass. (chairman, sect. pharmacol. and therapeut, 17); Chem. Soc. (chairman, Minn. sect, 17). Internal medicine; diseases of the heart; action of digitalis and acids; experimental pneumonia; lead poisoning; edema; prevention of louse infection; local anesthetics.
- Hirschkind, Dr. Wilhelm**, California Alkali Co, Cartago, Calif. *Chemistry*. Baidersdorf, Bavaria, Germany, Aug. 14, 86. Munich, 04-06; Royal Inst. Tech, Berlin, 06-07; D.Ing, Inst. Tech, Karlsruhe, 09. Chemist and asst. supt, Chromate and Alizarin Factory, Germany, 09-12; instr. chem, Illinois, 12-13; *chemist, J. M. Waterman Chem. Co, 13-15; Nat. Soda Products Co, 16-* Eighth Int. Cong. Applied Chem, 12. A.A.; Chem. Soc; Chem. Verein. Physical and industrial chemistry; gas equilibria; salt solutions; natural salt brines.
- Hirshberg, Dr. Leonard K(eene)**, 55th Street and Seventh Ave, New York, N. Y. *Zoology, Psychology, Pathology*. Baltimore, Md, Jan. 9, 77. Hopkins, 98, M.D, 12-14; Vienna, 03; hon. A.M, Loyola, 12; Berlin. Instr. bacter, Col. Physicians and Surg, Baltimore, 04-08, assoc. neuropath, 06-08; extern, dermat, Hopkins Hosp, 08-10; *research worker exp. psychol, zool. and philos, 12-* A.A.; Ass. Clin. Research (pres, 13); Physico-Chem. Soc. Experimental psychology and medicine; bacteriology; zoology; animal behavior.
- Hirshfeld, Prof. C(larence) F(loyd)**, Detroit Edison Co, Detroit, Mich. *Mechanical engineering*. San Francisco, Calif, Jan. 30, 81. B.S, California, 02; M.M.E, Cornell, 05. Instr. exp. eng, Cornell, 03-05, asst. prof. power eng, 05-09, prof, 09-13; *chief, research dept, Detroit Edison Co, 13-* Major and lieut. col, ordnance dept, 18-19.
- Hitch, Dr. A(rthur) R(omaine)**, P. O. Box 525, Wilmington, Del. *Chemistry*. Vienna, Md, Aug. 8, 84. A.B, Washington (Md), 08, M.S, 11; Ph.D, Cornell, 13. Teacher chem, Cascadilla Sch, Ithaca, N. Y, 08-10; asst. instr, Cornell, 10-13; chemist, Solvay Process Co, 13-14; acting director, dept. chem, Rice Inst, 14-17; chemist, Nat. Carbon Co, 17-18; chief chemist, Ashland Iron and Mining Co, 18-19; *research chemist, E. I. duPont de Nemours and Co, 19-* Chem. Soc; Electrochem. Soc. Inorganic and physical chemistry; thermal decomposition of trinitrids.
- Hitch, Dr. E(mmet) F(rancis)**, E. I. duPont de Nemours and Co, Wilmington, Del. *Chemistry*. Vienna, Md, Sept. 3, 82. A.B, Washington (Md), 04; A.M, 07; Ph.D, Cornell, 12. Instr. chem, Washington (Md), 04-06; Cascadilla Sch, Ithaca, N. Y, 06-08; org. chem, Cornell, 08-13; asst. prof. org. and sanit. chem, Pittsburgh, 13-14; *chief chemist, West. Cartridge Co, 14-18; E. I. duPont de Nemours and Co, 18-* Special lecturer, univ. exten, Pittsburgh, 13-14. Chem. Soc. Explosives; dyestuffs; color and chemical composition; tetraethlorofluorescein and some of its derivatives; preparation of acetamid.
- Hitchcock, Prof. A(lbert) S(pear)**, U. S. Department of Agriculture, Washington, D. C. **Botany, Agrostology*. Owosso, Mich, Sept. 4, 65. B.S.A, Iowa State, 84, M.S, 86, Sc.D, 20. Asst. chem, Iowa State, 85; instr, Iowa, 86-89; bot asst, Mo. Bot. Garden, 89-91; prof. bot, Kansas State, 92-01; asst. agrostologist, *U. S. Dept. Agr, 01-05, systematic agrostologist, 05-* Custodian, sect. grasses, U. S. Nat. Herbarium. Mem. Nat. Research Council. A.A. (sec'y, G, 01); Bot. Soc. (pres, 14); Wash. Acad; Wash. Bot. Soc. (pres, 16); Wash. Biol. Soc; Wash. Biol. Field Club; Kans. Acad. Taxonomy of grasses.
- Hitchcock, Prof. E(dward), Jr**, Room 32, State House, Boston, Mass. *Hygiene, Physical culture*. Stratford, Conn, Sept. 1, 54. A.B, Amherst, 78, A.M, 81; M.D, Dartmouth, 81; Bellevue Med. Col. Instr. physical culture and elocution, Amherst, 81-84; prof. hygiene and physical culture, Cornell, 84-03. Instr. elocution, Mass. Col, 82-83. Ass. Adv. Physical Educ. (sec'y); Physical Educ. Soc. (v. pres); Am. Acad. Med. (v. pres); Mass. Med. Soc; Tompkins Co. (N. Y) Med. Soc. Physical measurements; vital statistics.
- Hitchcock, Prof. E(mbury) A(sbury)**, 348 W. Eighth Ave, Columbus, Ohio. *Mechanical engineering*. Henrietta, N. Y, June 26, 66. M.E, Cornell, 90. Designer, Corliss Steam Engine Co, Providence, R. I, 90-93; asst. exp. eng, Ohio State, 91-93, asst. prof, 93-96, assoc. prof, 96-97, prof, 97-13; engineer, E. W. Clark and Co. Management Corp, 13-19; v. pres, Bailey Meter Co, 19-20; *dean, col. eng, Ohio State, 20-* Mech. Eng; assoc. mem. Naval Eng. Hydroelectric engineering; boiler and locomotive tests; the economical use of fuels; natural gas supply for Columbus.
- Hitchcock, Dr. Fanny R(ysam) M(ulford)**, 4038 Walnut St, Philadelphia, Pa. *Biology, Chemistry*. Brooklyn, N. Y, Feb. 7, 51. Ph.D, Pennsylvania, 94. A.A; Chem. Soc; Min. and Metal. Eng; Franklin Inst; Acad. Polit. and Social Sci; fel. N. Y. Acad. Effect of high temperature on minerals; chemistry of iron ores; origin of disease in the pineapple plant.
- Hitchcock, Prof. Frank L(auren)**, Massachusetts Institute of Technology, Cambridge, Mass. *Mathematics*. New York, N. Y, March 6, 75. A.B, Harvard, 96, Ph.D, 10; Paris, 97-03; Cincinnati, 06-07. Prof. chem, Fargo, 03-06; asst. prof, Kenyon, 07-09; instr. math, Mass. Inst. Tech, 10-17, *asst. prof, 17-* Int. Ass. Prom. Quaternions. Mathematical chemistry; quaternions and vector analysis.
- Hitchcock, Prof. Geo(rge) G(ale)**, Claremont, Calif. *Physics, Physical chemistry*. Galesburg, Ill, April 24, 61. A.B, Nebraska, 83; Hopkins, 84-85; Cornell, 12-13. *Prof. nat. science, Pierre, 85-92; chem, Wash. Col, 91-93; physics and chem, Pomona, 93-06, physics, 06-* Physical Soc; Illum. Eng. Soc; Eng. Educ.
- Hitchcock, Prof. Raymond R(oyce)**, University of North Dakota, Grand Forks, N. Dak. *Mathe-*

- matics*. Lake Mills, Wis, May 2, 80. A.B, Wisconsin, 07; A.M, Northwestern, 10. Instr. *math*, Wisconsin, 07; Northwestern, 07-10; *North Dakota*, 10-12, asst. prof, 12-14, assoc. prof. and head of dept, 14-15, prof, 15- Math. Soc; Math. Ass. Theory of functions; Mersenne's numbers; Riemann surfaces.
- Hitchens, Dr. A(rthur) Parker**, Army Medical School, Washington, D. C. *Bacteriology*. Delmar, Del, Sept. 14, 77. Temple Col; M.D, Medico-Chirurg. Col, Phila, 98. Instr. path. and bacter, Medico-Chirurg. Col, Phila, 00-01; bacteriologist, Antitoxin Lab, Glenolden, 01-18, director, 06-18; research in tuber, hygienic lab, U. S. Pub. Health Service, 20; *asst. prof. bacter, Army Med. Sch.* Major, M.R.C, 18-19, lieut. col, 19-20, major, M.C, 20-; ed, 'Abstracts Bacter,' 16- A.A; Soc. Bact. (sec'y-treas, 13-); Ass. Path. and Bact; Ass. Tuber; Am. Med. Ass; Pub. Health Ass; Phila. Col. Physicians; Phila. Clin. Soc. (pres, 05). Bacterial toxins and antisera; immunology; tuberculosis.
- Hite, Prof. B(ert) H(olmes)**, Morgantown, W. Va. *Chemistry*. Morgantown, Aug. 18, 66. M.S, West Virginia, 90; Hopkins, 91-95, fellow, 93-95. *Prof. org. chem, West Virginia*, 96-98, *agr. chem*, 98- Chief chemist, W. Va. Exp. Sta, 95-, v. director, 02-; chief chemist, W. Va. Geol. Surv, 98-; consulting chemist, B. and O. R. R, 16-18; ordnance dept, U. S. A, 18. Int. Cong. Applied Chem, 03, 09; Int. Cong. Food and Drug Adulteration, 08, 09. A.A; Chem. Soc; Agr. Chem; Electrochem. Soc; Franklin Inst. Molecular weights; sour soils; combustion; high pressure in chemistry and bacteriology; fixation of nitrogen.
- Hite, Miss Bertha C(ourtright)**, 1801 K St, Washington, D. C. *Botany*. Lancaster, Ohio, July 23, 80. A.B, Ohio State, 04. Teacher, high schools, Ohio, 04-07; *scientific asst, bur. plant indust, U. S. Dept. Agr*, 08- Phytopath. Soc. Germination of seeds.
- Hitzrot, Dr. Ja(me)s Morley**, 126 E. 37th St, New York, N. Y. *Surgery*. McKeesport, Pa, Feb. 22, 75. A.B, Princeton, 97; M.D, Hopkins, 01. Instr. surg. med. col, Cornell, 05; asst. surgeon, Bellevue Hosp; *prof. clin. surg. med. col, Cornell*. Assoc. surgeon, New York Hosp, 08. A.A; Am. Med. Ass; N. Y. Acad. Med; N. Y. Surg. Soc. Surgery of spleen, lungs, bones and joints.
- Hixson, Prof. Arthur W(arren)**, Columbia University, New York, N. Y. *Chemical engineering*. Mifflinbury, Pa, July 7, 80. A.B, Kansas, 07, M.S, 15; Ph.D, Columbia, 18. Chemist and metallurgist, Detroit Copper Mining Co, 06-07; chemist, Ill. Exp. Sta, 08; *assoc. prof. indust. chem. and metal*, Iowa, 09-17; *chem. eng, Columbia*, 19- Chem. engineer, ordnance dept, U. S. A, 18-19. Chem. Soc. Coal; asphalt; carvacrol; chemical plant design and operation.
- Hjort, Dr. Axel M(agnus)**, 150 York St, New Haven, Conn. *Pharmacology*. Chicago, Ill, Nov. 28, 89. A.B, Illinois, 14, M.S, 15; Ph.D, Yale, 18. Asst. chem, Illinois, 14-15; *instr. pharmacol, Yale*, 17- Chem. Soc. Organic chemistry.
- Hoad, Prof. W(illiam) C(hristian)**, 1028 Martin Place, Ann Arbor, Mich. *Sanitary engineering*. Leecompton, Kans, Jan. 11, 74. Lane, 90-94; B.S, Kansas, 98. Asst. prof, assoc. prof. and *prof. civil eng, Kansas*, 00-12; *sanit. eng, Michigan*, 12- Engineer Kans. State Board of Health, 07-12. A.A; Civil Eng; Pub. Health Ass; Water Works Ass; New Eng. Water Works Ass. Stream pollution; administration of streams; sewage disposal; city water supply.
- Hoadley, Prof. Geo(rge) A(rthur)**, Walnut Lane, Swarthmore, Pa. *Physics*. Sheffield, Mass, Dec. 2, 48. A.B, C.E, Union, 74, A.M, 77, Sc.D, 07. Principal, Acad, Argyle, N. Y, 74-79; union sch, Fort Edward, N. Y, 79-83; pub. schools, Florence, Mass, 83-86; Northampton, 86-88; *prof. physics, Swarthmore*, 88-14, *emer. prof*, 14- Mem. jury of awards, elec. sect, Phila. Export Expos, 00. A.A; Physical Soc; Elec. Eng. (chairman, Phila. sect, 09); Illum. Eng. Soc. (pres, 19); Franklin Inst; Phila. Physics Club (pres, 10). Practical measurements in magnetism and electricity.
- Hoagland, Prof. Dennis Rob(er)t**, 2709 Parker St, Berkeley, Calif. *Chemistry*. Golden, Colo, April 2, 84. A.B, Stanford, 07; A.M, Wisconsin, 13. Instr. chem, California, 07-10; chemist, U. S. Dept. Agr, 10-13; *assoc. prof. agr. chem, California*, 13- A.A; Chem. Soc. Agricultural chemistry; plant nutrition; soil chemistry.
- Hoagland, Prof. Ralph**, U. S. Department of Agriculture, Washington, D. C. *Chemistry*. Long Lake, Minn, Sept. 22, 80. B.Agr, Minnesota, 04. Asst. chemist, Minn. Dairy and Food Dept, 04-06; chemist in charge, meat inspection lab, Chicago, U. S. Dept. Agr, 06-09; *prof. agr. chem. and soils, Minnesota*, and chemist, Exp. Sta, 09-13; *chemist, bur. animal indust, U. S. Dept. Agr*, 13- Agr. Chem; Pub. Health Ass. Meats; flour.
- Hobart, Henry M(etalf)**, 10 Ballston Road, Schenectady, N. Y. *Electrical engineering*. Boston, Mass, Nov. 29, 68. B.S, Mass. Inst. Tech, 89. With Gen. Elec. Co, 89-94; Thomson-Houston Co, London, 94-99; Union Elec. Co, Berlin, 00-03; consulting engineer, London, 03-11; *consulting engineer, Gen. Elec. Co*, 11- Lecturer elec. eng, Univ. Col; Faraday House; Northampton Inst; James Forrest lecturer, British Inst. Civil Eng, 15- Fel. Elec. Eng; Mech. Eng; British Inst. Elec. Eng; British Inst. Civil Eng; British Inst. Mech. Eng. Electric trains; motors; continuous current dynamos; generators; static transformers; electric propulsion of ships.
- Hobbs, Dr. G(lenn) M(oody)**, Sears, Roebuck and Co, Chicago, Ill. *Physics*. Yorkville, Ill, Aug. 17, 70. B.L, Illinois, 92; Ph.D, Chicago, 05. Asst. lab, Illinois, 92; Chicago, 92-94, tutor physics, 94-96, asst, 97-98, assoc, 98-01, instr, 01-09; sec'y and educ. director, Am. Sch. Correspondence, 09-20; *manager, tech. laboratories, Sears, Roebuck and Co*, 20- A.A; assoc. Physical Soc. Spark potential and mean free path; repetition of experiment on Newton's law of gravitation by method of interference measurement.
- Hobbs, Prof. W(illiam) H(erbert)**, University of Michigan, Ann Arbor, Mich. **Geology*. Worcester, Mass, July 2, 64. B.S, Worcester, 83; fellow, Hopkins, 87-88, A.M, Ph.D, 88; Heidel-

- berg, 89. Instr. miner. and metal, *Wisconsin*, 89-91, asst. prof. miner. and petrog., 91-00, *prof. miner. and petrol.*, 00-06; *geol. Michigan*, 06- Asst. geologist, U. S. Geol. Surv., 96-06; assoc. ed., 'Jour. Geol.', 09- A.A. (sec'y, E, 93); Geol. Soc.; Ass. Geog.; Philos. Soc.; Wis. Acad. (sec'y, 92-94); Mich. Acad. (v. pres, 08, pres, 17). Structural and dynamical geology; glaciology; seismology; geology of south-west Massachusetts and Connecticut; the earth's fracture systems.
- Hocker, Dr. Carl De Witt**, Western Electric Co., 463 West St., New York, N. Y. *Chemistry*. Rockville, Ind., Oct. 4, 90. A.B., Wabash, 12; Ph.D., Michigan, 15. *Asst. research chemist*, West. Elec. Co., 15- Chem. Soc. Organic and physical chemistry; communication engineering; thermionic activity; insulation.
- Hodgdon, Dr. Daniel Russell**, Hahnemann Medical College and Hospital, Chicago, Ill. *Chemistry*. Winthrop, Maine, April 13, 85. A.B., Bates, 08; Maine, 09; M.S., Potomac, 10, Sc.D., 17; Columbia, 10-12; LL.D., Valparaiso, 20. Principal, Corinna Union Acad., 06-09; v. principal, State Nor. Sch., 09-10; head, science dept., prep. dept., Rutgers, 10-11; high sch., Passaic, N. J., 11-13; State Nor. Sch., Trenton, 13-18; *pres*, Newark Tech. Sch., 18-19; *Hahnemann Med. Col.*, 19-, *Valparaiso*, 20- Lecturer, N. Y. Univ. Chem. Soc. (director, N. J. sect). General science; junior science.
- Hodge, Prof. C(lifton) F(remont)**, Sebring, Fla. **Biology, Neurology*. Janesville, Wis., Oct. 16, 59. A.B., Ripon, 82; fellow, Hopkins, 88-89, Ph.D., 89; fellow, Clark, 89-91. *Asst. neur.*, Clark, 89-91; *instr. biol.*, Wisconsin, 91-92; *asst. prof. physiol. and neur.*, Clark, 92-06, *prof.*, 06-13; *biol.*, Clark Col., 02-13; *civic biol.*, Oregon, 13- A.A.; Soc. Nat.; Soc. Exp. Biol.; Ass. Anat.; Physiol. Soc.; assoc. Ornith. Union; Forestry Ass.; Nature Study Soc. (v. pres, 08, pres, 09); Mass. Forestry Ass.; Mass. Audubon Soc. Nature study and life; civic biology; physiology of nerve cells; fatigue; changes due to old age; physiological action of alcohol; daily life and rhythms of rest and activity in animals; dynamics of a series of animal species; domestication of ruffed grouse and bobwhite; investigations to save the passenger pigeon from extermination.
- Hodge, Prof. Frederick H(umbert)**, 518 Russell St., W. Lafayette, Ind. *Mathematics*. O'Fallon, Ill., Dec. 10, 70. A.B., Boston, 94; Chicago, 96-97, fellow, 07-08; Clark, 97-98, fellow, 98-99, 01-03, hon. fellow, 03-04; A.M., Boston, 99. *Prof. math.*, J. B. Stetson, 95-96; Bethel, 99-01; *instr.*, Clark Col., 02-05, *asst. prof.*, 05-08; *prof.*, Parsons, 08-10; Franklin, 10-19, *instr.*, *Purdue*, 19- A.A.; Math. Soc.; Math. Ass. Constructions leading to conics; generalization of the witch and cissoid.
- Hodge, Frederick W(ebb)**, Museum of the American Indian, Broadway at 155th St., New York, N. Y. **Anthropology*. Plymouth, England, Oct. 28, 64. George Washington, 85-86. Law and publishing office, 79-84; stenographer, U. S. Geol. Surv., 84-86; sec'y, Hemenway Archeol. Exped., 86-89; ethnologist, ed. and librarian, Bur. Am. Ethnol., 89-01; *asst. in charge of office and* acting curator, Int. Exchanges, Smithsonian Inst., 01-05; *ethnologist*, Bur. Am. Ethnol., 05-10, in charge, 10-18; with *Mus. Am. Indian, Heye Foundation*, 18- Ed., 'Am. Anthropologist'; Curtis' 'The North American Indian.' A.A.; Anthropol. Ass. (ed., 99-14, pres, 16); Ethnol. Soc.; Archeol. Inst.; Folk-lore Soc.; Am. Geog. Soc.; Antiq. Soc.; Wash. Anthropol. Soc.; Tex. Hist. Ass.; hon. mem. Ala. Anthropol. Soc.; cor. mem. Soc. des Américanistes de Paris. Ethnology and archeology of the Pueblo tribes of New Mexico; ethnological and historical annotation of early Spanish accounts of southwestern tribes; handbook of American Indians; bibliography of the Pueblo Indians; annotator of Fray Alonso Benavides' 'Memo- rial on New Mexico, 1630.'
- Hodgkins, Prof. H(oward) L(incoln)**, George Washington University, Washington, D. C. *Mathematics, Physics*. Elgin, Ill., Jan. 23, 62. A.M., George Washington, 83, Ph.D., 92. Tutor math., *George Washington*, 83, adj. prof., 84-87, *prof.*, 87-03, dean, scientific sch., 97-03, head *prof. physics*, 03-09, *prof. math.*, 09-, *dean*, *col. eng.*, 05-, *arts and sciences*, 13- Special computer, 'Nautical Almanac' Office, 82-92. A.A.; Math. Ass.; Math. Soc.; Physical Soc.; Eng. Educ.; Forestry Ass.; Wash. Acad.; Wash. Eng. Soc.; Wash. Philos. Soc. Optics; differential equations.
- Hodgkins, W(illiam) C(andler)**, U. S. Coast and Geodetic Survey, Washington, D. C. *Geodesy*. Boston, Mass., Oct. 21, 54. C.E., Harvard, 77. Aid and *asst.*, U. S. Coast and Geod. Surv., 71-17, hydrographer and geodetic engineer, 17-20, director by detail, Philippine Islands, 14-16, *inspector, northeast coast, Boston field sta.*, 19- Chairman, Va.-Tenn. Boundary Commission, 00; chief engineer, Pa.-Md. Boundary Commission, 01-03; cartographer, Alaskan Boundary Tribunal, London, 03. A.A.; Am. Geogr. Soc.; Wash. Philos. Soc. Boundary surveys; navigation; topographical and hydrographical surveying.
- Hodgman, Charles D(avid)**, Case School of Applied Science, Cleveland, Ohio. *Physics*. Hollis, N. H., Sept. 22, 81. B.S., Dartmouth, 05; M.S., Case, 20. *Asst. physics*, Dartmouth, 05-06; *instr.*, Case, 06-19, *asst. prof.*, 19- A.A.; Physical Soc. Three-color photography; making and testing of color filters.
- Hodgson, C(arey) V(anderwort)**, U. S. Coast and Geodetic Survey, Washington, D. C. *Geodesy*. Wilmington, Ohio, July 11, 80. B.S., Haverford, 03. *Hydrographic and geod. engineer*, U. S. Coast and Geog. Surv., 04-, *asst. chief, div. geod.*, 20- Capt. and major, corps engineers, 17-19. Civil Eng.; Wash. Acad.
- Hodgson, Ernest A(tkinson)**, Dominion Observatory, Ottawa, Ont., Can. *Seismology*. Utica, N. Y., 86. B.A., Toronto, 12, fellow, 12-14, M.A., 13. *Seismologist, Dominion Observatory*, 14- Gold medal in astrophysics, Toronto. Seismol. Soc.; Royal Astron. Soc. Can. (sec'y, Ottawa Centre, 16). Effect of cooling on concrete instrument piers; constants of seismographs.
- Hodgson, Millard B(enjamin)**, Eastman Kodak Co., Rochester, N. Y. *Physics*. Washington, D. C., July 1, 88. Lab. *asst.*, Carnegie Institution, 08-10; Bur. Standards, 10-13;

- physicist, *Eastman Kodak Co*, 15- Physical Soc; Optical Soc. Photography; röntgenology; fluorescence; latent image theory.
- Hoffer, Prof. George N(issley)**, 434 Littleton St, West Lafayette, Ind. *Plant pathology*. Hummelstown, Pa, Nov. 20, 87. A.B, Lebanon Valley, 09; M.S, Purdue, 11. Asst. gen. biol, Purdue, 09-11; instr. bot, 11-14, asst. prof, 14-16, assoc. prof, 16-17; *agent and pathologist in charge corn disease investigations*, U. S. Dept. Agr, 17- A.A; Phytopath.*Soc; Bot. Soc.
- Hoffman, Dr. Alfred**, 200 Abingdon Road, Kew Gardens, L. I, N. Y. *Chemistry*. New York, N. Y, Nov. 1, 81. A.B, Columbia, 03, A.M, 04; Ph.D, Berlin, 07. Asst. org. chem, Columbia, 07-10; *treas*, Hoffman and Knopf Chem. Co, 10-19; *Alco Deo Co*, 11-; *private research*, 19- Chem. Soc; Chem. Gesell. Ketone condensations.
- Hoffman, Dr. Frederick L(udwig)**, Prudential Insurance Co, Newark, N. J. *Statistics*. Varel, Germany, May 2, 65. Common and private schools, Germany; LL.D, Tulane, 11. Statist. asst, *Prudential Ins. Co*, 94-00, *statistician*, 00-, *third v. pres*, 18- Lecturer, Harvard, Yale, Columbia, California, Pennsylvania and Stanford. Statist. Ass. (councilor); Pub. Health Ass. (director); Ass. Cancer Control (trustee); Safety Inst. (trustee). Life insurance history; theory and practise; public health; mortality; industrial accidents; tuberculosis; cancer; leprosy; malaria; army anthropometry.
- Hoffman, Prof. James D(avid)**, Purdue University, La Fayette, Ind. *Mechanical engineering*. Auburn, Ind, Jan. 23, 68. B.M.E, Purdue, 90, M.E, 93. Instr. practical mech, Purdue, 90-00, asst. prof, 00-03, machine design, 03-04, assoc. prof. eng. design, 04-08, prof, 08-11; prof. mech. eng. and practical mech, Nebraska, 11-17; *head, dept. practical mech*, Purdue, 17- Mech. Eng; Heat. and Vent. Eng. (past pres); Eng. Educ; Pub. Health Ass. Heating; ventilation.
- Hoffman, Samuel V(erplanck)**, 258 Broadway, New York, N. Y. *Astrophysics*. Brooklyn, N. Y, May 12, 66. M.E, Stevens, 88; fellow, Hopkins, 93. *Director*, *E. A. Hoffman Estate, Inc*, 12- A.A; Astron. Soc; Physical Soc; N. Y. Hist. Soc; fel. Royal Astron. Soc. Astrolabes.
- Hoffmann, Dr. Geo(rge) L**, Western Pennsylvania Hospital, Pittsburgh, Pa. *Bacteriology*. Logansport, Ind, Nov. 1, 87. B.S, Purdue, 11; Ph.D, Berne, 15. Instr. biol, Purdue, 12; research bacteriologist, Parke, Davis and Co, 12-13; asst, Inst. Investigation Infectious Diseases, Berne, 14-15; *chief bacteriologist*, *West. Pa. Hosp*, 17- A.A; Soc. Bact; Chem. Soc; Ind. Acad. Serology; chemotherapy of trypanosomiasis; Spirochaeta hyos.
- Hoffmann, Ralph**, Carpinteria, Calif. *Ornithology*, *Botany*. Stockbridge, Nov. 30, 70. A.B, Harvard, 90. Teacher, Browne and Nichols Sch, Cambridge, Mass, 91-10; headmaster, Country Day Sch, Kansas City, Mo, 10-17, St. Louis, Mo, 17-19. Mem. Ornith. Union; New Eng. Bot. Club; Nat. Ass. Audubon Societies (director). Birds of California; flora of Berkshire County, Mass.
- Hoffstadt, Dr. Rachel E(milie)**, Milwaukee-Downer College, Milwaukee, Wis. *Botany*. Madison, Ind, June 14, 86. B.S, Hanover, 08; M.S, Chicago, 12, Ph.D, 15. Teacher science, high schools, Ind, 08-11; *head*, dept. biol, Marshall, 12-14; *dept. bot*, *Milwaukee-Downer*, 15- A.A; Bot. Soc. Plant morphology.
- Hofman, Dr. H(einrich) O(scar)**, 88 Robinwood Ave, Jamaica Plain, Mass. *Metallurgy*. Heidelberg, Germany, Aug. 13, 52. Heidelberg, 71-73; E.M, Met. E, Royal Sch. of Mines, Clausthal, 77; Ph.D, Ohio (Athens), 89. Practising metallurgist, 77-87; lecturer, Mass. Inst. Tech, 87-88; prof. metal. and assaying, Dak. Sch. of Mines, 87-89; asst. prof. mining and metal, *Mass. Inst. Tech*, 89-91, assoc. prof, 91-98, *prof. metal*, 98- Min. Eng; Eng. Educ; Chem. Soc; Inst. Metals; Ass. Prof; British Inst. Metal. Metallurgical chemistry; ferrocyclic silicates.
- Hofmann, Dr. J(ulius) V(alentine)**, Stabler, Wash. *Forestry*. Janesville, Minn, Feb. 20, 82. B.S.F, Minnesota, 11, M.F, 12, Ph.D, 14. Instr. forestry and bot, Minnesota, 11-12; pathologist, bur. plant indust, U. S. Dept. Agr, 12; scientific asst, Priest River Forest Exp. Sta, U. S. *Forest Service*, 12-13, *director*, *Wind River Forest Exp. Sta*, 13- Lecturer silviculture, Minnesota, 15. A.A; Soc. Foresters; Ecol. Soc; Phytopath. Soc. Silviculture; forest ecology and pathology; forest influences.
- Hogan, Prof. Albert G(arland)**, University of Missouri, Columbia, Mo. *Animal nutrition*. Maryville, Mo, Dec. 31, 84. A.B, Missouri, 07, B.S.A, 09, A.M, 12; Ph.D, Yale, 14. Instr. chem, State Nor. Sch, Maryville, Mo, 09-11; asst. physiol. chem, Sheffield Sci. Sch, Yale, 13-14; asst. prof. animal nutrition, *Kansas State*, 14-17, assoc. prof, 19; *prof. biochem*, Alabama, 19-20; *animal husbandry*, *Missouri*, 20- A.A; Chem. Soc; Soc. Biol. Chem. Carbohydrate metabolism; vitamins; comparative nutritional value of proteins.
- Hogan, John Vincent L(awless)**, International Radio Telegraph Co, 326 Broadway, New York, N. Y. *Electrical engineering*. Philadelphia, Pa, Feb. 14, 90. Sheffield Sci. Sch, Yale, 08-10. Telegraph supt. and consulting engineer, Nat. Elec. Signaling Co, 10-14, chief research engineer, 14-18; *manager*, *International Radio Telegraph Co*, 18- Pan-Am. Scientific Cong. A.A; Elec. Eng; fel. Radio Eng. (v. pres, 16-19, chairman, standards committee, 16-19, pres, 20); hon. mem. Radio Club. Applied physics; radio telegraphy and telephony; electromagnetic waves; signal-receiving methods.
- Hoge, Wendell P(hillips)**, Mt. Wilson Observatory, Pasadena, Calif. *Astronomy*. Belmont Co, Ohio, July 9, 67. Pub. sch. Employee, Santa Fe Ry. Co, 87-12; *asst. observer*, *Mt. Wilson Observatory*, 12- In charge astron. museum, Mt. Wilson Observatory. Astron. Soc; Seismol. Soc; Meteorol. Soc. Stellar spectroscopy and photometry; stellar parallaxes; meteorology; nebulae; star clusters; variable stars.
- Hogrefe, Louis (T. W)**, 5403 Illinois Ave, N. W, Washington, D. C. *Chemistry*. Copenhagen, Denmark, Aug. 3, 66. Ph.C, Michigan, 97, B.S,

02. Director, chem. dept, Patton Paint Co, 08-10; expert chem, U. S. Dept. Agr, 11; chemist, J. L. Hopkins Co, 12-17; *mem. exam. corps, U. S. Patent Office, 18-* Mem. bar, U. S. Supreme Court. A.A.; Chem. Soc; Math. Soc. Technical and pharmaceutical chemistry; rubber; cements; paints; alkaloids; leather.
- Hogue, Dr. M(ary) J(ane)**, Johns Hopkins University, Baltimore, Md. *Zoology*. West Chester, Pa., Oct. 12, 83. A.B, Goucher, 05; Bryn Mawr, 05-07; Ph.D, Würzburg, 09; Columbia, 10-11. Demonstrator, Bryn Mawr, 06-07; prof. science, Pa. Col. for Women, 09-10; instr, Miss Chapin's Sch, N. Y. City, 10-11; zool, Mt. Holyoke, 11-14; Wellesley, 14-18; lab. worker, base hosp, Ft. Sill, 18-19; collaborator, Carnegie Institution, 19; *fellow protozool, sch. hygiene and pub. health, Hopkins, 19-* Alumnae trustee, Goucher, 16-19. A.A.; Soc. Zool. Experimental embryology; protozoology.
- Holaday, Prof. Horace A(sa)**, E. R. Squibb and Sons, New Brunswick, N. J. *Chemistry*. Denver, Colo, Feb. 26, 89. A.B, Colorado, 11, Chicago, 15-16; Columbia, 11, 19. Asst. chem, Idaho, 10-12, instr, 12-15, asst. prof, 15-18; prof. physiol. chem. and head, div. food and physiol. chem, N. Dak. Col, 19-20; *director, biochem. research, E. R. Squibb and Sons, 20-* A.A.; Chem. Soc. Biological chemistry; nutrition; brain lipins; antitoxin concentration.
- Holbrook, Prof. E(lmer) A(llen)**, Bureau of Mines, Washington, D. C. *Mining engineering*. Fitchburg, Mass, June 23, 80. B.S, Mass. Inst. Tech, 04, E.M, Illinois, 16. Prof. mining and metal, N. S. Tech. Col, 10-12; asst. prof. mining, Illinois, 12-15, prof, 15-17; mining engineer and metallurgist, *U. S. Bur. Mines, 17-18*, supt. Pittsburgh Exp. Sta, 19, *asst. director, 20-* Eng. Educ. Preparation of minerals and coal.
- Holcomb, Prof. Anson M(unson)**, V. R. Browning, 17701 Lake Shore Boulevard, Cleveland, Ohio. *Electrical engineering*. Tariffville, Conn, July 21, 81. B.S, Worcester. With Gen. Elec. Co, Schenectady, 05-06; instr. elec. eng, Cornell, 06-11; asst. prof, Case, 11-18; *elec. engineer, V. R. Browning and Co, 18-* Elec. Eng; Cleveland Eng. Club.
- Holdaway, Prof. C(harles) W(illiam)**, Blacksburg, Va. *Dairy husbandry*. Masterton, N. Z, May 24, 80. B.S, Va. Polytech, 12, M.S, 15. Asst. *dairy husbandry, Va. Polytech, 03-07*, instr, 07-14, assoc. prof, 14-18, *prof, 18-* A.A; Dairy Sci. Ass. Animal nutrition; genetics; dairy manufacturing.
- Holden, Prof. Charles A(rthur)**, Hanover, N. H. *Civil engineering*. Hudson, Mass, July 14, 72. B.S, Dartmouth, 95, C.E, 01; Harvard, summer, 98. Engineer, Middletown and Portland Bridge Co, and Boston and Albany R. R, 95-98; instr. civil eng, Worcester, 98-00; math, *Dartmouth, 01-04*, asst. prof, 04-06, instr. *civil eng, Thayer Sch. Civil Eng, 00-04*, asst. prof, 04-05, assoc. prof, 05-08, *prof, 08-*, acting director, 18-19, *director, 19-* Instr, Wisconsin, spring, 01; engineer for N. H. in N. H.-Vt, boundary litigation, 17-; supervisor mil. training, Dartmouth, 18. Civil Eng; Eng. Educ.
- Holden, Edwin C(hapin)**, Garrett Building, Baltimore, Md. *Mining, Metallurgy*. New York, N. Y, Nov. 8, 72. B.S, Col. City of N. Y, 93; E.M, Columbia, 96. *Manager mines and consulting engineer, 96-*; prof. mining eng, Wisconsin, 08-16; manager, Davison Sulphur and Phosphate Co, 15-19. Min. Eng. Metallurgy; mine valuation; cyanidation of gold and silver ores.
- Holden, Prof. R(oy) J(ay)**, Blacksburg, Va. *Geology*. Sheboygan Falls, Wis, Oct. 21, 70. B.S, Wisconsin, 00, Ph.D, 15. Instr, high schools, Wis, 92-95; high sch, Sheboygan Falls, 95-97; Beloit, 00-02; assoc. geol, *Va. Polytech, 05-07*, assoc. prof. *geol. and miner, 07-08*, *prof, 08-* Asst. geologist, Va. Geol. Surv, 05-07. A.A; Geol. Soc; Meteorol. Soc; Min. Eng. Cytology; mineralogy; origin and alteration of iron ore; association and significance of minerals.
- Holder, Prof. F(rancis) J(erome)**, School of Commerce, Macon, Ga. *Mathematics*. Santa Fe, Fla, Aug. 11, 76. B.S, Lebanon, 96; A.M, Yale, 05, Ph.D, 08. Principal, high sch, Alachua, Fla, 96-00; manager, King's Business Col, Raleigh, N. C, 01-03; principal, sch. commerce, Wyoming, 08-09; prof. *math, Colby, 09-11*; Akron, 11-12; Pittsburgh, 12-18; *prof. and dean, Mercer, 18-* A.A; Math. Soc; Math. Ass; Eng. Educ.
- Hole, Prof. Allen David**, 615 National Road, Richmond, Ind. *Geology*. Bridgeport, Ind, Aug. 6, 66. B.S, Earlham, 97, A.M, 01; Ph.D, Chicago, 10. *Prof. geol, Earlham, 00-*, v. pres, 19-, *curator, Moore Museum, 05-* Asst, U. S. Geol. Surv, 06-16; asst. Ind. Geol. Surv, 11, 14, 19. Ind. Acad. Glacial and economic geology; glacial geology of Engineer Mountain and of Telluride quadrangles, Colorado; trilobites of western Illinois; moulding sands of Indiana.
- Holferty, Dr. G(eorge) M(ellinger)**, Central High School, St. Louis, Mo. *Botany, Geology*. Cazenovia, Ill, Nov. 17, 59. B.S, Wisconsin, 93; Leipzig, 94-95; M.S, Cincinnati, 97; Ph.D, Chicago, 03. Principal, high sch, Oconto, Wis, 87-90; asst. biol. lab, Wisconsin, 93-94; *instr. biol, Cincinnati, 95-99*; *bot, Illinois, 00-01*; Chicago, 01-03; *Cent. High Sch, St. Louis, 03-* A.A; Soc. Nat; Bot. Cent. States. Botany; root pressure and its transformation into work effects; ovule and embryo of Potamogeton natans; archegonium of the Bryophyta.
- Holgate, Prof. Thomas F(ranklin)**, 617 Library Place, Evanston, Ill. *Mathematics*. Hastings Co, Ont, April 8, 59. B.A, Toronto, 84, M.A, 89; fellow, Clark, 90-93, Ph.D, 93; LL.D, Illinois, 05; Queen's (Can), 19. Master math, Albert, 84-90; instr, *Northwestern, 93-94*, *prof. applied math, 94-05*, *math, 05-*, dean of col, 02-19, acting dean, 04-06, 16-19. A.A; Math. Soc. (sec'y, Chicago sect, 97-07); Math. Verein. Ruled surfaces of the fourth order; loci of common points of tangents forming a circuit with circles of a co-axial system; construction of conics through given elements in part imaginary; geometry.
- Holland, C(lifford) M(ilburn)**, Hall of Records, New York, N. Y. *Civil engineering*. Somerset,

Mass, March 13, 83. A.B, Harvard, 05, B.S, 06. Asst. engineer, N. Y. State Pub. Service Commission, 06-14, tunnel engineer, 14-19; *chief engineer, N. Y. State Bridge and Tunnel Commission and N. J. Interstate Bridge and Tunnel Commission*, 19- Civil Eng. Subaqueous tunnel construction.

Holland, Dr. Edw(ard) B(ertram), 28 N. Prospect St, Amherst, Mass. *Chemistry*. Amherst, Jan. 13, 72. B.S, Mass. Col, 92, M.S, 98, Ph.D, 15. Asst. gen. and anal. chem, *Mass. Exp. Sta.*, 92-93, asst. chemist, feeding dept, 93-99, first chemist, 99-07, assoc. chemist, research div, 07-20, *research prof. chem*, 20- Chem. Soc; Ass. Agr. Chem. Agricultural chemistry; oils and fats; insecticides.

Holland, Prof. J(ames) W(illiam), 2006 Chestnut St, Philadelphia, Pa. *Medicine*. Nashville, Tenn, April 24, 49. A.B, Louisville, 65, A.M, 69; M.D, Jefferson Med. Col, 68, Sc.D, 13. Prof, Univ. of Louisville Med. Col, 72-85; prof. med. chem. and toxicol, *Jefferson Med. Col*, 85-12, dean of faculty, 87-17, *emer. prof. med. chem.* Ed, 'Louisville Med. News,' 80; mem. Ky. State Board Health. Philos. Soc. (sec'y, 10); Ky. Med. Soc. (pres); Phila. Col. Physicians. Medical chemistry and toxicology; cases of rare nervous diseases; diet for the sick; toxicology of urine in yellow fever; tests for abnormal constituents of urine; antidotes of alkaloids.

Holland, Dr. W(illiam) J(acob), Carnegie Institution, Pittsburgh, Pa. **Zoology, Paleontology, Museum administration*. Bethany, Jamaica, W. I, Aug. 16, 48. Grad, Moravian Col. and Theol. Sem, Bethlehem, Pa, 67; A.B, Amherst, 69, D.D, 88; med. student under preceptor, 69-71; Princeton Theol. Sem, 74; hon. Ph.D, Washington and Jefferson, 86, Sc.D, 02; LL.D, Dickinson, 96; N. Y. Univ, 97; St. Andrew's, 05; Bethany (W. Va), 06. Principal, high sch, Amherst, Mass, 69-70; Westborough, Mass, 70-71; pastor, 74-91; prof. Latin, Pa. Col. for Women, 77-79; chancellor, Pittsburgh, 91-01, prof. polit. econ. and int. law, 92-97, lecturer zool, 95-99; *director Carnegie Museum, Pittsburgh*, 98- Naturalist, U. S. eclipse exped. to Japan, 87, to Africa, 89; director, Sch. of Design for Women, Pittsburgh, 83-; trustee, Pa. Col. for Women, 74-05; Western Theol. Sem, 77-, v. pres, 80-96; Pittsburgh, 88-; Washington and Jefferson, 89-91; Carnegie Library, Pittsburgh, 89-90; Carnegie Institute, 96-01; Carnegie Hero Fund (v. pres, 05-); mem. Pa. Col. and Univ. Council, 95-01. Officier Légion d'honneur, 08; Knight, III Kl, Royal Order of the Crown, Prussia, 08; Offizier Franz Josef Ordens, 09; commander, Order of the Crown, Italy, 10; Knight, II Kl, Order of St. Stanislaus, Russia, 11; commander, Order of Alfonso XII, Spain, 13; Order of the Crown, Belgium, 19. A.A; fel. Entom. Soc; Ass. Econ. Entom; Geol. Soc; Anthropol. Ass; Paleont. Soc; Ass. Mus. (v. pres, 06, pres, 09); Wash. Acad; Phila. Acad; Wash. Entom. Soc; cor. mem. N. Y. Entom. Soc; W. Pa. Entom. Soc. (pres); Cambridge Entom. Club (pres, 89); Col. Ass. Middle States and Md. (pres, 96); Pa. Hist. Soc; Moravian Hist. Soc; hon. mem. La Plata Acad; London

Zool. Soc; fel. London Entom. Soc; fel. Royal Soc. Edinburgh; Soc. entom. de France; Entom. Gesell. Iris; Madrid Soc. Nat; cor. mem. Royal Acad. Bologna; hon. mem. Swedish Soc. Anthropol. and Geog. Entomology; ornithology; history; archeology; avi-fauna of East Africa; Lepidoptera of North and South America, tropical West Africa and Malaysia; Tertiary fauna of western states; Jurassic dinosaurs.

Holland, Dr. W(illiam) W(est), Standard Oil Co. of Indiana, Wood River, Ill. *Chemistry*. Eastville, Va, Sept. 18, 81. Virginia, 00-04; Chicago, 05; A.B, Central, 06; Ph.D, Hopkins, 07, fellow by courtesy, 07-08. Carnegie research asst. chem, Hopkins, 07-08, asst. to Prof. H. N. Morse, 08-10, research assoc, 10-16; chief chemist, *Standard Oil Co, Wood River, Ill*, 16-18, *asst. supt. refinery*, 18- A.A; Chem. Soc. Osmotic pressure of cane sugar solutions.

Hollerof, Prof. Temple R(ice), Aurora-on-Cayuga, N. Y. *Mathematics*. Alton, Ind, April 8, 89. B.S, Hanover, 12, A.B, 14; A.M, Kentucky, 15; fellow, Wisconsin, 15-16; Cornell, 16-17, Ph.D, 17. Instr. *math*, Kentucky, 13-15; Columbia, 17-18; *prof. Wells*, 18- Instr. *math*, F. A. Cent. Officers Training Sch, U. S. A, 18. Math. Soc. Algebraic geometry.

Holler, Dr. Homer Denison, 15 Brook Terrace, Leonia, N. J. *Chemistry*. Newark, Ohio, Nov. 25, 89. B.S, Denison, 11; A.M, Ohio State, 12, Ph.D, 17. Asst. chemist, Bur. Standards, 15-18, assoc. chemist, 18-19; physical chemist, E. I. duPont de Nemours and Co, 19-20; *instr. chem, Columbia*, 20-; *consulting chemist*, 20- Chem. Soc; Electrochem. Soc; Elec. Eng.

Hollick, Dr. (Charles) Arthur, N. Y. Botanical Garden, Bronx Park, New York, N. Y. **Geology, Paleontology*. New Brighton, N. Y, Feb. 6, 57. Ph.B, Columbia, 79; Ph.D, George Washington, 97. Private asst. to Prof. J. S. Newberry, dept. geol, Columbia, 81-91, asst. geol, Columbia, 91-92, tutor, 93-00; curator, *dept. fossil bot, N. Y. Bot. Garden*, 01-14, *hon. curator*, 14-; *geologist, U. S. Geol. Surv*, 10- With U. S. Geol. Surv. and N. Y. N. J, Md. and La. State Geol. Surveys, 81-; mem. Board of Health, New Brighton, 86-92; mem. and pres, Boulevard Commission, Port Richmond, N. Y, 96; mem. and v. pres, Park Commission, Richmond Co, N. Y, 97-00, pres, 01-04; mem. Board Educ, N. Y. City, 07-10. A.A. (sec'y, E. 99); Geol. Soc; Bot. Soc. (treas, 96-16); Paleont. Soc. (v. pres, 11); Ass. Mus; fel. N. Y. Acad; Torrey Bot. Club (sec'y, 83-88); Staten Isl. Inst. Arts and Sci. (sec'y, 81-17, trustee, 05-14). Ecology; paleobotany; Miocene and Pleistocene floras of Maryland; Cretaceous flora of New Jersey, Staten Island, Long Island, Block Island and Marthas Vineyard; Miocene flora of New Jersey.

Hollingworth, Dr. H(arry) L(evi), Columbia University, New York, N. Y. **Psychology*. De Witt, Nebr, May 26, 80. A.B, Nebraska, 06; Ph.D, Columbia, 09. Teacher, secondary schools, Nebr, 99-03; asst. psychol, Nebraska, 04-06; principal, high sch, Fremont, Nebr, 06-07; asst. *psychol, Columbia*, 07-09, tutor, 09-10, *instr*, 10-14, asst. prof, 15-17, *assoc. prof*, 18- Psychol. Ass. Psychology of movement; pharmaco-

psychology; vocational and business psychology; acquisition of skill; judgment and thought processes; functional neuroses; mental measurement.

Hollingworth, Prof. Leta S(tetter), 417 W. 118th St., New York, N. Y. *Psychology*. Chadron, Nebr., May 25, 86. A.B., Nebraska, 06; A.M., Columbia, 13, Ph.D., 16. Teacher, high schools, Nebr., 06-09; psychologist, Clinic for Atypical Children, N. Y. City, 13-16; psychopathic service, Bellevue Hosp., 16; instr. educ. psychol., Teachers Col., Columbia, 16-19, *asst. prof. educ.*, 19- *Psychol. Ass.* Clinical and educational psychology; mental and motor abilities of women; frequency of inferior grades of intelligence as related to sex.

Hollingworth, Prof. Marion, Ohio State University, Columbus, Ohio. *Chemistry*. Near Jamestown, Ohio, Oct. 7, 77. B.S., Wilmington, 06; A.B., Ohio State, 08, A.M., 17, Ph.D., 19. Teacher, rural schools, 95-01; draftsman, Sherwin Williams Paint Co., 06-07; prof. chem., Wilmington, 08-14; *asst.*, Ohio State, 14-18, *instr.*, 18-19, *prof. anal. chem.*, 19- A.A.; Chem. Soc. Precision methods in analytical chemistry.

Hollis, Pres. Ira N(elson), Worcester Polytechnic Institute, Worcester, Mass. *Marine engineering*. Mooresville, Ind., March 7, 56. Grad., U. S. Naval Acad., 78; hon. A.M., Harvard; L.H.D., Union, 99; D.Sc., Pittsburgh, 12. *Asst. engineer*, U. S. N., 80-89, *past asst. engineer*, 89-93; *prof. eng.*, Harvard, 93-13; *pres.*, Worcester Polytech., 13- A.A.; Naval Eng.; Naval Archit. and Marine Eng.; Mech. Eng.; Eng. Educ.; Am. Acad.; Boston Soc. Civil Eng. Naval history; engineering.

Hollister, N(ed), National Zoological Park, Washington, D. C. *Mammalogy*. Delavan, Wis., Nov. 26, 76. Private educ. Expert and field worker, biol. surv., U. S. Dept. Agr., 02-09; *asst. curator*, dept. mammals, U. S. Nat. Museum, 10-16. Smithsonian-Alpine Club of Can. exped. to Mt. Robson, 11; Smithsonian-Harvard exped. to Altai Mountains, 12. A.A.; *mem.* Ornith. Union; Wilson Ornith. Club; Wis. Nat. Hist. Soc.; Wash. Biol. Soc. (sec'y, 11-13, chairman, publication committee, 14, counselor, 16). Mammals of North and South America, East Africa, Altai Mountains, Philippine Islands; ornithology of Wisconsin.

Hollister, Prof. S(herman) P(reston), Connecticut Agricultural College, Storrs, Conn. *Horticulture*. Medina, Ohio, Feb. 11, 84. Grad., Conn. Col., 05; B.S.A., Cornell, 09. *Asst. hort.*, Conn. Col., 05-07; horticulturist, Hampton Inst., 09-11; *instr. hort.*, Conn. Col., 11-17, *exten. horticulturist*, 16-19, *asst. prof. pomol.*, 17- Soc. Hort. Sci.; Pomol. Soc.; Conn. Pomol. Soc. Variation in length of apple stems.

Hollnagel, Dr. H(erbert) P(ercival), 22 Hampden St., Swampscott, Mass. *Physics*. Dubuque, Iowa, July 10, 82. B.S., Mass. Inst. Tech., 06, M.S., 09; M.A., Berlin, 10, Ph.D., 10. *Asst. physics*, Mass. Inst. Tech., 06-08, *instr.*, 11-16, *asst. prof.*, 16-19; *in charge, dept. physics, Thomson lab.*, Gen. Elec. Co., Lynn, Mass., 20- A.A.; Physical Soc.; Soc. de Physique; Physik. Gesell. Radiation; extreme infra red spectrum; the energy distribution and wave length of the residual

rays; absorption of organic compounds for waves of great length; the unknown region of the electro-magnetic spectrum.

Holloway, T(homas) E(dmunds), Sugar Experiment Station, Audubon Park, New Orleans, La. *Entomology*. Parsons, Kans., Aug. 20, 86. B.S., Tex. Col., 08. Agent and expert, cotton boll-weevil investigations, *bur. entom.*, U. S. Dept. Agr., 09-11, *asst. in charge, lab. sugar cane insect investigations*, 11- A.A.; Ass. Econ. Entom.; Entom. Soc.; Wash. Entom. Soc.; New Orleans Acad. Sugar-cane moth borer.

Holm, Dr. (Herman) Theo(dor), Clinton, Md. **Botany*. Copenhagen, Denmark, Feb. 3, 54. Grad., Copenhagen, 80; Ph.D., 02. Naturalist, Danish North Pole exped., 82-83; Danish exped. to Greenland, 84-86; *asst. botanist*, U. S. Nat. Museum, 88-03; U. S. Dept. Agr., 93-96. Danish, Swedish, French, and Canadian scientific societies. Anatomy and morphology of phanerogams.

Holm, Dr. M(arinus) L(arsen), 303 Tussing Building, Lansing, Mich. *Medicine*. Hobro, Denmark, Dec. 8, 78. Ph.G., Ph.C., Northwestern, 02, M.D., 07. *Instr. pharmacy*, Northwestern, 03, *asst. chem. med. dept.*, 04-06; *chemist*, Chicago Dept. of Health, 06-07; *state bacteriologist*, Mich., 07-15; *director*, Lansing Clin. Lab., 15- Major, M.C., 17-19; *mem.* Board of Educ., Lansing; *staff mem.*, Ingham Co. Tuber. Sanitarium; *lecturer bacter.*, Lansing City Hosp. A.A.; Am. Med. Ass.; Soc. Bact.; Pub. Health. Ass.; Chem. Soc.; Pharmaceut. Ass. Preventive medicine; clinical pathology; formaldehyde fumigation; air infection; water purification; milk analysis and sanitation; diphtheria; tuberculosis.

Holman, M(inard) L(afever), 721 Olive St., St. Louis, Mo. *Mechanical engineering*. Oxford Co., Maine, June 15, 52. C.E., Washington (St. Louis), 74, hon. A.M., 05. Master mechanic and *asst. supt. pub. buildings*, U. S. Treas. Dept., 74-77; *asst. engineer, water dept.*, St. Louis, 77-87; *water commissioner*, 87-99; *gen. supt.*, Mo. Edison Electric Co., 00-05; *consulting mech. engineer*, 05- Mech. Eng. (v. pres, 94-96, 03-05, pres, 07); Civil Eng. (v. pres, 05); Water Works Ass.; St. Louis Eng. Club (pres, 88, 10).

Holman, Prof. Richard M(orris), University of California, Berkeley, Calif. *Plant physiology*. Pittsburgh, Pa., Jan. 9, 86. A.B., Stanford, 07; Leipzig, 12-14; Ph.D., California, 15. *Instr. bot.*, Philippine Nor. Sch., 09-10; Univ. Philippines, 10-12; Michigan, 15-17; *prof.*, Wabash, 17-20; *asst. prof.*, California, 20- Sec'y, Ind. Conservation Commission. A.A.; Bot. Soc.; Ind. Acad.; Mich. Acad.; Bot. Gesell. Root curvatures.

Holman, Prof. Will(iam) F(rank), University of Minnesota, Minneapolis, Minn. *Engineering*. Friend, Nebr., March 6, 83. B.S., Nebraska, 04, A.M., 06; Ph.D., Göttingen, 08. *Instr. physics*, Worcester, 08-09; Minnesota, 09-11, *assoc. prof. math. and mech.*, 11- A.A.; Eng. Educ. Photoelectric effect; piezo electricity.

Holman, Prof. W(illiam) L(udlow), Stanford University, California. *Bacteriology*. Sum-

- merside, P. E. Isl. May 17, 79. B.A., McGill, 03, M.D., C.M., 07. Anesthetist, Royal Victoria Hosp., Montreal, 07-08, asst. path. and bacter., 08-09; research worker, Hopkins, 09-10; hygiene inst., Breslau, 10-11; instr. *bacter.*, Pittsburgh, 11-12, asst. prof., 12-16, assoc. prof., 16-17, prof., 18-20; *acting asst. prof.*, Stanford, 20- Asst. bacter., Walton Goelet Research Lab., Paris, 16-17. A.A.; Soc. Bact.; Ass. Path. and Bact.; Soc. Exp. Biol.; Pub. Health Ass. Anaerobic bacteria; bacteriology of soot; spontaneous infection in guinea pigs; Streptococci; bacteriological media.
- Holmes, Pres. Arthur**, Drake University, Des Moines, Iowa. *Psychology, Philosophy*. Cincinnati, Ohio, May 5, 72. A.B. Hiram, 99; fellow, Pennsylvania, 04-05, Ph.D., 08. Instr. psychol., Pennsylvania, 08-10, asst. prof., 10-12; dean, gen. faculty, Pa. State, 12-18; *pres.*, Drake, 18- Psychol. Ass. German idealism; abnormal psychology.
- Holmes, Dr. Arthur D(unham)**, Westminster Station, Vt. *Chemistry*. Walpole, N. H., July 19, 84. B.S., Dartmouth, 06; Ph.D., Hopkins, 11. Asst. chem., Dartmouth, 05-06; instr., Maine, 07; Mass. Col., 07-08; asst., Hopkins, 09-11; instr., Ga. Sch. Tech., 11; scientific asst., U. S. Dept. Agr., 11-18; *research chemist*, E. I. duPont de Nemours and Co., 18- Intermediates; azo dyes; nutrition; metabolism.
- Holmes, Fletcher B(each)**, P. O. Box 525, Wilmington, Del. *Chemistry*. Melrose, Mass., Jan. 13, 77. A.B., Harvard, 02. Asst. director, east lab., E. I. duPont de Nemours and Co., 04-17, *director*, Jackson Lab., 17- Chem. Soc.; Soc. Chem. Indust.; Chem. Eng.; Electrochem. Soc.; British Soc. Dyers and Colorists. High explosives; dyes and intermediates.
- Holmes, Prof. Harry N(icholls)**, Oberlin College, Oberlin, Ohio. **Chemistry*. Fay, Pa., July 10, 79. B.S., Westminster (Pa.), 99, M.S., 07; Ph.D., Hopkins, 07. Asst. chem., Hopkins, 06-07; prof., Earlham, 07-14; *prof. and head of dept.*, Oberlin, 14- Chairman, committee on colloid chem., Nat. Research Council, 19, 20. Chem. Soc. (sec'y, div. physical and inorg. chem., 19, chairman, 20). Soaps and colloid chemistry.
- Holmes, Dr. James Eugene Levering**, 133 Washington Ave., Newark, N. J. *Chemistry*. A.B., Hopkins, 12, Ph.D., 15. *Research chemist*, Gibbs Preserving Co., 15; E. I. duPont de Nemours and Co., 15- Chem. Soc. Pyroxylin plastics; smokeless powder; celluloid; ether and alcohol recovery.
- Holmes, Prof. Mary Elisabeth**, 52 Nameang Ave., New London, Conn. *Chemistry*. Mystic, Conn., Dec. 28, 70. A.B., Wellesley, 92; Ph.D., Pennsylvania, 08. Instr. chem., Mt. Holyoke, 98-04, assoc. prof., 04-07; *prof.*, Conn. Col. for Women, 17- A.A.; Chem. Soc.; Ass. Prof.; New Eng. Ass. Chem. Teachers. Electrodeposition of metals.
- Holmes, Prof. S(amuel) J(ackson)**, University of California, Berkeley, Calif. **Zoology, Genetics*. Henry, Ill., March 7, 68. B.S., California, 93, M.S., 94; Ph.D., Chicago, 97. Teacher, high sch., San Diego, Calif., 98-99; instr. *zool.*, Michigan, 99-05; asst. prof., Wisconsin, 05-11; assoc. prof., California, 11-16, *prof.*, 16- Instr. embryol., Woods Hole. A.A.; Soc. Nat.; Soc. Exp. Biol.; Soc. Zool.; Psychol. Ass.; Ecol. Soc.; West. Soc. Nat.; Calif. Acad.; Wis. Acad. Comparative psychology; Crustacea; embryology of Mollusca; animal behavior; heredity; eugenics.
- Holmes, Prof. W(illiam) H(enry)**, 1454 Belmont St., Washington, D. C. **Anthropology*. Harrison Co., Ohio, Dec. 1, 46. A.B., McNeely Nor. Col., Ohio, 70; B.S., George Washington, 18. Instr. physical geog. and nat. hist., McNeely Nor. Col., 71; asst., U. S. Geol. Surv. of Territories, 72, asst. geologist, 75-79; U. S. Geol. Surv., 80-88; archeologist, Bur. Am. Ethnol., 88-94; curator, dept. anthrop., Field Columbian Museum, 94-97; prof. anthropic geol., Chicago, 94-97; head curator, dept. anthrop., U. S. Nat. Museum, 97-02; chief, Bur. Am. Ethnol., 02-10; hon. curator, div. prehist. archeol., U. S. Nat. Museum, 03-10, head curator anthrop., 10- In charge, govt. exhibits, Centennial Expos, 76; Columbian, 93; Omaha, 98; Pan-Am, 00; Charleston, 01; La. Purchase, 04; director, Nat. Gallery of Art, 08. Loubat prize, 98. Int. Cong. Americanists (v. pres, 04-); U. S. delegate Pan-Am. Sci. Cong., Santiago, Chile, 08-09. Nat. Acad.; A.A. (sec'y, H, 91, v. pres, 92, 09); Anthropol. Ass. (v. pres, 02-09, pres, 09); Nat. Geog. Soc.; Philos. Soc.; Wash. Acad. (v. pres, 00-02); Wash. Anthropol. Soc. (pres, 00-02, v. pres, 07). Geology; archeology; ethnology; art.
- Holmes, Dr. Willis B(oit)**, 1337 Buckland Ave., Fremont, Ohio. *Chemistry*. Cambridge, Mass., Sept. 27, 73. A.B., Harvard, 96, A.M., 97; Ph.D., Hopkins, 99. Asst. chem., Harvard, 96-97; instr., Mass. Inst. Tech., 00; asst. instr., Chicago, 00-03, assoc. instr., 03-07; assoc., Illinois, 07-10; *supt. chemist*, Am. Laboratories, 10- Chem. Soc.; Ill. Acad. Isomeric chlorides of orthosulphobenzoic acid; sulphur, calomel, manganese, antimony and tin; dental cements.
- Holt, Prof. Caroline (Maude)**, 35 Irma Ave., Watertown, Mass. *Anatomy*. Hartland, Vt., May 29, 78. A.B., Wellesley, 03; Harvard, 06-07; A.M., Columbia, 08; Pepper fellow, Pennsylvania, 12-14, Ph.D., 15. Asst. zool., Wellesley, 03-07, instr., 08-12; *biol.*, Simmons, 14-17, *asst. prof.*, 17- A.A.; Ass. Anat. Cytology; neurology.
- Holt, Dr. Edwin B(issell)**, Cambridge, Mass. **Psychology*. Winchester, Mass., Aug. 21, 73. A.B., Harvard, 96, Ph.D., 01; A.M., Columbia, 00. Instr. psychol., Harvard, 01-05, asst. prof., 05-18. Phototactic response; visual anesthesia; recurrent vision.
- Holt, Dr. L(uther) Emmett**, 14 W. 55th St., New York, N. Y. **Diseases of children*. Webster, N. Y., March 4, 55. A.B., Rochester, 75, A.M., 78, LL.D., 02; M.D., Columbia, 80, hon. Sc.D., 04; Brown, 14. *Prof. diseases of children*, N. Y. Polyclinic, 93-00; Columbia, 02- Director and sec'y, Rockefeller Inst., 01; physician-in-chief, Babies' Hosp. Emer. mem. Am. Physicians; Pediatr. Soc. (pres, 98); N. Y. Acad. Med.; hon. mem. Children's Clin. Club, London; hon. mem. Gesell. für Kinderheilkunde; cor. mem. Vienna Imp. Med. Soc. Diseases of children.

- Holt, Dr. Norman E(dward)**, Carney's Point, N. J. *Chemistry*. Providence, R. I., May 3, 88. A.B., Brown, 10, M.S., 11, Ph.D., 13. Instr. chem., Brown, 10-15; chemical supt, Nitrogen Products Co, 15-17; capt, ordnance dept, 17-19; *asst. supt. colors dept, dye works, E. I. duPont de Nemours and Co*, 19- A.A.; Chem. Soc. (see'y-treas., R. I. sect., 14, 15). Fixation of atmospheric nitrogen; tribromophenylpropionic acid.
- Holt, Dr. William L(eland)**, University of Tennessee, Knoxville, Tenn. *Medical sociology*. Colorado Springs, Colo., Dec. 20, 78. A.B., Harvard, 01, M.D., 05; Freiburg and Heidelberg, 06-07; Freiburg, 10-13; C.P.H., Harvard Med. Sch. and Mass. Inst. Tech., 14. Austin fellow, Harvard, 05-06; asst. bacteriologist, Fla. State Board of Health, 14-15; health officer, S. Orange, N. J., 15-17; instr. hygiene, Western Reserve, 17-18; health officer, Beloit, Wis., 18-19; dept. health, Los Angeles Co, 19-20; *prof. hygiene and univ. physician, Tennessee*, 20-A.A.; Pub. Health Ass. Venereal peril; bacteria of milk; vital statistics; short methods of correcting death rate.
- Holtz, Frederick L(eopold)**, 52 Spencer Ave, Lynbrook, L. I., N. Y. *Botany, Nature study*. Minneapolis, Minn., Sept. 4, 70. B.S., Minnesota, 92, A.M., 02. Instr. science, high sch., Fergus Falls, Minn., 92-94; Nor. Sch., Mankato, Minn., 94-06; *head, dept. nature study and geog, Maxwell Training Sch. for Teachers*, 06-12, *model sch*, 13- A.A.; Nature Study Soc. (chairman, N. Y. sect.); N. Y. Biol. Teachers Ass. Botany; Pelvetia; nature study.
- Holway, Prof. E(dward) W(illet) D(orrard)**, University of Minnesota, Minneapolis, Minn. *Botany*. Adrian, Mich., Feb. 13, 53. *Asst. prof. bot, Minnesota*, 04- Uredineae.
- Holway, Prof. R(uliff) S(tephen)**, University of California, Berkeley, Calif. *Physiography*. Hesperia, Iowa, May 8, 57. A.B., Stanford, 03; M.S., California, 04. *Prof. physiog, State Nor. Sch., San Jose, Calif.*, 88-02; *California*, 03- Ass. Geog.; Seismol. Soc.; Royal Geog. Soc. London. Physiography of California; stream and ocean terraces as a guide to recent earth movements in California.
- Holzinger, Prof. John M(ichael)**, 716 W. Broadway, Winona, Minn. *Botany*. Hachtel, Germany, May 14, 53. A.B., Olivet, 79, M.S., 87; B.D., Yale, 82. *Instr. nat. hist, Winona Nor. Sch., Minn.*, 82-90, 93- Asst. dept. bot., U. S. Dept. Agr., 90-93; biologist, nat. hist. surv. of Minn., 97-05; state expeditions, Cook Co, 97, upper Minnesota River, 01, Lake Superior, 02. A.A. Mosses of western North America.
- Homberger, Dr. Alfred William**, University of Louisville, Louisville, Ky. *Chemistry*. Prairie du Sac, Wis., May 18, 87. A.B., Wisconsin, 05; fellow, Illinois, 07-08, A.M., 08, research fellow, 09-10, Ph.D., 10; Göttingen, 08-09. Instr. chem., Rose, 05-07; *prof, Illinois Col*, 10-11; Ill. Wesleyan, 11-18; *Louisville*, 18- Chemist, Laclede Gas Co; Oliver Min. Co. Chem. Soc.; Ky. Acad. Quantitative estimation of tellurium; molecular rearrangement in the camphor series; turbidity in beverages containing maltose or glucose; nitrogen in milk; chlorination of acetone; determination of morphin in various tissues of cat and rabbit after injection.
- Honaman, R(ichard) Karl**, American Telephone and Telegraph Co, New York, N. Y. *Electrical engineering*. Lancaster, Pa., Sept. 17, 90. B.S., Franklin and Marshall, 12, M.S., 16. Instr. physics, Franklin and Marshall, 16-17; asst. physicist, Bur. Standards, 17-18, assoc. physicist, 18-19; *development and research dept, Am. Tel. and Tel. Co*, 19- Asst. prof. elec. eng., George Washington, 18-19. A.A.; Physical Soc.; Elec. Eng.; Radio Eng.; Franklin Inst.; Wash. Philos. Soc. Electro-physics; alternating current circuits; insulating materials; gas engine ignition.
- Honan, Dr. Edward M(ark)**, Western Electric Co, 463 West St, New York, N. Y. *Chemistry*. Lebanon, Ind., Sept. 11, 91. A.B., Wabash, 13; Ph.D., Michigan, 17. *Research chemist, Procter and Gamble Co*, 19; *West. Elec. Co*, 19- Chemist, Dow Chem. Co, summer, 17; ordnance dept, U.S.A., 18-19. Chem. Soc.; Electrochem. Soc. Organic chemistry.
- Hood, Prof. G(eorge) W(illiam)**, 2738 Garfield Boulevard, Lincoln, Nebr. *Horticulture*. Lancaster, Ohio, July 30, 86. B.S., Ohio State, 10, M.S., 14. Instr. hort., Ohio State, 07-09; asst., U. S. Dept. Agr., 10-11; instr. hort., Mich. Agr. Col., 11-13; *assoc. prof, Nebraska*, 13- A.A.; Soc. Hort. Sci.; Mich. Acad.; Ohio Acad.; Nebr. Acad.; Nebr. Hort. Soc. Inheritance; hybridization; olericulture; pomology.
- Hood, Prof. O(zni) P(orter)**, 1831 Irving St, Washington, D. C. *Mechanical engineering*. Lowell, Mass., June 14, 65. Worcester, 82-83; B.S., Rose, 85, M.S., 95, M.E., 98. Prof. mech. eng., Kansas State, 86-98; mech. and elec. eng., Mich. Col. Mines, 98-11; *chief mech. engineer, U. S. Bur. Mines*, 11- Consulting engineer. A.A.; Mech. Eng.; Min. Eng.; Eng. Educ. Fuels and mining machinery.
- Hoogewerff, Real Admiral J(ohn) A(drian)**, U.S.N., U. S. Naval Observatory, Washington, D. C. *Astronomy*. Howard Co, Md., Nov. 27, 60. Grad., U. S. Naval Acad., 81. Asst. to Prof. Asaph Hall, Sr, *U. S. Naval Observatory*, 83-85, in charge magnetic observations, 89-92, *supt*, 14-17, 19-
- Hooker, A(lbert) H(untington)**, Hooker Electrochemical Co, Niagara Falls, N. Y. *Chemistry*. Rochester, N. Y., Nov. 25, 65. Rochester, hon. M.S.; 20; Mass. Inst. Tech. Chemist, Dighton Color Works, 89-90; Cary-Ogden Co, 90-91; supt, Opaque Shade Cloth Co, 92-93; chief chemist, Heath and Milligan Mfg. Co, 94-06; works manager, *Hooker Electrochem. Co*, 06-11, *tech. director*, 11- V. chairman, N. Y. State board for licensing engineers. A.A.; Chem. Soc.; Chem. Eng. (director); Electrochem. Soc. (chairman, Niagara Falls sect); Soc. Chem. Indust.; Soc. Test. Mat.; N. Y. Chemists Club; Buffalo Eng. Soc. (director); Faraday Soc.; Soc. de Chim. indust. Chemical technology; paints and pigments; chlorine and electrolytic alkali manufacture.
- Hooker, Dr. Davenport**, University of Pittsburgh, Pittsburgh, Pa. *Embryology*. Brooklyn, N. Y., May 13, 87. A.B., Yale, 08, fellow, 08-09, A.M.,

- 09, Ph.D, 12; Bonn, 11-12; Naples Zool. Sta, 12. Instr. anat, Yale, 09-14; asst. prof. histol, Pittsburgh, 14-15; anat, Yale, 15-19; *prof, Pittsburgh, 19-* A.A; Ass. Anat; Soc. Zool; Soc. Exp. Biol; Conn. Acad. Microscopic anatomy; nerve growth and regeneration; muscle development in absence of nerves; pigment cells; internal secretion; hermaphroditism.
- Hooker, Dr. D(onald) R(ussell)**, Upland, Roland Park, Md. **Physiology*. New Haven, Conn, Sept. 7, 76. A.B, Yale, 99, M.S, 01; M.D, Hopkins, 05. Asst. *physiol, Hopkins, 06-07*, instr, 07-08, *assoc, 08-10, assoc. prof, 10-* A.A; *Physiol. Soc. (managing ed, 'Am. Jour. Physiol')*; Soc. Pharmacol.
- Hooker, Prof. H(enrietta) E(dgecomb)**, South Hadley, Mass. **Botany*. Gardiner, Maine, Dec. 12, 51. Mt. Holyoke; Ph.D, Syracuse, 89; Woods Hole; Mass. Inst. Tech; Berlin. Teacher pub. schools, 69-70; Acad, W. Charleston, Vt, 70-71; *prof. bot, Mt. Holyoke, 73-08*; *emer. prof, 08-* A.A; Torrey Bot. Club; Int. Ass. Bot. Botany; historical sketches of Mt. Holyoke College; morphology and embryology of Cuscuta.
- Hooker, Prof. Henry D(aggett), Jr**, University of Missouri, Columbia, Mo. *Botany*. Brooklyn, N. Y, Jan. 25, 92. A.B, Yale, 12, fellow, 12-15, *bot, Yale, 14-15*, instr, 15-18; asst. physiologist, U. S. Bur. Mines, 17-18; lieut, C.W.S, 18; asst. *prof. hort, Missouri, 19-20, assoc. prof, 20-* A.A; Bot. Soc; Chem. Soc; Soc. Hort. Sci. Plant nutrition and behavior.
- Hooker, Dr. M(arian) O(sgood)**, 519 California St, San Francisco, Calif. *Experimental medicine*. San Francisco, July, 75. M.D, California, 10; Cincinnati, 13. Intern, univ. hosp, California, 10-11, asst. med. examiner, infirmary, 12-13; research scholar, *physiol. lab, Cincinnati, 16-18*. Lecturer *physiol, Cincinnati Gen. Hosp. Training Sch. for Nurses, 16-18*; *assoc. ed, 'Lancet-Clinic,' 16-18*. A.A; Am. Med. Ass. Water absorption by nerve tissue; the physical chemistry of emulsions; fats and fatty degeneration.
- Hooker, Dr. Samuel C(ox)**, 82 Remsen St, Brooklyn, N. Y. *Chemistry*. Brenchley, England, April, 64. Nor. Sch. of Science and Royal Sch. of Mines, London, 81-84; Ph.D, Munich, 85. Chemist and tech. expert, Franklin Sugar Ref, Phila, 85-92; *Am. Sugar Ref. Co, N. J, and allied companies, 92-15, org. chemist, 15-* Chemist, Platinotype Co, London, 83; mem. jury awards, Nat. Export Expos, 99. Chem. Soc; Franklin Inst; London Chem. Soc; Chem. Gesell. Organic chemistry; lapachol and its derivatives; conversion of ortho- into para- and para- into ortho-quinone derivatives; manufacture and refining of sugar; lomatiol; hydroxynaphtha quinone.
- Hooker, Dr. W(illiam) A(nson)**, U. S. Department of Agriculture, Washington, D. C. *Agriculture*. Westhampton, Mass, Aug. 13, 77. B.S, Mass. Col, and Boston, 99; D.V.M, George Washington, 13; LL.B, National Univ, 20. Special field agent, bur. entom, U. S. Dept. Agr, 04-08, *entom. and vet. ed, 'Exp. Sta. Record,' 08-* Contributor on entom. and vet. med, 'Am. Year Book' and 'Int. Enc.' A.A; Ass. Econ. Entom; Wash. Entom. Soc. Economic entomology; Thysanoptera; Ixodoidea; biology of the Ixodoidea; Bibionidae.
- Hooper, Dr. Charles Warren**, Hygienic Laboratory, U. S. Public Health Service, Washington, D. C. *Medicine*. Great Bend, Kans, 90. A.B, Kansas, 11, M.D, Hopkins, 14. Asst. prof. research med, Hooper Foundation for Med. Research, California, 14-18; *path. physiologist, hygienic lab, U. S. Pub. Health Service, 18-* A.A; *Physiol. Soc; Soc. Exp. Biol; Am. Med. Ass; San Francisco Acad. Med. Blood and pigment metabolism; sugar and bile acid metabolism; industrial poisons; salvarsan and allied drugs.*
- Hooper, Dr. Everett (Dennison)**, Warren Chambers, Boston, Mass. *Chemistry*. Riversdale, Mass, Sept. 16, 68. A.M, Tufts, 88; M.D, Col. Physicians and Surg, Boston, 91; Ph.D, Harvard, 05. *Prof. chem, Col. Physicians and Surg, Boston, 93-* Instr. chem, tech. dept, Tufts, 97; asst. surgeon, U.S.A, 98; mem. Mass. Board of Health. A.A; Chem. Soc. Clinical technique; albumen compounds.
- Hooper, Prof. John Julian**, University of Kentucky, Lexington, Ky. *Animal husbandry*. Colorado, Tex, March 16, 83. B.S, Tex. Col, 01; M.S, Iowa State, 07. Asst. prof. agr, *Kentucky, 07-09, prof. animal husbandry and husbandman, Exp. Sta, 09-* Director, breeding bur, Ky. State Racing Commission; dairy ed, 'Inland Farmer.' A.A; Soc. Animal Production; Dairy Sci. Ass; Ky. Acad. Animal feeding and breeding; inheritance of Jersey coat colors; estimating milk production; Jack stock in Kentucky; milking machine; stock judging.
- Hooton, Dr. E(arne)st A(lbert)**, Peabody Museum, Cambridge, Mass. *Anthropology*. Clemons-ville, Wis, Nov. 20, 87. A.B, Lawrence, 07; A.M, Wisconsin, 08, Ph.D, 11; Rhodes scholar, Oxford, 10-13, B.Litt, 13. *Instr. anthrop, Harvard and curator somatol, Peabody Museum, 13-* Mem. exped. to Canary Islands, 15. *Anthrop. Ass; Folk-lore Soc; hon. mem. Am. Acad. Dental Sci; Royal Anthropol. Inst; Galton Soc. Physical anthropology; African ethnology and archeology.*
- Hoover, Dr. C(harles) F(ranklin)**, 1903 E. 75th St, Cleveland, Ohio. *Medicine*. Miamisburg, Ohio, Aug. 2, 65. A.B, Harvard, 87, M.D. 92. *Prof. med, Western Reserve, 07-* Chief, dept. med, Lakeside Hosp, Cleveland. Am. Physicians; Am. Med. Ass. Internal medicine; physical diagnosis; cardio-respiratory, neurological and hepatic diseases.
- Hoover, Charles P(otter)**, Water Purification Works, Columbus, Ohio. *Chemistry*. Ross, Ohio, June 20, 84. A.B, Ohio State, 08. Asst. chemist, bur. plant indust, U. S. Dept. Agr, 06-07; *chemist in charge, water works dept, Columbus, Ohio, 08-* Chem. Soc; Water Works Ass; Pub. Health Ass; Columbus Eng. Club. Water purification and softening; coagulation of water.
- Hoover, Prof. C(harles) R(uglas)**, 151 Mt. Vernon St, Middletown, Conn. *Chemistry*. Oskaloosa, Iowa, Sept. 30, 85. Ph.B, Penn (Iowa), 06; B.S, Haverford, 07, A.M, 08; Carnegie fellow, Harvard, 12-13, Ph.D, 15. *Prof. chem, Penn*

- (Iowa), 09-10; assoc. prof., Syracuse, 13-15; *Wesleyan*, 15-18, *prof.*, 18- Chemist and consulting chemist, C.W.S., 17-19. A.A.; Chem. Soc. (councilor, 19, pres, Conn. Valley sect). Atomic weights; gas analysis; tobacco smoke.
- Hoover, Secretary Herbert (Clark)**, Washington, D. C. *Mining engineering*. West Branch, Iowa, Aug. 10, 74. B.S., Stanford, 95, LL.D., Harvard; Princeton; Brown; Pennsylvania; Oberlin; Yale; Alabama; Liège; Brussels; D.C.L., Oxford. Consulting and managing engineer, mining, metal, and railway operations in U. S., Mex., China, Australia, Africa and India, 95-14; chairman, Commission for Relief in Belgium, 14-19; *director gen., European Relief*, 18-; *Am. Relief Administration*, 19-; *sec'y of commerce*, U. S., 21- Mining.
- Hoover, Theodore J(esse)**, 450 Melville Ave., Palo Alto, Calif. *Mining, Metallurgy*. West Branch, Iowa, Jan. 28, 71. A.B., Stanford, 01. Consulting engineer; manager and director, numerous concerns; *prof. mining and metal*, Stanford, 19-A.A.; Min. Eng.; Min. and Metal. Inst.; Cooper Ornith. Club; N. Y. Eng. Club; fel. Royal Zool. Soc.; London Inst. Min. and Metal; Soc. Belge des Ing. et des Ind. Concentrating ores by flotation.
- Hopewell-Smith, Prof. A(rthur)**, University of Pennsylvania, Philadelphia, Pa. *Anatomy*. Boston, England, May, 65. L.R.C.P., M.R.C.S., London, 91; Sc.D., Pennsylvania, 19. *Prof. comp. odontol.; dental histol. and path.*, Pennsylvania, 14- Tomes prize, Royal Col. Surg. Ass. Anat.; hon. mem. Soc. odont. de France. Comparative odontology, histology and pathology of the mouth; dental anatomy and microscopv.
- Hopfield, J(ohn) J(oseph)**, 1135 Walnut St., Berkeley, Calif. *Physics*. Russia, July 8, 91. A.B., Syracuse, 17, fellow, 17-18. Instr. *physics*, Syracuse, 18-20; *research fellow, California*, 20- Physical Soc. Absorption spectra of indicators.
- Hopkins, Dr. A(ndrew) D(elmar)**, U. S. Department of Agriculture, Washington, D. C. *Forest entomology*. Jackson Co., W. Va., Aug. 20, 57. Hon. Ph.D., West Virginia, 93. Special agent entomol., W. Va. Exp. Sta., 90-91, entomologist, 91-02; *prof. econ. entom.*, West Virginia, 96-02; v. director, W. Va. Exp. Sta., 97-02; *special agent, expert and entomologist in charge of forest insect investigations, bur. entom.*, U. S. Dept. Agr., 02- Lecturer forest entom., forest sch., Yale, 02- A.A.; Ass. Econ. Entom. (v. pres, 01, pres, 02); Entom. Soc. (v. pres, 08); Wash. Acad. (v. pres, 07, 20); Wash. Entom. Soc. (v. pres, 05, pres, 07); Wash. Biol. Soc. (v. pres, 15, pres, 20); hon. mem. Soc. Econ. Biol. England. Forest insects; Scolytidae of the world; the bioclimatic law.
- Hopkins, Prof. Arthur John**, Amherst, Mass. *Chemistry*. Bridgewater, Mass., Sept. 20, 64. A.B., Amherst, 85; fellow, Hopkins, 92, Ph.D., 93. Teacher, Mass. pub. schools, 85-88; science, Peekskill Mil. Acad., N. Y., 88-90; *prof. chem.*, Westminster (Pa.), 92-94; *asst. prof.*, Amherst, 94-95, *assoc. prof.*, 95-07, *prof.*, 07-A.A.; Chem. Soc.; Johns Hopkins Chem. Soc. (first pres). Bronzing methods in alchemistic Leyden papyrus; a dissolver; a chemical balance; control of size of crystals; action of manganese dioxid on potassium permanganate; valence, position-number and specific gravity; arrangement of the periodic table; history of alchemy; preparation of standard solution by direct dilution; thermostat for a laboratory; instrument for calibration; amorphous arsenic; ammonia in water analysis.
- Hopkins, Prof. B. Smith**, 706 W. California St., Urbana, Ill. *Chemistry*. Owosso, Mich., Sept. 1, 73. A.B., Albion, 96, A.M., 97; Ph.D., Hopkins, 06. *Prof. chem.*, Nebr. Wesleyan, 06-09; Carroll, 09-12; instr., Illinois, 12-14, *assoc.*, 14-17, *asst. prof.*, 17-19, *assoc. prof.*, 20- A.A.; Chem. Soc. (chairman, Ill. sect, 19-). Osmotic pressure; rare earths; atomic weights of yttrium, erbium and dysprosium.
- Hopkins, Edwin F(raser)**, University of Missouri, Columbia, Mo. *Plant pathology*. Buffalo, N. Y., Nov. 30, 91. B.S., Cornell, 15, Ph.D., 20; Wisconsin, 17. *Asst. agr. chem.*, Cornell, 14-15, instr. plant path., 15-18; *assoc. pathologist*, Ala. Exp. Sta., 19-20; *plant pathologist and asst. prof. bot.*, Missouri, 20- Phytopath. Soc. Chemistry; enzymes.
- Hopkins, Dr. G(rant) S(herman)**, Ithaca, N. Y. *Anatomy*. Westfield, N. Y. B.S., Cornell, 89, Sc.D., 93; D.V.M., N. Y. State Vet. Col., 00. Instr. histol. and embryol., Cornell, 89-96, *asst. prof. anat. methods and comp. vet. anat.*, 96-03, *prof. vet. anat.*, 03- A.A.; Ass. Anat.; N. Y. State Vet. Med. Soc. Comparative and veterinary anatomy.
- Hopkins, Dr. J(oseph) Gardner**, 40 E. 83rd St., New York, N. Y. *Bacteriology*. Brooklyn, N. Y., June 30, 82. A.B., Columbia, 02; M.D., Hopkins, 07. *Asst. prof. bacter.*, Columbia, 15-17. Ass. Path. and Bact.; Soc. Exp. Biol. Dermatology; syphilis.
- Hopkins, Prof. Louis A(llen)**, 1517 S. University Ave., Ann Arbor, Mich. *Mathematics*. Danville, Ind., May 9, 81. A.B., Butler, 05; M.S., Chicago, 06, Ph.D., 15. Instr. and later *asst. prof. math.*, Michigan, 06- Math. Soc.; Astron. Soc. Celestial mechanics.
- Hopkins, Dr. Marion B(yrd)**, Baltimore City Health Department, Baltimore, Md. *Chemistry*. West River, Md., June 24, 89. A.B., Hopkins, 12, Ph.D., 15. Research asst., Hopkins, 14-15; *chemist and bur. chief*, Baltimore City Health Dept., 15- Chem. Soc. Sulphonic acid derivatives; milk.
- Hopkins, Dr. Nevil Monroe**, 2128 Bancroft Place, Washington, D. C. *Chemistry, Physics*. Portland, Maine, Sept. 15, 73. B.S., George Washington, 99, M.S., 00, Ph.D., 02; Harvard, 01. *Asst. chem.*, George Washington, 99-00, instr. and later *asst. prof.*, 00-; *mem. firm, Monroe, Hall and Hopkins; consulting engineer*. Elec. course, Gen. Elec. Co., Schenectady, N. Y.; elec. engineer, in charge power plant consolidation, U. S. Navy Yards and Naval Stations; in charge, div. elec. and mech. science, Inst. Indust. Research; v. pres. and consulting engineer, Elec. Tachometer Corp.; expert aid, gun div., ordnance dept., U.S.A.; consulting engineer, Union Carbide and Carbon Corp.; editorial representative, 'Elec. Eng.' John Scott medal, Franklin Inst., 00. A.A.; Chem. Soc.; Elec. Eng.; Electrochem. Soc.;

- Chem. Eng; Mech. Eng. Electrochemistry; precision measurements of speed through electrical agencies; dynamometer for internal combustion engines based on thermoelectric phenomena; equipments for new inventions and processes.
- Hopkins, Dr. Oliver B(aker)**, U. S. Geological Survey, Washington, D. C. *Geology*. Penn Laird, Va, Dec. 4, 86. A.B. Hopkins, 09, Ph.D, 12. Junior geologist, U. S. Geol. Surv, 11-12; asst. state geologist, Ga, 12-14; asst. geologist, U. S. Geol. Surv, 14-20, *geologist*, 20- Mineralogy; physical chemistry; coal flora of Maryland; asbestos, talc, soapstone and slate deposits of Georgia; coal deposits of Wyoming and Colorado; oil and gas of the coastal plain of Louisiana.
- Hopkins, Prof. Sam(ue)l A(ugustus)**, 400 Marlboro St, Boston, Mass. *Bacteriology*. Jersey City, N. J, Sept. 12, 58. Grinnell; M.D, Columbia, 80; D.D.S, N. Y. Col. Dentistry, 82. *Prof. theory and practise of dentistry*, Tufts, 02- A.A.; Ass. Path. and Bact; Boston Soc. Med. Sci. Bacteriology of the mouth; saliva changes.
- Hopkins, Prof. T(homas) C(ramer)**, Syracuse University, Syracuse, N. Y. *Geology*. Center Co, Pa, May 4, 61. B.S, DePauw, 87; A.M, Stanford, 92; Ph.D, Chicago, 00. Asst. prof. *geol*, Pa. State, 96-99; *prof*, Syracuse, 00- Asst. geologist, Ark. Geol. Surv, 89-92; Ind. Geol. Surv, 95, 96, 01. A.A.; Geol. Soc; Rochester Acad. Building stones, clays, and iron ores.
- Hopper, Prof. H(erbert) A(ndrew)**, Cornell University, Ithaca, N. Y. *Animal husbandry*. Ithaca, June 10, 79. B.S.A, Cornell, 03; M.S, Illinois, 07. Instr. dairy husbandry, Illinois, 03-07; director, dairy exten, Purdue, 07-08; asst. prof. dairy husbandry, California, 08-11; *prof. animal husbandry*, Cornell, 13- Dairying.
- Hopper, W(alter) E(verett)**, Brazos River Oil Corporation, Shreveport, La. *Geology*. Newark, N. J, Sept. 20, 86. A.B, Cornell, 08, A.M, 10. Asst. instr. geol, Cornell, 08; asst. geologist, La. Geol. Surv, 08-09; field asst, U. S. Geol. Surv, 09; instr. geol, Cornell, 10; Wisconsin, 10-12; Mich. Col. Mines, 12-14, asst. prof, 14-18; bur. research, W. T. B., 18-19; *geologist*, Brazos River Oil Corp, 19- Geologist, Mich. Geol. Surv, 14-; asst. ed, 'Mining and Scientific Press,' 14-15. A.A.; Min. Eng; Ass Petrol. Geol. Economic geology; petroleum; natural gas.
- Hore, Reginald E(dwin)**, C. P. R. Building, Toronto, Can. *Geology*. Hamilton, Ont, Sept. 29, 81. B.A, Toronto, 05. Instr. petrog, Michigan, 07-08; lecturer geol, Sch. Mining, Kingston, Ont, 08-09; instr. petrog, Mich. Col. Mines, 09-13; ed, 'Can. Min. Jour,' 13-19, *consulting ed*, 19-; *consulting geologist*, 19- A.A.; Chem. Soc; Min. Eng; Can. Min. Inst. Economic geology; cobalt-silver deposits of Nipissing, Ont; general geology, chiefly pre-Cambrian, of the Nipissing district and of northern Michigan.
- Hormell, Prof. Will(iam) G(arfield)**, Ohio Wesleyan University, Delaware, Ohio. *Physics*. Oakland, Ohio, July 19, 61. B.S, Ohio Nor. Sch, 80; A.B, Ohio Wesleyan, 89, B.S, 90, Ph.D, 94; A.M, Harvard, 92, 92-93, 00-01. Teacher, pub. sch, 80-83; instr. math. and physics, Ohio Wesleyan, 89-91; asst. *physics*, Harvard, 92-93; *prof*, Ohio Wesleyan, 94-; *dean of men*, 09- A.A.; Eng. Educ. Dielectric constant of paraffins for short electric waves.
- Horn, Dr. David Wilbur**, Bryn Mawr, Pa. *Chemistry*. Carlisle, Pa, May 7, 77. A.B, Dickinson, 97, A.M, 98; Ph.D, Hopkins, 00. Asst. chem, Hopkins, 00-01; assoc, Bryn Mawr, 01-04, assoc. prof, 04-07; *consulting chemist*. Lecturer hygiene, Hahnemann Med. Col; chem, Wagner Inst. A.A.; Chem. Soc. (v. chairman, Phila. sect, 03, chairman, 04, 05, counselor, 08); Phila. Acad; Del. Co. Inst. Sci; Royal Soc. Arts. Boric acid; osmotic membranes by electrolysis; calorimetry; copper ammonia compounds; transition temperatures; solubility curve of borax; terminal fumigation.
- Hornaday, Dr. William T(emple)**, Zoological Park, New York, N. Y. **Zoology*, *Zoological park administration*. Plainfield, Ind, Dec. 1, 54. Iowa State, 74; hon. Sc.D, Pittsburgh, 06; hon. A.M, Yale, 17. Collecting naturalist, Ward's Nat. Sci. Establishment, 75-79; chief taxidermist, U. S. Nat. Museum, 82-90; supt, Nat. Zool. Park, 89-90; *director*, N. Y. Zool. Park, 96- Trustee, permanent wild life protection fund, 13- Three medals, Soc. Am. Taxidermists; gold medal, Camp-Fire Club; Royal Soc. Protection Birds, England; Royal Zool. Soc, Antwerp; grand medal, hon. class, Soc. d'acclimat. de France; Order of the Crown, Belgium, 19. Am. Bison Soc. (pres, 07); N. Am. Fish and Game Protect. Ass; patron and fel. N. Y. Zool. Soc; fel. N. Y. Acad; hon. mem. Phila. Zool. Soc; cor. mem. London and Dublin Zool. Societies; hon. mem. Soc. Preserv. Fauna British Empire. Protection of wild life; the American bison; quadrupeds of North America; mountain sheep of North America; destruction of bird life; acclimation of mammals in North America; methods for introduction of natural history studies into grammar, high and normal schools.
- Hornbeck, Prof. J(ohn) W(esley)**, Carleton College, Northfield, Minn. *Physics*. Exeter, Ill, May 21, 81. B.S, Ill. Wesleyan, 06; A.M, Illinois, 09, Ph.D, 13. Principal schools, Summer Hill, Ill, 04-05; instr. math, Park Col. Acad, 06-08; asst. *physics*, Illinois, 09-10; Cornell, 10-11; instr, Illinois, 11-13; *asst. prof*, Carleton, 13- Physical Soc. Thermal and electrical conductivities of the alkali metals.
- Horne, Dr. W(illiam) D(odge)**, 175 Park Ave, Yonkers, N. Y. *Chemistry*. Williamsburg, N. Y, Jan. 25, 65. Ph.B, Columbia, 86, Ph.D, 94. *Chemist*, various sugar refining companies, 86- Instr. chem, Columbia, 87; Rutgers, 89; consulting chemist and bacteriologist to various companies and boards; assoc. ed, 'Jour. Indust. and Eng. Chem.' 08- Silver medal, Ass. Chim. de Sue. et de Dist. de France; pres, sugar sect, Eighth Int. Cong. Applied Chem, 12. Chem. Soc; Soc. Chem. Indust; Ass. Chim. de Sue. et de Dist. de France. Sugar manufacturing and refining.
- Horne, Prof. W(illiam) T(itus)**, University of California, Berkeley, Calif. *Vegetable pathology*. Kankakee, Ill, Nov. 8, 76. B.S, Nebraska, 98; fellow, Columbia, 03-04. Instr. bot, Nebr. Wesleyan, 98-00; sch. agr, Nebraska, 99-00;

- asst. pathologist, Estacion Cent. Agron, Cuba, 04-07, chief, plant path, 07-09; *asst. prof. plant path, California*, 09-14, *assoc. prof.*, 14- A.A.; *Phytopath. Soc.* (past sec'y, Pacific div); Torrey Bot. Club. Diseases of tropical plants; olive knot; root rot of trees.
- Hornor, Dr. Albert A (urelius)**, 86 Bay State Road, Boston, Mass. *Medicine*. Helena, Ark, Sept. 15, 86. A.B, Virginia, 07; M.D, Harvard, 11. Asst. med, Harvard Med. Sch, 14-17. A.A. Internal medicine; pertussis; typhoid fever; diabetes mellitus.
- Horsch, Dr. W(illiam) G(renville)**, 17 Bartlett Ave, Waverly, Mass. *Physical chemistry*. Newburyport, Mass, April 28, 90. B.S, Mass. Inst. Tech, 13; M.S, California, 16, Ph.D, 17. Asst. and teaching fellow chem, California, 15-17; electrochemist, U. S. Bur. Mines, 18; *research assoc. applied chem, Mass. Inst. Tech.*, 19- A.A.; Chem. Soc.; Electrochem. Soc. Electrochemistry; electrode potentials.
- Horsford, Miss Cornelia (Conway Felton)**, Sylvester Manor, Shelter Island, N. Y. *Archeology*. Cambridge, Mass, Sept. 25, 61. Private schools. Pres, Shelter Isl. Pub. Library. A.A.; Folk-lore Soc; Irish Texts Soc; Icelandic Antiq. Soc; Prince Hist. Soc; London Viking Club (hon. v. pres). Norse archeology.
- Horsley, Dr. J(ohn) Shelton**, 617 W. Grace St, Richmond, Va. *Surgery*. Lovingsston, Va, Nov. 24, 70. M.D, Virginia, 92. Prof. surg, Virginia, 03-13; *surgeon in charge, St. Elizabeth's Hosp*, 12- Gold medal, S. Med. Ass, 16. A.A.; Am. Med. Ass; S. Surg. and Gyneec. Soc; Richmond Acad. Med. and Surg. (pres, 13). Reversed circulation of the blood; surgery of the intestines.
- Horton, G(eorge) D(iack)**, 95 Madison Ave, New York, N. Y. *Bacteriology*. Brooklyn, N. Y, Sept. 30, 87. B.S, Conn. Col, 11; M.S, Yale, 13. Instr. bacter, Oregon Col, 13; *with agr. div, Hanff-Metager, Inc.* A.A. Intestinal bacteriology; poultry diseases.
- Horton, Dr. Goldie Printis**, 504 W. 32d St, Austin, Tex. *Mathematics*. Athens, Tex, Sept. 4, 87. A.B, Texas, 08, fellow, Smith, 09-10, A.M, 10; fellow, Bryn Mawr, 12-13; Ph.D, Texas, 16. Teacher math, high sch, 08-09, 10-12; tutor *pure math, Texas*, 13-17, *instr.*, 17- Math. Soc. Analysis.
- Horton, Robert E(lmer)**, Voorheesville, N. Y. *Civil engineering*. Parma, Mich, May 18, 75. B.S, Albion, 97. Dist. engineer, U. S. Geol. Surv, 00-05; res. engineer, N. Y. State Barge Canal, 06-11; *hydraulic expert, N. Y. State Dept. Pub. Works*, 11- Lecturer hydraulic eng, Michigan, 14. Civil Eng; Meteorol. Soc. (treas); Water Works Ass; Am. Geog. Soc; New Eng. Water Works Ass; British Inst. Civil Eng; Royal Meteor. Soc. Hydrology; meteorology; rainfall; evaporation; stream drainage basins; underground waters; floods.
- Hortvet, Julius**, Old Capitol, St. Paul, Minn. *Chemistry*. Baraboo, Wis, April 24, 63. B.S, Wisconsin, 86; Minnesota, 92. Principal, Sacred Heart Sch, Minn, 88; city supt. schools, Red Lake Falls, Minn, 89-91; teacher physics and chem, E. High Sch, Minneapolis, 92-00; *state chemist, Dairy and Food Dept, Minn.*, 00- A.A.; Chem. Soc; Agr. Chem; Royal Soc. Arts. Mem. joint committee, food and drug definitions, U. S. Dept. Agr. Chemical composition of maple syrup and sugar and methods of analysis; determination of total, fixed and volatile acids in wines; essential oil and alcohol in flavoring extracts; tomato catsup; malt and malt tonics; cryoscopy of milk; new model cryoscope; fat in butter.
- Horwood, Murray P(hilip)**, Massachusetts Institute of Technology, Cambridge, Mass. *Public health*. New York, N. Y, Dec. 31, 92. B.S, Col. City of N. Y, 13; M.S, Mass. Inst. Tech, 16. Chemist and bacteriologist, Brooklyn Sewage Exp. Sta, 13-15; *instr. biol. and pub. health, Mass. Inst. Tech.*, 16-; Wellesley, 17-18; *Boston*, 19- Ed. asst, 'Jour. Pub. Health,' 17-; director, Okla. Pub. Health Surveys, 18, 19; Glen Ridge Pub. Health Surv, summer, 16. A.A.; Pub. Health Ass; Boston Soc. Bact. Public health surveys; sewage disposal.
- Hosford, Prof. H(enry) H(allock)**, 2329 Grandview Ave, Cleveland, Ohio. *Chemistry*. Hudson, Ohio, July 12, 59. A.B, Western Reserve, 80, A.M, 83; Ph.D, Hopkins, 11. *Prof. Latin*, Doane, 87-89, *chem*, 92-18; *Western Reserve*, 18- Chem. Soc; Nebr. Acad. Physical chemistry; conductivity of solutions.
- Hoskin, Arthur J(oseph)**, Kittredge Building, Denver, Colo. *Mining engineering*. Shopiere, Wis, Jan. 4, 69. B.S, Wisconsin, 90, M.E, 05. Mining engineer, assayer and ore broker, 90-96; asst. prof. and later prof. mining eng, Colo. Sch. Mines, 05-11; *consulting mining engineer*, 13- Colo. Geol. Surv, 10-11; ed, 'Min. and Metal Jour,' 08; west. ed, 'Mines and Minerals,' 12-13; Colo. correspondent, 'N. Y. Eng. and Min. Jour,' managing ed, 'Mining American,' 15- Min. Eng; Colo. Sci. Soc. Economics of mining and metallurgy.
- Hoskins, Prof. L(eander) M(iller)**, 365 Lincoln Ave, Palo Alto, Calif. *Applied mathematics*. Wis, May 10, 60. B.S, Wisconsin, 83, M.S, 85, C.E, 87. Instr. civil eng, Wisconsin, 85-89, asst. prof, 89-91, *prof. mech*, 91-92; *applied math, Stanford*, 92- A.A.; Math. Soc. (councilor, 13-16); Eng. Educ. Applied mechanics; hydraulics; geophysics.
- Hoskins, Dr. Margaret M(orris)**, Medical College of Virginia, Richmond, Va. *Biology*. Williamstown, Mass, Dec. 10, 86. A.B, Bryn Mawr, 08; Ph.D, Yale, 16. Instr. histol, Univ. and Bellevue Hosp. Med. Col, 17-18; Minnesota, 20; *assoc. prof. histol. and embryol, Med. Col. of Va.*, 20- Ass. Anat. Artificial parthenogenesis; endocrine organs.
- Hoskins, Prof. R(oy) G(raham)**, 2122 N. Calvert St, Baltimore, Md. *Physiology*. Nevinville, Iowa, July 3, 80. A.B, Kansas, 05, A.M, 06; Ph.D, Harvard, 10; M.D, Hopkins, 20. Teaching fellow zool, Kansas, 06; *physiol, Harvard*, 08-10; prof. and head of dept, Starling Med. Col, 10-13; assoc. prof, Northwestern, 13-16, prof. and head of dept, 16-18; *assoc, Hopkins*, 20- Ed, 'Endocrinology,' 17- Capt. and major, Sanit. C, 17-19, chief, sect. food and nutrition, 18. A.A.; Physiol. Soc; Soc. Pharmacol; Soc. Exp. Biol. Physiology and pharmacology of internal secretions.

Hoskins, William, 49 Sixth Ave. La Grange, Ill. **Chemistry*. Covington, Ky, 63. Chicago High Sch; private instruction. *Mem. firm of Mariner and Hoskins, Chicago*, 80- Assoc. mem. Naval Con. Board. A.A.; Chem. Soc. (mem. board of editors, tech. monographs, mem. U. S. Bur. Mines advisory committee); Soc. Chem. Indust.; Electrochem. Soc.; Min. Eng.; Micros. Soc.; West. Soc. Eng.; Franklin Inst.; Ill. Acad.; Chicago Acad. Metallic arsenic and arsenides; industrial chemistry.

Hoskins, Prof. W(illiam) Horace, 331-333 E. 26th St, New York, N. Y. *Veterinary jurisprudence*. Rockdale, Pa, July 23, 60. D.V.S., Am. Vet. Col. of N. Y., 81. Lecturer and later prof. juris, ethics and business methods, vet. dept, Pennsylvania, 97-17; *prof. vet. juris. and dean*, N. Y. State Vet. Col., N. Y. Univ., 17- Ed, 'Jour. Comp. Med. and Vet. Archives,' 94- Vet. Med. Ass.; Pub. Health Ass.; hon. mem. N. J. Vet. Med. Ass. Veterinary jurisprudence of foreign countries.

Hosmer, Prof. Ralph S(heldon), New York State College of Agriculture, Ithaca, N. Y. *Forestry*. Deerfield, Mass, March 4, 74. B.A.S., Harvard, 94; M.F., Yale, 02. Asst. div. of soils, U. S. Dept. Agr., 96-98, field asst, bur. of forestry, 98-03, collaborator, 03-14; *supt. forestry*, Hawaii, 03-14; *prof. and head of dept*, N. Y. State Col. Agr., Cornell, 14- Mem. board of regents, College of Hawaii; chairman, Conservation Commission of Hawaii, 08-14; delegate, Conference of Governors, Washington, 08. A.A.; Forestry Ass.; Soc. Foresters (chairman, N. Y. sect, 20); Ecol. Soc. Silviculture; forest management in the Adirondacks; forest history and forest policy.

Hosmer, Sidney, Edison Electric Illuminating Co, 39 Boylston St, Boston, Mass. *Electrical engineering*. London, England, July 13, 71. A.B., Yale, 92. Elec. engineer, Boston Elec. Light Co, 94-01; *supt. installation*, Edison Elec. Illuminating Co, 01- A.A.; Elec. Eng.; Mech. Eng.

Hostetter, J(ohn) C(lyde), Stuben Division, Corning Glass Works, Corning, N. Y. *Physical chemistry*. Williamsport, Pa, Feb. 13, 86. B.S., Bucknell, 08, M.S., 09; Chicago, 08. Instr. chem, Bucknell, 08-10; asst. chemist, Bur. Standards, 10-12; physical chemist, geophys. lab, Carnegie Institution, 12-19; *with Steuben Glass Works*, 19- Manufacturer optical glass, W.I.B., 18. A.A.; Chem. Soc.; Ceramic Soc.; Wash. Acad.; Wash. Geol. Soc.; Wash. Philos. Soc. Vanadium; iron; magnesium; mineral densities at high temperatures; dissociation of calcium carbonate; effect of strain on solubility; growth of crystals; optical glass; iron oxides; volatilization of iron from glass pots by chlorine.

Hotchkiss, Prof. H(omer) J(ames), 208 Dearborn Place, Ithaca, N. Y. *Physics*. Moseletown, Pa, March 1, 60. B.S., Northern Ind. Nor. Sch, 84; C.E., Allegheny, 88, A.B., 89, A.M., 92; M.M.E., Cornell, 96. Instr. math, Madisonville Nor, Ky, 86; Harper Nor, Kans, 87; math. and chem, Westminster (Pa.), 89; asst. instr. physics, Cornell, 90-93, instr., 93-03; *prof*, Drexel Inst., 03-14; *instr. mech*, Cornell, 16- A.A.; Physical Soc. Curve tracing galvanometers;

counter electromotive force of arc; carbon-aluminum cells.

Hotchkiss, Dr. Lucius W(ales), 11 E. 48th St, New York, N. Y. *Surgery*. New Haven, Conn., Dec. 31, 59. A.B., Columbia, 81, M.D., 84. Prof. anat, Woman's Med. Col., N. Y., 90-99; asst. demonstrator, Columbia, 90-97, instr. surg., 97-09, adj. prof. *clin. surg.*, 09-10, *prof.*, 10- Fel. Surg. Ass.; Soc. Clin. Surg.; Am. Med. Ass.; Col. Surg.; N. Y. Surg. Soc. (pres, 01-03); N. Y. Acad. Med.; Soc. Int. Chirurgie. Appendicitis; peritonitis; cholelithiasis; malignant growths of cheek and jaws; hernia.

Hotchkiss, Dr. W(illiam) O(tis), Geological and Natural History Survey, Madison, Wis. *Geology*. Eau Claire, Wis, Sept. 17, 78. B.S., Wisconsin, 03, C.E., 08, Ph.D., 16. Mining engineer, Donora Min. Co, Duluth, and geologist, Leith Explor. Co, 02-04; instr. geol. in charge miner. and petrog, Wisconsin, 04-07; *econ. geologist*, Wis. Geol. and Nat. Hist. Surv., 07-, *director*, 19-, *state geologist*, 09- Mem. State Highway Commission, Wis, 11-; War Minerals Commission, 17-18; committee on geol, Nat. Research Council, 17. A.A.; Geol. Soc.; Min. Eng.; Ass. State Geol. (sec'y, 16-19, pres, 19-); Ass. State Highway Eng.; Wis. Acad.; Wis. Eng. Ass. Mining and mine taxation; road construction and materials; mineral land classification and areal survey of Wisconsin; magnetic methods in geological surveys.

Hotson, Prof. J(ohn) W(illiam), 418 E. 44th St, Seattle, Wash. *Mycology*. Innerkip, Ont, May 2, 70. A.B., McMaster, 01, A.M., 02; Chicago, 02, 06-07; Cornell, 03; Columbia, 03; Clark, summer, 03; Harvard, 07-08, Ph.D., 13. Lecturer bot, Ont. Agr. Col., 03-04; principal schools, Guelph, 04-06; Austin teaching fellow, Harvard, 07-08; instr. bot, Pomona, 08-09, asst. prof., 09-11; instr, Washington, 11-14, *asst. prof.*, 14- A.A.; Phytopath. Soc. Bulbiferous fungi; fire blight; Sphagnum as a surgical dressing.

Hottes, Prof. Cha(rle)s F(rederick), University of Illinois, Urbana, Ill. *Botany*. Mascoutah, Ill, July 8, 70. B.S., Illinois, 94, fellow, 94-95, M.S., 95; Ph.D., Bonn, 01. Asst. bot, Illinois, 95-98, instr., 01-02, asst. prof., 02-13, *prof. plant physiol.*, 13- A.A.; Bot. Soc.; Ecol. Soc.; Ill. Acad. Physiology of the vegetable cell; growth and development as affected by external conditions and apparatus of control.

Hough, Romeyn B(eck), Lowville, N. Y. *Dendrology*, *Ornithology*. Albany, N. Y., March 30, 57. A.B., Cornell, 81. Curator ornith, Cornell, 82-83. Gold medals, Paris Expos, 90; Columbian Expos, 92; Am. Inst. Fair, 97; Pan-Am. Expos, 01; La. Purchase Expos, 04; Elliott Cresson gold medal, 08; grand prize, Alaska-Yukon Expos, 09. A.A.; Forestry Ass.; Wash. Acad.; Torrey Bot. Club. American trees.

Hough, Prof. Theodore, University, Va. **Physiology*. Front Royal, Va, June 19, 65. A.B., Hopkins, 86, Ph.D., 93. Instr, McDonogh Sch, Md, 86-89; biol, Mass. Inst. Tech, 93-95, asst. prof., 95-03; assoc. prof, Simmons, 03-06, prof., 06-07, director, sch. science, 03-07; *prof. physiol.*, Virginia, 07-, *dean, dept. med.*, 16- Instr. physiol. and personal hygiene, Boston Nor. Sch.

- of Gymnastics, 93-07. A.A. (v. pres, K, 13); Soc. Nat; Physiol. Soc; Am. Med. Ass. Cardiac inhibition; muscular fatigue and soreness; effect of temperature on cutaneous circulation; alcohol and fatigue; factors regulating the depth and rate of breathing movements; influence of increased pressures of oxygen on dyspnea; respiration during muscular activity; regeneration of blood after hemorrhage.
- Hough, Dr. Walter**, U. S. National Museum, Washington, D. C. **Anthropology*. Morgantown, W. Va., April 23, 59. W. Va. Col. 73; A.B., West Virginia, 83, A.M., 84, Ph.D., 94. Aid, dept. ethiol, U. S. Nat. Museum, 86-94, asst. curator, 94-08, acting head curator, dept. anthrop, 08-09, curator ethiol, 09-, acting head curator anthrop, 20- Mem. commission to Hist. Expos, Madrid, 92-93. Knight of Isabella, Spain, 93. A.A.; Soc. Nat; Anthropol. Ass; Folk-lore Soc; Wash. Anthropol. Soc. (sec'y, v. pres, 07, pres, 08-); Wash. Acad. (v. pres, 08, 10); cor. mem. Soc. d'Anthrop. de Paris; Swedish Soc. Anthropol. and Geog. Aboriginal fire-making; Eskimo lamps; history of illumination; primitive aboriginal armor; Hopi ethnobotany and pigments; Korean ethnography; reports on extensive field work in Arizona and New Mexico; Pueblo region of Arizona; Hopi foodstuffs; Malayan ethnography.
- Houghton, Prof. Clinton Osborne**, Newark, Del. *Entomology*. Helena, N. Y., April 7, 73. Grad, State Nor. Sch, Potsdam, N. Y., 98; A.B., Cornell, 02. Entomologist, Del. Exp. Sta., 02-09, assoc. prof. zool, Delaware, 02-06, prof., 06-09, biol, 09- A.A.; Ass. Econ. Entom. Economic and systematic entomology.
- Houghton, Dr. E(lijah) M(ark)**, 680 Longfellow Ave, Detroit, Mich. *Pharmacology, Bacteriology*. Antwerp, N. Y., April 29, 67. Ph.C, Michigan, 93, M.D., 94. Asst. pharmacol, Michigan, 94-95; director, med. research and biol. laboratories, Parke, Davis and Co, Detroit, 95- Lecturer, dept. med, Michigan, 02-08; exp. pharmacol, Detroit Col. Med., 96-01. A.A.; Soc. Baet; Physiol. Soc; Am. Physicians; Ass. Immunol; Ass. Study Int. Secretions; Ass. Tuber; Am. Med. Ass; Pharmaceut. Ass. Localization of strychnin tetanus; ergot aseptic; pharmacologic assay of the heart tonics; pharmacology and pharmacologic assay of active principles of suprarenal glands; pharmacology and therapeutics of chloretone and brometone; preparation of the antitoxins; aseptic preparations of digitalis, ergot, veratrum viridi; anti-dysenteric serum; rabies; purgatives; hypnotics.
- Houlehan, Dr. A(rthur) E(arl)**, 1106 Greenhill Ave, Wilmington, Del. *Chemistry*. Garfield, Ind, Feb. 16, 85. A.B., Wabash, 08; Ph.D., Cornell, 12. Asst. instr. chem, Cornell, 08-12; research chemist, E. I. duPont de Nemours and Co, 12-, assoc. director, Jackson Lab. Chem. Soc; Soc. Chem. Indust. Hydronitrogens and their derivatives.
- House, Dr. H(omer) D(oliver)**, State Botanist, Albany, N. Y. *Botany*. Near Oneida, N. Y., July 21, 78. B.S., Syracuse, 02; A.M., Columbia, 04, Ph.D., 08. Prof. bot. and baeter, Clemson, 06-07; assoc. director and lecturer bot. and dendrol, Biltmore Forest Sch., 08-13; asst. state botanist, N. Y., 13-14, state botanist, 14- Asst, dept. bot, Columbia, 02-03; aid, N. Y. Bot. Garden, 03-04, 07-08; U. S. Nat. Museum, 05; botanist, U. S. Dept. Agr., 06. Bot. Soc; Ecol. Soc; Soc. Foresters; Rochester Acad; N. Y. Acad; Torrey Bot. Club. Taxonomic botany; ecology; dendrology; taxonomy.
- Houser, Prof. Gilbert L(ogan)**, 430 Iowa Ave, Iowa City, Iowa. **Biology*. Lee Co, Iowa, July 9, 66. B.S., Iowa, 91, M.S., 92; Ph.D., Hopkins, 01. Instr. biol, Iowa, 92-95, asst. prof., 95-97, prof. animal morph. and physiol, 97-05, animal biol, 05- Mem. Iowa Geol. Surv; collaborator, 'Am. Jour. Anat.' and 'Jour. Applied Micros.' A.A.; Soc. Nat; Soc. Zool; Iowa Acad. (pres). Experimental biology; cellular biology; vertebrate embryology; architecture of the nervous system of lower vertebrates; neurones of selachian brain; intracellular canaliculi of the liver; methods for the microscopical study of the nervous system; the animal cell.
- Houser, J(ohn) S(amuel)**, Ohio Agricultural Experiment Station, Wooster, Ohio. *Entomology*. Oxford, Kans, April 19, 81. B.S., Kansas State, 04; M.S., Cornell, 11. Asst. entomologist, Ohio Exp. Sta., 03-07, 09-12, assoc. entomologist, 12- Primer ayudante, dept. path, Estacion Cent. Agron. de Cuba, 07-08. A.A.; Entom. Soc; Ass. Econ. Entom; Ohio Acad. Economic entomology.
- Houssay, Prof. B(ernardo) A(lberto)**, Paso 765, Buenos Aires, Argentina. *Physiology*. Buenos Aires, April 10, 87. M.D., Buenos Aires, 10. Prof. physiol, vet. faculty, Buenos Aires, 12-15; chief, inst. baeter, Dept. Nat. Hygiene, 15; prof. physiol, faculty med, Buenos Aires, 19- Soc. de Path. exot; Soc. de Biol. de Barcelona. The hypophysis, thyroids and suprarenals; venoms of serpents, spiders and scorpions; poisonous and medicinal plants; diabetes insipidus.
- Hovey, Dr. E(dmund) O(tis)**, American Museum of Natural History, New York, N. Y. **Geology*. New Haven, Conn, Sept. 15, 62. A.B., Yale, 84, Ph.D., 89; Heidelberg, 90-91. Principal schools, Janesville, Minn., 84-85; Elk River, Minn., 85-86; asst. miner. lab, Sheffield Sci. Sch., Yale, 86-87; asst. principal, high sch, Waterbury, Conn., 88-91, principal, 91-92; supt, Mo. miner. exhib, Columbian Expos, 92-93; asst. curator, dept. geol. and invert. paleont, Am. Museum Nat. Hist., 94-00, assoc. curator, 01-10, curator, 10- Asst, U. S. Geol. Surv., 90, 01-06; with Crocker land exped. to Greenland, 15-17; mem. Int. Geol. Cong., 97, 00, 03, 06, 10, 13. A.A. (sec'y, E, 03, 04-07); Geol. Soc. (sec'y, 07-); Am. Geog. Soc; Ass. Geog; Min. Eng; fel. N. Y. Acad. (v. pres, 05, 18, rec. sec'y, 07-16, ed, 08-16); cor. Soc. Cient. Ant. Alz. Mex. Vulcanology and seismology; meteorites; general geology.
- Hovey, O(tis) E(illis)**, American Bridge Co, 30 Church St, New York, N. Y. *Civil engineering*. East Hardwick, Vt., April 9, 64. B.S., Dartmouth, 85, C.E., 89. Instr. civil eng, Washington (St. Louis), 89-90; asst. engineer to Geo. S. Morison, 90-96; engineer, Union Bridge Co, 96-00; engineer of design, Am. Bridge Co, 00-07, asst. chief engineer, 07- Overseer, Thayer Sch. Civil Eng, Dartmouth, 07- Civil Eng;

- Mech. Eng; Am. Iron and Steel Inst; Soc. Test. Mat.
- Hovgaard, Prof. William**, Massachusetts Institute of Technology, Boston, Mass. *Naval construction*. Aarhus, Denmark, Nov. 28, 57. Naval Acad, Copenhagen, 75-79; Royal Naval Col, Greenwich, 83-86. Lieut, Danish Navy, 79-98, commander, 98-01; *prof. naval design, Mass. Inst. Tech.*, 01- On Danish Govt. transit of Venus exped. to West Indies, 82; on naval tech. staff and prof. technol. Dockyard Sch. Naval Archit. and Eng, Copenhagen, 88-95; director, Burmeister and Wains Shipbuilding Co, Copenhagen, 95-98. Gold medal, British Inst. Naval Archit, 17. Naval Archit. and Marine Eng; Naval Inst; British Inst. Naval Archit. Structural design of warships; watertight bulkheads; submarine boats; resistance to propulsion of ships; diverging waves; stresses in gun-turrets; strength of airships; history of warships.
- Howard, Prof. (Alan) C(ampbell) P(almer)**, University Hospital, Iowa City, Iowa. *Medicine*. Montreal, Que, April 2, 77. B.A, McGill, 97, M.D.C.M., 01. Asst. med, Hopkins, 02-05; demonstrator, McGill, 07-10; *prof. theory and practice of med, Iowa, and physician, univ. hosp.*, 10- Am. Physicians; Ass. Path. and Bact; Soc. Clin. Invest; Am. Med. Ass; Can. Med. Ass; Royal Soc. Med. Clinical medicine; diseases of metabolism; scurvy; diabetes; endocrine glands.
- Howard, Prof. Arthur D(ay)**, U. S. Biological Station, Fairport, Iowa. *Zoology*. Glencoe, Ill, Sept. 30, 74. B.S, Amherst, 98; M.S, Northwestern, 01; Ph.D, Harvard, 06. Teacher science, Englewood Sch, 99-00; asst. zool, Harvard, 02-04, Austin teaching fellow, 04-05; prof. biol. and geol, Westminster (Pa), 06-08; asst. prof. zool, Washington (Seattle), 08-11; *asst. U. S. Biol. Sta, Fairport, Iowa*, 12- Mem. board of directors, Puget Sound Marine Sta, 09. A.A; Soc. Zool; Fisheries Soc; Ecol. Soc. Visual cells of vertebrates; ecology and life histories of the Unionidae.
- Howard, Prof. Burton James**, 1212 Decatur St, N. W, Washington, D. C. *Microscopy*. Ionia, Mich, Sept. 17, 72. B.S, Michigan, 97, 00-01. Teacher science, Pontiac, Mich, 98-00; asst. chem, Michigan, 95-96, bot, 01; *prof. micros.*, Nat. Col. Pharm, 04-17; *chief, microchem. lab.*, U. S. Dept. Agr, 01- A.A; Chem. Soc; Wash. Bot. Soc. Microanalysis; applied microscopy.
- Howard, Charles D(anforth)**, State Laboratory of Hygiene, Concord, N. H. *Chemistry*. Westford, Mass, July 31, 73. B.S, Worcester, 93. Asst. to Dr. Wolcott Gibbs, 93-94; asst. chemist, N. H. Exp. Sta, 95-98; W. Va. Exp. Sta, 98-03, assoc. chemist, 03-05; *chemist, N. H. Board of Health*, 05- Collaborating chemist, bur. chem, U. S. Dept. Agr. A.A; Chem. Soc; Pub. Health Ass. Sanitary and food chemistry; toxicology; water supply.
- Howard, Prof. C(harles) W(alter)**, Canton Christian College, Canton, China. *Entomology*. Ogdensburg, N. Y, Feb. 22, 82. A.B, Cornell, 04. Asst. entomologist, Transvaal Dept. Agr, 05-06, entomologist, 06-08; *chief, entom. sect.*, Dept. Agr, Mozambique, 08-12; instr. and later assoc. prof. entom, Minnesota, 12-17; *prof. biol.*
- Canton Christian Col*, 17- Pan-African Trypanosomiasis Commission, 09- Entom. Conference, Brussels, 10. A.A; Entom. Soc; fel. London Entom. Soc; S. African A.A.S; Royal Soc. S. Africa; S. African Ornith. Union; Transvaal Biol. Soc. Systematic, morphological and biological study of the Ixodidae of S. Africa; blood-sucking Diptera and the diseases transmitted by them.
- Howard, Dr. F(rederick) H(ollis)**, Williamstown, Mass. *Physiology*. Newburyport, Mass, Sept. 3, 76. Cornell, 93-94; M.D, Pennsylvania, 98. Res. physician, Mercy Hosp, Pittsburgh, 98-99; asst. demonstrator path, Pennsylvania, 99-00; *instr. anat. and physiol.*, Williams, 00-04, asst. prof, 04-08, *prof.*, 08- Am. Med. Ass.
- Howard, Henry**, The Grasselli Chemical Co, Guardian Building, Cleveland, Ohio. *Chemistry*. Boston, Mass, July 5, 68. Mass. Inst. Tech, 85-89. Chemist, asst. supt. and supt, Merrimac Chem. Co, 89-03, v. pres, 03-20; *with Grasselli Chem. Co*, 20- Chem. Soc; Chem. Eng. (v. pres); Soc. Chem. Indust; Electrochem. Soc. Sulphuric acid manufacture; picric acid; phenol; sodium hydrosulphite.
- Howard, James Erigene**, Interstate Commerce Commission, Washington, D. C. *Engineering*. Palmer, Mass, June 26, 51. Hon. M.S, Dartmouth, 10. Engineer of tests, Watertown Arsenal, Mass, 80-10; *engineer-physicist*, Bur. Standards, 10-14; *Interstate Commerce Commission*, 14- Soc. Test. Mat. Tests of metals; strength of materials.
- Howard, Prof. Joseph Whitney**, University of Montana, Missoula, Mont. *Chemistry*. Dixon, Ill, June 18, 89. A.B, Shurtleff, 12; A.M, Illinois, 13, fellow, 13-15, Ph.D, 15. Instr. chem, Montana, 15-18, *asst. prof.*, 18- Chem. Soc. Organic chemistry; plant analysis.
- Howard, Dr. L(eland) O(ssian)**, Department of Agriculture, Washington, D. C. **Entomology*. Rockford, Ill, June 11, 57. B.S, Cornell, 77, M.S, 83; hon. Ph.D, Georgetown, 96; hon. M.D, George Washington, 11; LL.D, Pittsburgh, 11. Asst. entomologist, U. S. Dept. Agr, 78-94, *chief entomologist*, 94-; *hon. curator, U. S. Nat. Museum*, 95- Lecturer entom, Swarthmore; ed, 'Insect Life'; contributor definitions in entom, 'Century' and 'Standard' Dictionaries. Nat. Acad; A.A. (v. pres, 95, 97, perm. sec'y, 98-19, pres, 20); Soc. Nat; Ass. Econ. Entom. (pres, 94); Soc. Prom. Agr. Sci; Philos. Soc; Am. Acad; Wash. Acad. (pres, 16); Wash. Biol. Soc. (pres, 97); hon. fel. London Entom. Soc; cor. mem. London Zool. Soc.; hon. mem. Soc. entom. de France; Soc. d'Acclim. de France; Acad. d'Agr. de France; cor. Mus. d'hist. nat. de Paris; Entom. Gesell; hon. mem. Gesell. für angewandte Entom; Entom. Forén. Stockholm; hon. mem. Portuguese Royal League Agr; cor. mem. Geneva Inst. Nat; cor. mem. Barcelona Acad. Economic entomology; relations of insects to disease; parasitic Hymenoptera.
- Howard, Nathaniel O(rson)**, Brown University, Providence, R. I. *Plant pathology*. Providence, May 11, 80. Ph.B, Brown, 03, M.S, 17. V. principal, high sch, Coshocton, Ohio, 03-04; Rutland, Vt, 04-05; instr. chem, Tech. High Sch, 05-18; collaborator forest path, bur. plant

- indust.* U. S. Dept. Agr., 13-18, pathologist, 18- A.A.; Phytopath. Soc.; Forestry Ass. Control of sap stain and mold in green timber.
- Howard, Dr. Orson**, 1105 First St, Salt Lake City, Utah. *Natural science.* Salt Lake City, Nov. 6, 53. Utah, 75-80; B.S., Grinnell, 83, A.M., 86; M.D., Bellevue Med. Col., 92. Prof. nat. science, Utah, 84-90, 98-04, curator, museum, 04- A.A. Spiders of Utah.
- Howard, Prof. Robert Francis**, Agricultural College, Lincoln, Nebr. *Horticulture.* Griffin, Mo., Feb. 16, 83. B.S.A., Missouri, 08; A.M., Nebraska, 12. Asst. hort., Nebraska, 08-12; asst. prof., Wisconsin, 12-14; chairman, dept. hort., Nebraska, 14- A.A.; Soc. Hort. Sci. Plant breeding.
- Howard, Prof. S(amuel) Francis**, Northfield, Vt. *Chemistry.* Wilbraham, Mass., June 14, 72. B.S., Mass. Col., 94, M.S., 01; Hopkins, 96-98, Ph.D., 12. Principal, high sch., Eliot, Maine, 95; asst. prof. chem., Mass. Col., 99-12; assoc. prof., Amherst, 12-13; prof., Norwich, 19- A.A.; Chem. Soc. (v. pres., 17); Electrochem. Soc. Inorganic and physical chemistry; molecular weights of electrolytes; conductivity of salts in solution.
- Howard, Prof. W(alter) L(afayette)**, Mountain View, Calif. *Horticulture.* Christian Co., Mo., May 12, 72. B.Agr., B.S., Missouri, 01, M.S., 03; Ph.D., Halle-Wittenberg, 06. Asst. hort., Missouri, and asst. horticulturist, Exp. Sta., 01-03, instr. hort., 03-04, asst. prof., 05-08, prof., 08-15; pomol., California, 15-, in charge, deciduous fruit exp. sta., 20- Sec'y, Mo. State Board Hort., 08-12. A.A.; Soc. Hort. Sci. (pres., 15); Soc. Prom. Agr. Sci. Plant physiology; dormant period of plants; origin of fruit buds; tomato breeding; fruit tree root-stocks; orchard irrigation.
- Howard, Dr. William Travis**, 1213 N. Calvert St, Baltimore, Md. **Pathology, Bacteriology.* Statesburg, S. C., March 13, 67. Virginia, 85-87; M.D., Maryland, 89; Hopkins, 89-94; Munich, 06-07. Prof. path. and bacter., Western Reserve, 94-14; lecturer biometry and vital statist., sch. hygiene and pub. health, Hopkins, 19- Pathologist, Lakeside and City Hosp.; city bacteriologist, Cleveland. A.A.; Ass. Path. and Bact. (pres., 02); Ass. Anat.; Am. Physicians. Heart hypertrophy; origin and occurrence of cells with eosinophil granulations; ulcerative endocarditis; B. aerogenes capsulatus; origin of gas and gas cysts of the central nervous system; streptococcus mucosus; general gaseous emphysema; the pathology of labial, nasal and corporeal herpes occurring in acute croupous pneumonia, and their relation to herpes zoster; actinomycosis; tumors; etiology of smallpox; vaccinia; physiological degeneration of Actinosphaerium eichhorni; biology of tumor cells.
- Howe, Dr. Anna M(ayme)**, Newcomb College, Tulane University, New Orleans, La. *Mathematics.* N. Y., 84. A.B., Wells, 08; A.M., Cornell, 11; Ph.D., 17. Teacher math., Fairmount Sem., Washington, D. C., 11-15, 17-18; overseer tech. shipments, W. R. Grace and Co., N. Y. City, 18-19; tacher math., Dana Hall, Wellesley, Mass., 19-20; asst. prof., Newcomb, Tulane, 20- Applications of mathematics to astronomy and statistics; psychology of education.
- Howe, Pres. Charles S(ummer)**, Case School of Applied Science, Cleveland, Ohio. **Astronomy.* Nashua, N. H., Sept. 29, 58. B.S., Mass. Col. and Boston, 78; Ph.D., Wooster, 87; hon. Sc.D., Armour Inst., 05; LL.D., Mount Union, 08; Oberlin, 11. Prof. math. and astron., Buchtel, 83-89; Case, 89-, pres., 03- A.A. (sec'y, A., 03, gen. sec'y, 04); Astron. Soc.; Math. Soc.; fel. Royal Astron. Soc. The almucantar as an instrument for determination of star places; constant temperature rooms for clocks; printing chronographs; effect of temperature on the Case almucantar; catalogue of stars determined with the almucantar.
- Howe, Prof. C(lifton) D(urant)**, University of Toronto, Toronto, Can. *Forest ecology.* Newfane, Vt., July 30, 74. A.B., Vermont, 98, M.S., 01; fellow, Chicago, 01-04, Ph.D., 04. Asst. biol., Vermont, 99-01; instr., Biltmore Forest Sch., 05-06, asst. director, 07-08; lecturer bot. and forestry, Toronto, 08-12, asst. prof., 13-15, assoc. prof., 16-20, prof. and dean, faculty of forestry, 20- Assoc. ed., 'Forestry Quarterly.' A.A.; Ecol. Soc.; Bot. Soc.; Can. Inst. (chairman, biol. sect., 12-); Can. Soc. Forest Eng. Reforestation of sand plains, Vermont; forest distribution in Nova Scotia; forest conditions in the Trent watershed; reproduction of Douglas fir in coast region, British Columbia.
- Howe, Dr. Ernest**, Litchfield, Conn. *Petrology, Mining geology.* New York, N. Y., Sept. 28, 75. A.B., Yale, 98; A.M., Harvard, 99, Ph.D., 01. Asst. geologist, U. S. Geol. Surv., 00-10; consulting mining geologist, 08- Geologist, Isthmian Canal Commission, 06-07. A.A.; Min. Eng.; Min. and Metal. Soc.; Seismol. Soc.; Geol. Soc.; Optical Soc.; Wash. Geol. Soc. Experimental geology; physics of igneous intrusions; pre-Cambrian intrusive rocks; ore deposits; Tertiary and later volcanic rocks; the eruptive rocks of the Lesser Antilles; terrace phenomena of the Rocky Mountain region; geology of Panama Canal Zone; red beds of Colorado; landslides of San Juan Mountains; magmatic ore deposits; geology of Rio Negro, Brazil.
- Howe, Prof. Eugene C(larence)**, Wellesley College, Wellesley, Mass. *Physiology.* Forestville, California, June 14, 83. A.B., Cornell, 04; B.S., Mass. Inst. Tech., 08, Ph.D., 11. Instr. Adelphi Acad. and Col., 04-07; biol., Mass. Inst. Tech., 11-15; instr. hygiene, Wellesley, 12-14, assoc. prof., 14- Lecturer, dept. biol. and pub. health, Mass. Inst. Tech. Soc. Baet; Pub. Health Ass. Bacteriology; hygiene; sanitation.
- Howe, Prof. H(arley) E(arl)**, Rockefeller Hall, Ithaca, N. Y. *Physics.* Linneus, Mo., Aug. 26, 82. B.S., Missouri, 06; A.M., Cornell, 09, Ph.D., 16. Instr. physics, Cornell, 09-11; prof., Randolph-Macon, 12-18; asst. prof., Cornell, 18- A.A.; Physical Soc. Ultraviolet absorption by organic salts.
- Howe, H(arrison) E(stell)**, 2702 36th St, N. W., Washington, D. C. **Chemistry.* Georgetown, Ky., Dec. 15, 81. B.S., Earlham, 01; Michigan, 01-02; M.S., Rochester, 13. Chemist, Sanilac Sugar Ref. Co., 02-04; with Bausch and Lomb Optical Co., 04-15; chem. engineer, asst. to pres. and

later dept. manager, A.D. Little, Inc, 16-19; chairman, div. research extension, Nat. Research Council, 18- Major, R. O. C, 19-; consulting chemist, ordnance dept, U. S. A. Chem. Soc. (councilor-at-large); Chem. Eng; Min. and Metal. Eng. Industrial chemistry; spectra optical glass.

Howe, Prof. H(enry) M(arion), Bedford Hills, N. Y. **Metallurgy*. Boston, Mass, March 2, 48. B.S, Mass. Inst. Tech, 71; A.M, Harvard, 72, LL.D, 05; Lafayette, 05; Sc.D, Pittsburgh, 15. Lecturer, Mass. Inst. Tech, 85-97; prof. metal, Columbia, 97- Pres, jury of awards, Columbian Expos, 93; juror, Paris Expos, 89, 00. Elliott Cresson gold medal, Franklin Inst, 95; Bessemer gold medal, Gt. Britain Iron and Steel Inst, 95; gold medal, Verein Beförderung des Gewerbfleisses, 95; award, Soc. d'Encouragement pour l'Industrie nationale, 95, 16; John Fritz medal, 17. Chevalier Légion d'honneur, 01; Knight, St. Stanislas, star first order, 06. Nat. Acad; A.A; Min. Eng. (pres, 93); Mech. Eng; Soc. Test. Mat. (pres); hon. mem. Am. Iron and Steel Inst; Steel Treat. Soc; Am. Acad; Wash. Acad; fel. N. Y. Acad; Philos. Soc; hon. mem. Dallas Hist. Soc; hon. mem. Cleveland Inst. Eng, England; Gt. Britain Inst. Min. and Metal; British Iron and Steel Inst. (hon. v. pres); cor. mem. Soc. d'Encourag. pour l'Indust. nat; Russian Metal. Soc; hon. mem. Russian Imp. Tech. Soc; Royal Swedish Acad; Int. Ass. Test. Mat. (life mem. council). Iron, steel and other alloys; metallurgy of steel; copper smelting; metallography of steel and cast iron.

Howe, Dean Herbert A(lonzo), University of Denver, Denver, Colo. **Astronomy*. Brockport, N. Y, Nov. 22, 58. A.B, Chicago, 75; A.M, Cincinnati, 77; Sc.D, Boston, 84; LL.D, Denver, 10; Colo. Col, 13. Student and asst, Observatory, Cincinnati, 75-80; prof. math. and astron, Denver, 81-, dean, col. lib. arts, and director, Chamberlin Observatory, 92- A.A; Astron. Soc; Math. Soc; Astron. Gesell. Double stars; nebulae; orbits of comets and asteroids; Kepler's problem; determination of positions of 2,000 neglected nebulae.

Howe, Dr. Ja(me)s Lewis, Washington and Lee University, Lexington, Va. **Chemistry*. Newburyport, Mass, Aug. 4, 59. A.B, Amherst, 80; Ph.D, Göttingen, 82; Berlin, 82; Mass. Inst. Tech, 94; hon. M.D, Louisville Hosp. Med. Col, 86. Instr. chem, Brooks Mil. Acad, Cleveland, 82-83; prof. chem. and geol, Cent. Univ. of Ky, 83-87; scientist and lecturer, Polytech. Soc. of Ky, 86-94; prof. chem. and dean, Louisville Hosp. Med. Col. and Col. of Dentistry, 87-94; prof. chem, Washington and Lee, 94- Chairman, Am. Commission Inorg. Chem. Nomenclature, 12; mem. U. S. Assay Commission, 16; mem. special committee on platinum, Nat. Research Council, 17-18. A.A. (sec'y, C, 92, gen. sec'y, 95, v. pres, 00); Chem. Soc; Soc. Chem. Indust; Wash. Acad; London Chem. Soc; Chem. Gesell. Ruthenium; other platinum metals; chlorids, etc, of ruthenium.

Howe, Prof. Malverda A(bijah), The Hermitage, Northfield, Vt. *Civil engineering*. Northfield, Vt, Dec. 9, 63. B.S, Norwich, 82; C.E, Dart-

mouth, 86. Instr. civil eng, Lawrence Sci. Sch, Harvard, 86-87; prof, Rose, 87-16, emer. prof, 16- Practising engineer, 82- Civil Eng; Forestry Ass. Strength of vitrified sewer pipe; effect of different beds upon strength of stone; draw-bridge reactions; deflection of bridges under various loads and speeds; reinforced concrete beams; arches.

Howe, Dr. Marshall A(very), New York Botanical Garden, Bronx Park, New York, N. Y. **Botany*. Newfane, Vt, June 6, 67. Ph.B, Vermont, 90; fellow, Columbia, 97-98, Ph.D, 98; hon. Sc.D, Vermont, 19. Instr. crypt. bot, California, 91-96; curator, herbarium, Columbia, 99-01; asst. curator, N. Y. Bot. Garden, 01-06, curator of the museums, 06- Ed, 'Torreya,' 01-07; mem. bot. expeditions to Newfoundland, Fla. and the West Indies, 01- A.A; Soc. Nat; Bot. Soc. (v. pres, 13); fel. N. Y. Acad; Torrey Bot. Club (assoc. ed, 'Bul,' 98-08, 11-, ed, 08-10). Taxonomy of Hepaticae and marine algae of North America.

Howe, Prof. Paul E(dward), Rockefeller Institute, Princeton, N. J. *Biological chemistry*. Chicago, Ill, July 29, 85. B.S, Illinois, 06, A.M, 07, Ph.D, 10. Asst. physiol. chem, Illinois, 07-10; instr, 10-12; asst. prof. biol. chem, Columbia, 12-17; assoc. dept. animal path, Rockefeller Inst, 17, 19- Capt, sect. food and nutrition, Sanit. C, 17-19; chief nutrition lab, Army Med. Sch, 19. A.A; Soc. Biol. Chem; Chem. Soc; Physiol. Soc; Soc. Exp. Biol; Soc. Animal Production; Columbia Biochem. Ass; Harvey Soc. Metabolism; nutrition; fasting and recuperation; acidity of urine.

Howe, R(aymond) M(iller), 507 S. Lang Ave, Pittsburgh, Pa. *Chemistry*. Elmira, N. Y, March 15, 94. B.S, Alfred, 15; fellow, Pittsburgh, 15-16, A.M, 16. Instr. chem, Pittsburgh, 16-17; fellow, Mellon Inst, 17- Advisory committee, W. I. B, 18. Chem. Soc. (sec'y, Pittsburgh branch, 17); Ceramic Soc. (sec'y, refractories div, 19); Soc. Test. Mat. Silvering of mirrors; firebrick; refractories; underglaze colors.

Howe, Dr. Reginald Heber, Jr, Thoreau Museum of Natural History, Middlesex Schools, Concord, Mass. *Biology*. Quincy, Mass, April 10, 75. Nobles Sch, Boston, 88-95; Lawrence Sci. Sch, Harvard, 01; Univ. Dr, Paris, 12. Lecturer ornith, various New England schools, 99-02; master nat. science, Middlesex Sch, Concord, Mass, 01- Assoc. Ornith. Union; Entom. Soc; Cambridge Entom. Club; Boston Soc. Nat. Hist; Sullivant Moss Chapter. Birds of Rhode Island, Massachusetts and Vermont; lichens of New England; genus Usnea; filamentous lichens; Odonata of New England.

Howell, A(lfred) B(razier), 770 S. Pasadena Ave, Pasadena, Calif. *Zoology*. Catonsville, Md, July 28, 86. Yale, 08. *Independent research*. With biol. surv, U. S. Dept. Agr, Ariz, 18; private expeditions. Mem. Ornith. Union; Soc. Mammal; Cooper Ornith. Club; Calif. Acad; Wash. Biol. Soc. Vertebrate zoology; geographical variation, distribution and ecology of birds and mammals of the Pacific Coast.

Howell, Arthur H(olmes), U. S. Biological Survey, Washington, D. C. *Zoology*. Lake Grove,

- N. Y., May 3, 72. *Asst. biologist, biol. surv. U. S. Dept. Agr.*, 95- Mem. Ornith. Union; Wash. Biol. Soc. Mammalogy; ornithology; revisions of North American mammals; geographic distribution of mammals and birds.
- Howell, Benjamin F (ranklin)**, Princeton University, Princeton, N. J. *Geology*. Troy Hills, N. J., Sept. 30, 90. B.S., Princeton, 13, A.M., 15, Ph.D., 20. *Asst. geol. Princeton*, 13-15, instr., 15-17, 19-20, *asst. prof.*, 20- V. pres. acad. board, U. S. Sch. Mil. Aeronaut., 17-18. A.A.; Paleont. Soc. Paleontology; the middle Cambrian.
- Howell, Dr. L (loyd) B (relsford)**, Rice Institute, Houston, Tex. *Chemistry*. Piqua, Ohio, Aug. 29, 87. A.B., Wabash, 09; M.S., Illinois, 18, fellow, 18-19, Ph.D., 19. Instr. chem., Wabash, 12-13; *asst. org. chem.*, Illinois, 16-18; *instr.*, *Rice Inst.*, 19- Organic chemistry; positive halogen in organic compounds.
- Howell, Dr. W (illiam) H (enry)**, 232 W. Lanvale St., Baltimore, Md. **Physiology*. Baltimore, Feb. 20, 60. A.B., Hopkins, 81, Ph.D., 84; hon. M.D., Michigan, 90, LL.D., 12; Trinity (Conn.), 01; hon. Sc.D., Yale, 11; LL.D., Washington (St. Louis), 15. *Asst. and assoc. biol.*, Hopkins, 84-88, *assoc. prof. physiol.*, 88-89; *prof. physiol. and histol.*, Michigan, 89-92; *assoc. prof. physiol.*, Harvard, 92-93; *prof.*, Hopkins, 93-, dean, med. faculty, 99-11, *asst. director, sch hygiene and pub. health*, 16- Prize, Am. Physiol. Soc. Nat. Acad.; A.A. (v. pres., 08); Soc. Nat. (v. pres. east. sect., 09); Physiol. Soc. (pres., 05-10); Soc. Exp. Biol.; Philos. Soc.; hon. mem. London Physiol. Soc. Origin of the red corpuscles of the blood; degeneration and regeneration of nerve fibres; causation of the rhythmic beat of the heart; mechanism of sleep; internal secretion of hypophysis cerebri; isolated mammalian heart; relation of the inorganic salts of the blood to the beat of the heart; proteins of blood serum; theory of cardiac inhibition; coagulation of blood.
- Hower, Prof. Harry S (loan)**, Carnegie Institute of Technology, Pittsburgh, Pa. *Physics*. Parker, Pa., July 24, 77. B.S., Case, 99; Berlin, 03-05. Instr. science, high sch., Conneaut, Ohio, 99-00; *physics*, Case, 00-06; *Carnegie Inst. Tech.*, 06-08, *asst. prof.*, 08-11, *assoc. prof.*, 11-15, *prof. and head of dept.*, 15- Director, research, Macbeth-Evans Glass Co., 18- Physical Soc. Coefficient of expansion of metals by interferometer methods; the effect of radium rays upon oxygen; the detection of minute quantities of ozone; the formation of ozone by the photo-electric discharge in oxygen; index of refraction of tubercular blood serum.
- Howes, Benjamin A (lfred)**, 70 Fifth Ave., New York, N. Y. *Engineering*. Keene, N. H., Aug. 4, 75. B.S., Mass. Inst. Tech., 97. *Asst. research engineer*, H. Huenniker and Co., 03-05, *consulting and construction engineer*, 05- A.A.; Mech. Eng.; assoc. Civil Eng.; Soc. Test. Mat.; Concrete Inst.; N. Y. Elec. Soc. Fireproof construction; Portland cement and permanence of concretes.
- Howes, Mrs. Ethel (Dench) P (uffer)**, Scarsdale, N. Y. **Psychology, Philosophy*. Framingham, Mass., Oct. 10, 72. A.B., Smith, 91; Berlin and Freiburg, 95-97; Ph.D., Radcliffe, 02. Teacher, high sch., Keene, N. H., 91-92; instr. math., Smith, 92-95; *asst. psychol.*, Radcliffe, 98-06; instr. philos., Wellesley, 01-06; psychol., Simmons, 04-06. Psychol. Ass.; Philos. Ass. Esthetics.
- Howes, Prof. Horace L (eonard)**, New Hampshire Agricultural College, Durham, N. H. *Physics*. Syracuse, N. Y., Oct. 19, 82. B.S., Syracuse, 05; Ph.D., Cornell, 15. Teacher, science dept., Cook Acad., Montour Falls, N. Y., 05-10; *asst. physics*, Cornell, 10-15; research *asst.*, Carnegie Institution, 15-18; *prof. physics*, N. H. Col., 18- Physical Soc.; N. H. Acad. Luminescence and phosphorescence of uranyl salts.
- Howitt, Prof. John Eaton**, Ontario Agricultural College, Guelph, Ont., Can. *Plant pathology*. Guelph, July 28, 80. B.S.A., Ont. Agr. Col., 05; M.S., Cornell, 06. Lecturer *bot.*, Ont. Agr. Col., 07-11, *prof.*, 11- A.A.; Phytopath. Soc. Economic botany; weeds and their destruction; fungus diseases in Ontario; chemical herbicides.
- Howland, Henry R (aymond)**, Buffalo Society of Natural Sciences, Buffalo, N. Y. *Archeology*. Springfield, Mass., June 1, 44. A.B., Col. City of N. Y., 63, A.M., 66. *Supt. and treas.*, Buffalo Soc. Nat. Sciences. A.A.; Anthropol. Ass.; Micros. Soc.; Ass. Mus. (pres). American archeology and history; ethnology.
- Howland, Dr. J (ohn)**, Johns Hopkins Hospital, Baltimore, Md. **Pediatrics*. New York, N. Y., Feb. 3, 73. A.B., Yale, 94, A.M., 14; M.D., N. Y. Univ., 97, Cornell, 99. Instr. and *assoc. diseases of children*, Columbia, 03-11; *prof. pediat.*, Washington (St. Louis), 11-12; Hopkins, 12- A.A.; *Pediat. Soc.*; Am. Physicians; Soc. Exp. Biol.; Soc. Biol. Chem.; Soc. Clin. Invest. Diseases of infancy and childhood.
- Howland, Prof. Leroy A (lbert)**, 34 Home Ave., Middletown, Conn. *Mathematics*. Acushnet, Mass., July 6, 79. A.B., Wesleyan, 00; A.M., Harvard, 04, Parker fellow, 06-08; Ph.D., Munich, 08. Instr. math., Drexel Inst., 00-03; Wesleyan, 05-06, *assoc. prof.*, 08-13, *prof.*, 13- Assoc. ed., 'Annals of Math.', 10-11. A.A.; Math. Soc. The invariants of binary forms; algebraic plane curves.
- Howland, Prof. Ruth B**, Sweet Briar College, Sweet Briar, Va. *Embryology*. Clay Center, Kans., Feb. 10, 87. Ph.B., Syracuse, 08, Ph.M., 09; Ph.D., Yale, 20. *Asst. zool.*, Syracuse, 09-11; instr. Mt. Holyoke, 11-12; *assoc. prof. biol.*, Sweet Briar, 12-19, *prof.*, 20- Experimental embryology; migration of retinal pigments in Crustacea.
- Hoxie, Prof. George Howard**, Bryant Building, Kansas City, Mo. *Medicine*. South Easton, N. Y., July 24, 72. A.B., Union, 93, A.M., 96; M.D., Zürich, 01. *Assoc. prof. anat.*, Kansas, 02-05, *prof. internal med. and dean of clin. dept.*, sch. med., 05-11. Lieut. col., M.C. Col. Physicians; Ass. Study Int. Secretions (director); Am. Med. Ass. Medicine for nurses; therapeutics for junior medical students; internal secretions.
- Hoxie, Dr. Geo (rge) L**, 50 E. 41st St., New York, N. Y. *Physics, Electrical engineering*. Leonardsville, N. Y., May 14, 72. M.E., Cornell, 92, M.M.E., 97, Ph.D., 02. Instr. physics, Arizona,

- 92-93, prof, 93-96; instr, Cornell, 98-99, elec. eng, 99-02; *consulting engineer*, 02- Meeh. Eng; Elec. Eng. Electrical machinery.
- Hoxton, Prof. L(ewellyn) G(riffith)**, University of Virginia, University, Va. *Physics*. Alexandria, Va, April 28, 78. B.S, A.M, Virginia, 00; Harvard, summer, 00; George Washington, 01-02; fellow, Hopkins, 05-06, Ph.D, 16. Asst. physicist, Bur. Standards, 01-05; adj. prof. and later assoc. prof. *physics*, Virginia, 06-16, *prof*, 16- Mem. U. S. Naval Observatory eclipse exped. to Spain and Africa, 05; Baker, Oregon, 18. A.A; Physical Soc; Astron. Soc. Thermodynamics; Joule-Thomson effect in gases.
- Hoynes, Dr. Archibald L(awrence)**, 428 Oakdale Ave, Chicago, Ill. *Medicine*. Chicago, April 4, 78. A.B, Williams, 01; B.S, Chicago, 02, M.D, Rush Med. Col, 04. *Asst. prof. med*, Rush Med. Col, 16- A.A; Am. Med. Ass.
- Hoyt, John C(layton)**, U. S. Geological Survey, Washington, D. C. *Hydraulics*. La Fayette, N. Y, June 10, 74. C.E, Cornell, 97. Asst. engineer, Cornell Hydraulic Construction, 97; recorder, U. S. Deep Waterways Surv, and draftsman, bur. yards and docks, Navy Dept, 97-99; computer, U. S. Coast and Geod. Surv, 00-02; engineer in charge hydraul. computation, U. S. *Geol. Surv*, 02-06, asst. chief hydrographer in charge stream gaging, 07-10, *hydraul. engineer in charge, surface water div*, 11- A.A; Civil Eng. (director, 20-); Wash. Acad. (v. pres, 16); Wash. Soc. Eng. (sec'y, 08-15, pres, 16). Flow of water in open channels.
- Hoyt, Dr. John E(zra)**, Upper Darby Branch P. O, Philadelphia, Pa. *Physics*. Dexter, Mich, March 8, 79. A.B, Ursinus, 04; fellow, Pennsylvania, 04-06, A.M, 06, Ph.D, 11. *Instr. physics*, Drexel, 06-14; *West Phila. High Sch*, 14- A.A; Physical Soc; Phila. Physics Teachers Club. Oscillographic study of the singing arc; electricity and magnetism.
- Hoyt, Ray S(tevens)**, 48 Richmond Ave, Ridge-wood, N. J. *Electrical engineering*. Auburn, N. Y, July 24, 82. B.S, Wisconsin, 05; M.S, Princeton, 10. Lab. worker, West. Elec. Co, 07-09, 10-11; *Am. Telephone and Telegraph Co*, 06-07, engineer, theoret. investigations, 11-19, *research and developmental engineer*, 19- Elec. Eng; Math. Soc. Telephone engineering; mathematical theory of telephone transmission and devices.
- Hoyt, Dr. Samuel L(eslie)**, Experimental Engineering Laboratory, Nela Park, Cleveland, Ohio. *Metallurgy*. Minneapolis, Minn, May 29, 88. M.E, Minnesota, 09; Ph.D, Columbia, 14; Polytech, Charlottenburg, 11-13. Assoc. prof. metallog, Minnesota, 13-19; *metal. engineer, Exp. Eng. Lab*, 19- Consulting metallurgist, U. S. Bur. Mines, 18-; Carnegie scholar, British Iron and Steel Inst. Min. and Metal. Eng; British Iron and Steel Inst; London Inst. Metals. Metallography; alloys of copper, tin and zinc; steel.
- Hoyt, Prof. Wilbur Franklin**, Peru, Nebr. *Chemistry*. Reedsville, Ohio, March 13, 64. A.B, Ohio Wesleyan, 95, A.M, 05; Harvard. Teacher, pub. schools, Ohio and Pa, 80-97; chem, Chamberlain Inst, 97-00; prof, Kans. Wesleyan, 00-10, acting pres, 02-04; *prof. chem, State Nor.*
- Sch, Peru, Nebr*, 10- A.A; Nebr. Acad. Qualitative analysis; astronomy.
- Hoyt, Prof. W(illiam) D(ana)**, Washington and Lee University, Lexington, Va. *Botany*. Rome, Ga, April 16, 80. A.B, Georgia, 01, M.S, 04; fellow, Hopkins, 08-09, Ph.D, 09, Bruce fellow, 09-10. Tutor biol, Georgia, 01-04; scientific asst, U. S. Bur. Fisheries, Beaufort, N. C, 02-09; instr. bot, Rutgers, 10-12; fellow, Hopkins, 12-15; *assoc. prof. biol, Washington and Lee*, 15-20, *prof*, 20- Instr. bot, Woods Hole, 17-19. A.A; Bot. Soc; Eugenics Research Ass. Fertilization and hybridization in ferns; marine Algae of southern United States; periodicity of reproduction and alternation of generations in *Dictyota dichotoma*; physiology of fertilization; structure of vegetative and fruiting Algae cells.
- Hrdlička, Dr. A(leš)**, U. S. National Museum, Washington, D. C. **Anthropology*. Humpolec, Bohemia, March 30, 69. M.D, N. Y. Eclectic Col, 92; N. Y. Homeop. Med. Col, 94; Paris, 96. In charge physical anthrop, Hyde exped. for Am. Museum Nat. Hist, 99-03; asst. curator in charge, *div. physical anthrop, U. S. Nat. Museum*, 03-10, *curator*, 10- Intern, Middleton Hosp, 94-96; assoc. anthrop, N. Y. Path. Inst, 96-99; anthrop. expeditions to Mex, 98, 02, 05; various parts of U. S, 99-; Egypt and Europe, 09; S. Am. and Mex, 10; Europe, Siberia and Mongolia, 12; Peru, 13; east. Asia, 20; lecturer anthrop, Georgetown, 19; prof, American Univ, 20-; sec'y, committee on anthrop, Nat. Research Council. Assoc. ed, 'Am. Naturalist,' 01-08; ed, 'Jour. Physical Anthrop,' 18- Mem. managing board, Am. Sch. Research; judge, anthrop. exhib, La. Purchase Expos, 04; Jamestown Expos, 07; author exhibits physical anthrop. and prehist. Am. path, Panama-Calif. Expos, 15-16. Sec'y, 19th Int. Cong. Americanists; sect. anthrop, second Pan-Am. Sci. Cong. A.A (chairman H, 18); Ass. Anat; Anthrop. Ass; Philos. Soc; fel. Am. Acad; Wash. Acad. (v. pres, 17); Wash. Anthrop. Soc. (pres, 07); Wash. Biol. Soc; fel. Anthrop. Inst. Gt. Britain and Ireland; Soc. d'Anthrop. de Paris; Paris Soc. des Américanistes; for. mem. Bohemian Acad; cor. mem. Bohemian Ethnol. Soc; Royal Bohemian Ass. Sci; Liège Soc. d'Anthrop; Vienna Anthrop. Gesell; Portuguese Soc. d'Anthrop. e Ethnol; Anthrop. Societies of Rome and Florence; Anat. and Anthrop. Ass. China. Defective classes; physical anthropology and genesis of American Indians; antiquity of man; racial osteology; anthropology of American whites and negroes, of Egyptians and Slavs, of Peru, Mexico and Asia; history of physical anthropology; anthropometry.
- Huard, Rev. Canon Victor A(lphonsus)**, 2 Port-Dauphin St, Quebec, Can. *Zoology, Entomology*. Quebec, Feb. 28, 53. Sem. Quebec; Sc.D, Laval. Prof. French, Latin, Greek, literature and rhetoric, various institutions, 75-93; ed. and publisher, 'Le Naturaliste Canadien,' 94-; curator, *Museum Pub. Instruction, Que*, 04-Superior, Chicoutimi Sem, 96-99; ed, 'La Semaine Relig. de Quebec,' 01-13. A.A; Ass. Econ. Entom; Entom. Soc; fel. Royal Soc. Can; Soc. d'Hort. et de Bot. Bouches-du-Rhone; Soc. entom. de Belg.

- Hubbard, Bela**, Woods Hole, Mass. *Geology*. Detroit, Mich., Aug. 10, 90. B.S., Columbia, 14, A.M., 16. Asst. geol. Columbia, 15-17; lecturer, Queen's (Can), 19-20. Field geologist, Geol. Surv. of Mich., summer, 15; mem. N. Y. Acad. Sciences geol. exped. to P. R., summer, 16; topog. aid, U. S. Geol. Surv., summer, 17. Paleont. Soc.; assoc. Min. and Metal. Eng. Paleontology; stratigraphic geology.
- Hubbard, Prof. Geo(rge) D(avid)**, Oberlin College, Oberlin, Ohio. *Geography, Geology*. Tolono, Ill., May 12, 71. B.S., Illinois, 96, fellow, 96-97, M.S., 98; A.M., Harvard, 01; Ph.D., Cornell, 05. Asst. geol. Illinois, 97-00; dept. geog., East. Ill. State Nor. Sch., 01-03; physical geog., Cornell, 03-04, instr., 04-05; asst. prof. geol., Ohio State, 05-10, sec'y, col. educ., 07-10; *prof. geol. and geog. and head of dept., Oberlin, 10*-Temporary field asst. glacial geol., U. S. Geol. Surv., 04-05; asst. geologist, Ohio Geol. Surv., 06-; mem. Int. Geog. Cong., 04; assoc. ed., 'Ohio Naturalist,' 06-; 'Ohio Jour. Science.' A.A.; Ass. Geog.; Am. Geog. Soc.; Geol. Soc.; Meteorol. Soc.; Ohio Acad. (pres., 15). Geographic influence of gold and silver in the development of the United States; influence of physiography and geography on industrial development; physiography of Ohio; geology of Peterstown, Virginia, quadrangle and of Washington, Vermont, quadrangle.
- Hubbard, Dr. J(ohn) C(harles)**, New York University, New York, N. Y. *Physics*. Boulder, Colo., April 16, 79. B.S., Colorado, 01; Ph.D., Clark, 04, hon. fellow, 06-10. Instr. *physics*, Simmons, 04-05; asst. prof., N. Y. Univ., 05-06; Clark, 06-11, *prof.*, 11-16; N. Y. Univ., 16-Capt. Sig. C., 17-18, major, A.E.F., 18-19. A.A.; Physical Soc.; Am. Acad. Spark discharge; distributed capacity of solenoids; binary mixtures; period of electrical oscillations; dielectric constants; surface tension; inductive electrical circuits; visual and auditory phenomena; theory of binary mixtures.
- Hubbard, Dr. Lucius L(ee)**, Houghton, Mich. *Geology, Mining*. Cincinnati, Ohio, Aug. 7, 49. A.B., Harvard, 72; LL.B., Boston, 75; Ph.D., Bonn, 87. Asst. Mich. Geol. Surv., 91-93; asst. instr. miner, Mich. Col. Mines, 91-93; state geologist, Mich., 93-99; consulting geologist. Regent, Michigan, 11- Lake Superior Min. Inst. Correlation of Keweenaw beds.
- Hubbard, Prof. Marion E(lizabeth)**, Wellesley College, Wellesley, Mass. *Zoology*. McGregor, Iowa, Aug. 31, 68. Mt. Holyoke, 86-89; B.S., Chicago, 94. Asst. science and language, high sch., Eau Claire, Wis., 89-93; instr. *zool.*, Wellesley, 94-01, assoc. prof., 02-16, *prof.*, 17- A.A. Poison glands of some California salamanders; order of succession of somites in the chick; variation in certain beetles.
- Hubbard, Prevost**, 25 W. 43d St., New York, N. Y. *Chemistry*. Washington, D. C., Nov. 2, 81. George Washington, 03, 06. Chemist, B. P. Clapp Ammonia Co., 00-02; U. S. Treas. Dept., 03; asst. chemist, office of pub. roads, U. S. Dept. Agr., 05-07, chemist, 07-10; lecturer highway eng., Columbia, 10-14; mem. advisory board on highways, N. Y. State Dept. Efficiency and Econ., 13-14; chem. engineer and chief, div. tests and research, bur. pub. roads, U. S. Dept. Agr., 14-19; *chem. engineer, The Asphalt Ass., 19*- Chairman, sub-committee on cements, Nat. Research Council, 17-19. A.A.; Chem. Soc.; Soc. Test. Mat.; Soc. Munic. Improv.; assoc. Civil Eng.; Road Ass.; Int. Ass. Test. Mat. Decomposition of the feldspars; extraction of potash from feldspathic rocks; dust preventives and road binders; chemical road materials; physical and laboratory tests of road building materials.
- Hubbard, Dr. W(infield) S(cott)**, Ramsey, N. J. *Chemistry*. Ogden, Utah, March 7, 84. Ph.G., Illinois, 04; B.S., Michigan, 08; A.M., Columbia, 09; Ph.D., Wisconsin, 11. Asst. org. chem., Wisconsin, 09-11, instr. food and drug anal., 11-14; org. chemist, *bur. chem., U. S. Dept. Agr.*, 14-17, chief control chemist, 18-19, *org. chemist*, 19-Chem. Soc.; Pharmaceut. Ass. Food; drugs; enzymes.
- Hubble, Dr. Edwin P(owell)**, Mt. Wilson Observatory, Pasadena, Calif. *Astronomy*. Marshfield, Mo., Nov. 20, 89. B.S., Chicago, 10, Ph.D., 17; B.A., Oxford, 12, M.A. Asst., Yerkes Observatory, 14-17; *astronomer, Mt. Wilson Observatory, 19*- Major, Inf., 17-19. Astron. Soc. Nebulae.
- Hubbs, Carl L(eavitt)**, Museum of Zoology, Ann Arbor, Mich. *Zoology*. Williams, Ariz., Oct. 18, 94. A.B., Stanford, 16, A.M., 17. Asst. curator ichthyol. and herp., Field Museum Nat. Hist., 17-20; *curator fishes, museum zool., Michigan, 20*- Asst. ichthyol. survey, Bonneville Basin, Utah, 15. A.A.; Soc. Ichthyol. and Herp.; Calif. Acad.; Ill. Acad.; Wash. Biol. Soc. Ichthyology; taxonomy, distribution, ecology, variation and life histories of fishes.
- Huber, Prof. G(ottlieb) Carl**, 1330 Hill St., Ann Arbor, Mich. **Anatomy, Histology, Embryology*. Hoobly, India, Aug. 30, 65. M.D., Michigan, 87; Berlin, 90-91; Prague, 95. Asst. demonstrator anat., *Michigan, 87-89*, instr. histol., 89-91, asst. prof. histol. and embryol., 91-98, junior prof. anat. and director, histol. lab., 98-03, prof. histol. and embryol. and director, histol. lab., 03-14, *prof. and director, anat. lab., 14*- Prof. embryol., Wistar Inst., 11-12, mem. advisory board; assoc. ed., 'Am. Jour. Anat.'; managing ed., 'Anat. Record'; contract surgeon peripheral nerve repair, U.S.A., 18-20. Prize, Am. Physiol. Soc., 01. A.A.; Soc. Nat.; Philos. Soc.; Ass. Anat. (sec'y and treas., 04-14, pres., 15, 16); Physiol. Soc.; Ass. Path. and Baet.; Soc. Exp. Biol.; Am. Med. Ass.; Harvey Soc.; Phila. Acad.; Phila. Col. Physicians; fel. Royal Micros. Soc. Nerve regeneration and degeneration; microscopic anatomy of sympathetic nerves of vertebrates; sensory nerve endings; neuroglia tissue of vertebrates; neuroglia during degeneration of nerve tissues; degeneration and regeneration of motor and sensory nerve endings; development and morphology of uriniferous tubules in mammals; development of the white rat; development of the chorda dorsalis.
- Huber, Dr. Harry Lee**, 920 Monroe Building, Chicago, Ill. *Medicine*. Ill., Aug. 1, 83. B.S., Chicago, 14, M.S., 16, Ph.D., 17, M.D., 18. Asst. anat., Chicago, 12-13, path., 14-17, mat. med., Rush Med. Col., 17-18. Am. Med. Ass. Physiology; pathology; ammonia in gastric juice;

- chemotherapy of organic copper; fat embolism; asthma.
- Huber, Prof. H(arvey) E(vert)**, Ada, Ohio. *Botany*. Bluffton, Ohio, March 19, 84. A.B., Ohio Northern, 09; A.M., Yale, 12, 12-13; Wisconsin, 20. Teacher bot, high sch, Glenwood Springs, Colo, 09-11; *prof. biol*, Ohio Northern, 13-18; Bluffton, 18-19; *Ohio Northern, and dean, col. liberal arts*, 19- Field plant pathologist, bur. plant indust, U. S. Dept. Agr, summer, 18. Ohio Acad. Plant pathology; leaf spot diseases.
- Hubert, Ernest E(verett)**, Old Soils Building, Madison, Wis. *Forestry*. Philipsburg, Mont. Sept. 17, 87. B.S., Montana, 12, M.S., 18. *Scientific asst, bur. plant indust, U. S. Dept. Agr*, 13- A.A.; Phytopath. Soc; assoc. Soc. Foresters. Forest pathology, sanitation and hygiene.
- Hudson, Charles John**, 7 Cutting Ave, Worcester, Mass. *Ceramics*. Clinton, Mass, Oct. 28, 86. A.B, Amherst, 10, A.M, 11. Instr, Amherst, 10-12; asst. astron, Allegheny Observatory, 12-17; *research asst, Norton Co*, 17- Ceramic Soc; Astron. Soc.
- Hudson, Prof. C(larence) W(alter)**, 85 Livingston St, Brooklyn, N. Y. *Civil engineering*. Manasquan, N. J, May 20, 67. C.E., Lehigh, 89. Designing engineer, Phoenix Bridge Co, 90-06; *prof. civil eng*, Cooper Union, 07-09; *Brooklyn Polytech*, 09- Consulting bridge and struct. engineer, 06- Civil Eng. (director, 20-). Deflections and stresses of structures.
- Hudson, Dr. C(laude) S(ilbert)**, Samuel Heath Co, Trenton, N. J. **Chemistry*. Atlanta, Ga, Jan. 26, 81. B.S., Princeton, 01, M.S., 02, Ph.D., 07. Research asst. physical chem, Mass. Inst. Tech, 03-04; instr. physics, Princeton, 04-05; Illinois, 05-07; asst. physicist, U. S. Geol. Surv, 07-08; asst. chemist, bur. chem, U. S. Dept. Agr, and later chief of carbohydrate lab, 08-19; *with Samuel Heath Co*, 19- Nichols medal, Chem. Soc, 16. Mem. Am. Commission on Org. Chem. Nomenclature, 12. Chem. Soc; Soc. Biol. Chem. Laws of action of enzymes; constitution of complex sugars; the forms of milk sugar; mutarotation; hydration in solution; osmotic pressures; mutual solubility of liquids; action of sacroclastic enzymes; mutarotation of rare sugars; decolorizing carbon.
- Hudson, George H(enry)**, 39 Broad St, Plattsburgh, N. Y. *Biology, Geology*. North Bangor, N. Y, Oct. 1, 55. Private instruction. Private teacher music, bot, zool, etc, 79-90; teacher nat. science, *State Nor. Sch, Plattsburgh*, 90-92, v. principal, in charge science, 92-07, *director science and supervisor nature study*, 07- A.A.; Ass. Econ. Entom.; Geol. Soc; Paleont. Soc; New Eng. Hist. and Geneal. Soc; various educ. societies. Flora, Mollusca and Lepidoptera of Clinton County, N. Y; times of flight and egg-laying of moths; educational methods in light of theory of evolution; Pelmatozoa of Chazy epoch; geology of Valeour Island, Lake Champlain and of Champlain Valley; methods of illustrating paleobiology and paleohistology.
- Hudson, Dr. Jessie B(lanche)**, Carroll, Iowa. *Bacteriology*. Franklin Co, Iowa, March 4, 70. B.S, B.L, Iowa State, 93; M.D, Iowa, 08, M.S., 10; Pennsylvania, 12, 13. Principal, Ward Sch, Hampton, Iowa, 93-95; high sch, Lansing, 98-03; first asst. state bacteriologist, Iowa State Board of Health, 08-12; *practising physician*. A.A.; Am. Med. Ass; Soc. Bact; Pub. Health Ass; Nat. Child Labor Committee. Bacteriology of the ear.
- Huff, Dr. Wilbert J(ames)**, 5350 Beeler St, E. E, Pittsburgh, Pa. *Chemistry*. Butler, Pa, Oct. 4, 90. A.B, Yale, 14, fellow, 14-17, Ph.D, 17. *Research chemist*, Barrett Co, 17-18; *Bur. Mines*, 19- Lieut. C. W. S., 18-19. Chem. Soc. Physiological and organic chemistry; hypophosphoric acid; coal-tar chemistry; organic catalysis; after-corrosion in firearms.
- Huff, Dr. W(illiam) B(ashford)**, Bryn Mawr, Pa. *Physics*. Boscobel, Wis, Oct. 12, 66. A.B, Wisconsin, 89; A.M, Chicago, 96; Ph.D, Hopkins, 00; Cambridge, 05-06. Instr. math, high sch, Milwaukee, 93-96; student asst. *physics*, Hopkins, 99-00, asst, 00-01, instr, 01-02; assoc, *Bryn Mawr*, 02-05, assoc. prof, 05-09, *prof*, 09- With Bur. Standards, 18-19; U. S. Gen. Hosp, 19. A.A.; Physical Soc; Soc. de Physique. Spectroscopy; radioactivity.
- Huffman, Dr. Otto V**, 771 Madison Ave, New York, N. Y. *Pathology*. Dayton, Ohio, Feb. 7, 82. M.D, Columbia, 03. Instr. Cincinnati, 10-12; Columbia, 12-13; investigator, med. schools and laboratories for N. Y. State Educ. Dept, 13-15; lecturer and dean, Long Isl. Col. Hosp, 15-20; *assoc. prof. med, N. Y. Post-Grad. Med. Sch*, 20- A.A.; Ass. Path. and Bact; N. Y. Acad. Med. Ectopic pregnancy.
- Hufford, Prof. Mason E(dward)**, Indiana University, Bloomington, Ind. *Physics*. Frankfort, Ind, Sept. 27, 82. A.B, Indiana, 11, A.M, 12, Ph.D, 16. Instr. physics, Indiana, 13-17; asst. physicist, Bur. Standards, 17-18; *asst. prof. physics*, Swarthmore, 18-19; *Indiana*, 19- Physical Soc; Ind. Acad. Diffraction photographs.
- Hughes, Prof. A(rthur) L(ewelyn)**, Queen's University, Kingston, Ont, Can. **Physics*. Liverpool, England, Dec. 18, 83. Oliver Lodge fellow, Liverpool, B.Se, 06, D.Sc, 12; B.A, Cambridge, 10. Asst. demonstrator *physics*, Cavendish Lab, Cambridge; asst. prof, Rice Inst; *research prof, Queen's (Can)*. MacKinnon student, of the Royal Soc, London. A.A.; Physical Soc. Photoelectricity.
- Hughes, Prof. H(ector) J(ames)**, Harvard University, Cambridge, Mass. *Civil engineering*. Centralia, Pa, Oct. 23, 71. A.B, Harvard, 94, B.S, 99. Asst. town engineer's office, Brookline, Mass, 94-98; res. engineer, C. B. and Q. R. R, 99-02; engineer, Am. Bridge Co, 02; instr. *civil eng, Harvard*, 02-03, asst. prof, 03-13, *assoc. prof*, 13-14, *prof*, 14-, *dean, eng. sch*, 20- A.A.; Civil Eng; Eng. Educ; Soc. Test. Mat; Am. Acad; Boston Soc. Civil Eng. Hydraulics; highway construction.
- Hughes, Prof. Horatio**, Charleston, S. C. *Physical chemistry*. Charleston, S. C, Oct. 20, 85. B.S, Col. of Charleston, 05, A.M, 06; Ph.D, Hopkins, 13. Chem. engineer, Gen. Asbestos and Rubber Co, 08-11; asst. *prof. chem*, Ga. Tech, 13-16; *prof, Florida State*, 19- A.A.; Chem. Soc;

- Electrochem. Soc. Electrical conductivity; electrochemistry.
- Hughes, Howard R(ober) t**, Hughes Tool Co, Houston, Tex. *Engineering*. Lancaster, Mo, Sept. 9, 69. Harvard, 97. *Pres*, Sharp-Hughes Tool Co, 13-14; *Hughes Tool Co*, 14- Research for British, French, Russian, and U. S. governments, 16- Min. Eng. Rotary drills.
- Hughes, John L(eroy)**, Connecticut Agricultural College, Storrs, Conn. *Chemistry*. Brookfield, Mass, April 21, 87. A.B, Clark, 09, A.M, 10. *Instr. chem, Conn. Col*, 11- A.A; Chem. Soc. Analytical chemistry.
- Hughes, Prof. J(osiah) S(impson)**, Manhattan, Kans. *Biochemistry*. Ohio, 84. Ph.D, Ohio State, 17. *Prof. chem, Kansas State*, 10- Nutrition.
- Hulbert, R(ober) t**, Agricultural College, N. Dak. *Chemistry*. Detroit, Mich, Jan. 9, 87. B.S, Michigan, 12. Bacteriologist, state pub. health lab, North Dakota, 12-14; *sanit. chemist, N. Dak. Col*, 14- Sanitation; water softening and purification; ground and natural waters; sewage.
- Hulburt, Dr. E(dward) O(ison)**, Johns Hopkins University, Baltimore, Md. *Physics*. Vermilion, S. Dak, Oct. 12, 90. A.B, Hopkins, 11, Ph.D, 15. Carnegie research asst, Hopkins, 15-16; instr. physics, Western Reserve, 16-17; physicist, Westinghouse Lamp Co, 17; capt, Sig. C, A. E. F, 17-19; *instr. physics, Hopkins*, 19- Physical Soc. Physical optics; wireless telegraphy.
- Hulburt, Prof. L(orrain) S(herman)**, Johns Hopkins University, Baltimore, Md. **Mathematics*. Albany, Wis, March 8, 58. A.B, Wisconsin, 83, A.M, 88; Göttingen, 89-90; fellow, Clark, 91-92; Ph.D, Hopkins, 94. Prof. math. and astron, South Dakota, 87-91; instr. and assoc. *math, Hopkins*, 92-97, *collegiate prof*, 97- Math. Soc; Math. Ass; Circolo Mat. di Palermo. Plane algebraic curves.
- Hulett, Dr. George A(ugustus)**, Princeton, N. J. **Physical chemistry*. Will Co, Ill, July 15, 67. A.B, Princeton, 92; Ph.D, Leipzig, 98. Asst. chem, Princeton, 92-96; instr, Michigan, 99-04, asst. prof. *physical chem*, 04-05; *Princeton*, 05-09, *prof*, 09- Chief chemist, U. S. Bur. Mines, 12; mem. for. service committee, Nat. Research Council, 17; mem. research div, C. W. S, 17-18. Physical Soc; Chem. Soc; Electrochem. Soc; Philos. Soc. Surface tension and solubility; nature of precipitates; standard cells; electrochemical equivalent; isomorphism in precipitates; electromotive force of amalgams; silver and cadmium coulometers; occlusions in electrodeposits; cool and thermal decompositions; properties of carbon; decomposition potentials.
- Hull, Dr. Albert W(allace)**, 106 Waverly Place, Schenectady, N. Y. **Physics*. Southington, Conn, April 19, 80. A.B, Yale, 05, Ph.D, 09. Instr. physics, Worcester, 09-12, asst. prof, 12-14; *research physicist, Gen. Elec. Co*, 14- Physical Soc. Photo-electrics; X-rays; thermionic vacuum relays.
- Hull, Dr. Clark L(eonard)**, University of Wisconsin, Madison, Wis. *Psychology*. Akron, N. Y, May 24, 84. A.B, Michigan, 13; A.M,
- Wisconsin, 15, Ph.D, 18. Asst. psychol, *Wisconsin*, 14-16, *instr. exp. psychol*, 16-20, *asst. prof*, 20- Psychol. Ass. Experimental quantitative analysis of the higher mental processes; evolution of concepts; subconscious neural activity.
- Hull, Prof. G(ordon) F(errie)**, Hanover, N. H. **Physics*. Garnet, Ont, Oct. 7, 70. B.A, Toronto, 92, fellow, 92-95; fellow, Chicago, 95-97, Ph.D, 97; Cambridge, England, and Berlin, 05-06. Asst. *physics*, Toronto, 92-95; Chicago, 95-97; prof, Colby, 98-00; asst. prof, *Dartmouth*, 00-03, *Appleton prof*, 03- Instr. physics, Chicago, 97-98, summers, 98, 99; prof, Columbia, summers, 09-14; major, tech. staff, ordnance dept, 18-19, physics expert, 19- A.A. (v. pres, B); Physical Soc. (mem. council, 18-); Astron. Soc; Am. Acad. Electrical radiation; experimental determination of the pressure of light; the elimination of gas action in experiments on light pressure; determination of law of retardation of projectiles due to air streams of high velocity; physics of artillery.
- Hull, Dr. Thomas G(ordon)**, Massachusetts Agricultural College, Amherst, Mass. *Bacteriology*. Southington, Conn, Dec. 21, 89. Ph.B, Yale, 13, M.S, 15, Ph.D, 16. Bacteriologist and asst. pub. health, Am. Museum Nat. Hist, 16-17; *Mass. Col*, 19- Chief, sect. exhibits, Food Ad, 17-18; lieut. Sanit. C, 18-19; abstractor, 'Abstracts of Bacter.' Soc. Bact; Pub. Health Ass; fel. N. Y. Acad. Influence of diet on intestinal bacteria; poliomyelitis; diseases of domestic fowl.
- Humbert, Dr. Eugene P(eter)**, College Station, Tex. *Plant breeding*. Corning, Iowa, Sept. 1, 81. B.S.A, Iowa State, 06; M.S, Cornell, 08, Ph.D, 10. Instr, Iowa State, 06-07; asst. plant breeding, Cornell, 08-10; plant physiologist, U. S. Dept. Agr, 10; assoc. biologist, Maine Exp. Sta, 11; agronomist, N. Mex. Col. and Exp. Sta, 12-15; *plant breeder, Tex. Col*, 16- A.A; Soc. Nat; Soc. Agron. Genetics.
- Hume, Prof. A(lbert) N(ash)**, Agricultural Experiment Station, Brookings, S. Dak. *Agronomy*. Plymouth, Ind, Dec. 3, 78. B.S.A, Purdue, 00, M.S, 02; Leipzig, 07; Ph.D, Göttingen, 10. Asst. agr, Purdue, 01-02; instr, Winona Inst, 02-03; instr, assoc. and asst. prof. crop production, Illinois, 04-11; *prof. agron, S. Dak. Col*, and *agronomist, Exp. Sta*, 11- A.A; Soc. Agron. Crop improvement.
- Hume, Prof. Alfred**, University, Miss. *Mathematics*. Beech Grove, Tenn, Dec. 1, 66. B.E, Vanderbilt, 87, C.E, 88, Sc.D, 90. Fellow and instr. civil eng, Vanderbilt, 87-90; *prof. math, Mississippi*, 90-, v. *chancellor and dean, acad. dept*, 05-, acting chancellor, 06-07. A.A; Eng. Educ; Eng. Ass. of the South. (pres, 14).
- Hume, Dr. George S(herwood)**, Geological Survey of Canada, Ottawa, Can. *Geology*. Milton, Ont, 93. B.A, Toronto, 15; Ph.D, Yale, 20. *With Can. Geol. Surv*, 13-16, 20- Paleont. Soc. The Lake Timiskaming district, Ontario.
- Hume, Prof. H. Harold**, Glen St. Mary, Fla. *Botany, Horticulture*. Russel, Ont, June 13, 75. B.S.A, Iowa State, 99, M.S, 01. Prof. bot. and hort, Florida, 99-04; hort, N. C. Col, and

- state horticulturist, N. C. 04-06; v. pres. and sec'y, *Glen St. Mary Nurseries Co.*, 06-20, pres, 20-; *E. O. Painter Fertilizer Co.*, 18- Soc. Hort. Sci; Pomol. Soc; Nat. Nut Growers Ass; Iowa Acad; St. Louis Acad. Horticulture; citrus fruits; pecans; crossing and botany of persimmons; citrus fruits.
- Hummel, J(ohn) A(dolph)**, 2143 Commonwealth Ave, St. Paul, Minn. *Chemistry*. Washington Co, Minn, June 12, 75. B.Agr, Minnesota, 99. Chemist, Minn. State Dairy and Food Dept, 99-00; asst. prof. agr. chem, Minnesota, and asst. chemist, Exp. Sta, 00-09; *chemist, Minn. State Grain Inspection Dept*, 17- A.A. Agricultural chemistry.
- Hummell, Prof. R(obert) C(leveland)**, 11325 Knowlton Ave, Cleveland, Ohio. *Chemistry*. Lithopolis, Ohio, Jan. 20, 85. B.S. Otterbein, 11; fellow, Ohio State, 11-13, A.M, 12, Ph.D, 18. Asst. chem, Ohio State, 13-14, instr, 14-17; *asst. prof, Case*, 17- A.A; Chem. Soc. (sec'y, Columbus sect, 16). Inorganic chemistry.
- Humphrey, C(larence) J(ohn)**, University of Wisconsin, Madison, Wis. *Forest pathology*. Wakesman, Ohio, March 3, 82. A.B, B.S.(forestry), Nebraska, 06. In office wood preservation, U. S. Forest Service, 06-07; asst. mycol, Cornell, 07-09; *in charge path. investigations, forest products lab, Forest Service, U. S. Dept. Agr.*, 10-; *lecturer forest path, Wisconsin*, 13- A.A; Bot. Soc; Phytopath. Soc; Wis. Acad. Life history, distribution, morphology and control of timber destroying fungi.
- Humphrey, Prof. Geo(rge) C(olvin)**, 438 University Farm Place, Madison, Wis. *Animal husbandry*. Palmyra, Mich, Feb. 13, 75. B.S, Mich. Agr. Col. Instr. *animal husbandry*, Mich. Agr. Col, 02-03; *prof. and chairman of dept, Wisconsin*, 03- The feeding of various farm animals; milking machine; sheep and dairy cattle breeding; the value of various grain rations for mutton production; the growth and development of young animals receiving their nutrients from a single plant source; the relation of medium and high protein rations to milk secretion and to milk and butter fat; the influence of a high protein ration on the growth and quality of wool.
- Humphrey, Prof. Harry Baker**, U. S. Department of Agriculture, Washington, D. C. *Botany*. Granite Falls, Minn, Aug. 4, 73. B.S, Minnesota, 99; Ph.D, Stanford, 07. Asst. bot, Minnesota, 98-99; acting instr, Stanford, 05-08; asst. prof, Wash. State, 08-10, plant pathologist, Exp. Sta, 08-12, prof. plant path, 10-12, bot. and plant path, 12; *pathologist in charge cereal disease investigation, bur. plant indust, U. S. Dept. Agr.*, 13- Instr. in charge bot, Stanford Marine Biol. Summer Sch, 06, 07, 08. A.A; Ecol. Soc; Am. Geog. Soc. Plant pathology; development of *Fossombronina longiseta* Aust; morphology and physiology of some California Hepaticae; life history and control of tomato blight.
- Humphrey, Miss Lillian E(aton)**, Ironton High School, Ironton, Ohio. *Botany*. Ironton, May 5, 89. A.B, Ohio State, 13, A.M, 14, B.S.E, 16. Asst. bot, Ohio State, 12-14; *head, science dept, Ironton High Sch*, 14- Bot. Soc; Ohio Acad. Systematic botany; cytology; ecology.
- Humphrey, Richard L(ewis)**, Harrison Building, Philadelphia, Pa. *Civil engineering, Chemistry*. Marblehead, Mass, Oct. 19, 69. C.E, Pennsylvania, 91, A.M, 93. R. R. draftsman and topographer, 90-91; city draftsman and engineer, Phila, 91-92; founder and engineer in charge, City Test. Lab, Phila, 92-99; designer, engineer and gen. manager, Buckhorn Portland Cement Co, 99-03; *consulting engineer, Pa. R. R. Co, and other corporations*, 99- Engineer in charge, cement exhibit, Ass. Am. Portland Cement Mfrs, La. Purchase Expos, 04; engineer in charge, struct. mat. test. laboratories, U. S. Geol. Surv. Gold medal, La. Purchase Expos, 04. U. S. delegate, Int. Cong. Test. Mat, Copenhagen, 09 (hon. pres). A.A; Civil Eng; Chem. Soc; Soc. Chem. Indust; Seismol. Soc; R. R. Eng; Soc. Test. Mat; Nat. Ass. Cement Users (pres, 05-); Franklin Inst; Phila. Eng. Club; Int. Ass. Test. Mat. (sec'y, Am. sect, 98-00); Soc. des Ing. civils de France. Manufacture, use and tests of cement, concrete, and other materials of construction; theory of concrete construction; abnormal behavior of cement as to time of setting; action of salt water and alkali on cement and other materials; corrosive tests.
- Humphreys, Pres. Alex(ander) C(rombie)**, Stevens Institute of Technology, Hoboken, N. J. *Engineering*. Edinburgh, Scotland, March 30, 51. M.E, Stevens, 81; hon. Sc.D, Pennsylvania, 03; LL.D, Columbia, 03; N. Y. Univ, 06; Princeton, 07; Rutgers and Brown, 14; E.D, Rensselaer, 18. Sec'y and supt, Bayonne and Greenville Gas Light Co, 72-81; chief engineer, Pintsch *Lighting Co, 81-85; gen. supt. and chief engineer, United Gas Improv, 85-94; pres, Humphreys and Glasgow; pres, Buffalo Gas Co; *pres, Stevens*, 02- Trustee and mem. exec. committee, Carnegie Foundation for Adv. Teaching. A.A; Mech. Eng. (manager, pres, 11); Min. Eng. (councilor); Civil Eng; Eng. Educ; Soc. Chem. Indust; Am. Gas Inst. (pres, 08); Inst. Consulting Eng. (pres, 20); Am. Acad; Soc. Indust. Educ. (pres, 09); New Eng. Ass. Gas Eng; Pacific Coast Gas Ass; British Inst. Civil Eng; British Ass. Technical education; candle power; illumination; photometry; water gas.
- Humphreys, Prof. D(avid) C(arlisle)**. Lexington, Va. *Civil engineering*. Chatham Hill, Va, 55. C.E, Washington and Lee, 78. Draughtsman for Jed. Hotchkiss and B. and O. R. R, 72-75; teacher, McDonogh Sch, Md, 78-79; U. S. asst. engineer, improv. of the Missouri River, 79-85; *prof. applied math, later civil eng, Washington and Lee*, 85-, dean, sch. eng, 02- Res. hydrographer, U. S. Geol. Surv, 95-07. A.A; Civil Eng; Eng. Educ. Water resources of Virginia and West Virginia.
- Humphreys, Dr. W(illiam) J(ackson)**, U. S. Weather Bureau, Washington, D. C. **Physics*. Gap Mills, W. Va, Feb. 3, 62. A.B, Washington and Lee, 86, C.E, 88; Virginia, 88-89; fellow, Hopkins, 95-96, Ph.D, 97. Prof. physics and math, Miller Sch, Va, 89-93; physics and chem, Washington (Md), 93-94; instr. physics, Virginia, 97-05; supervising director, Mt.

- Weather Observatory, 05-08, *prof. meteorol. physics, U. S. Weather Bur, 05-*; *George Washington, 11-* Assoc. ed, 'Jour. Franklin Inst,' 13-; v. chairman, sect. meteorol. Geophys. Union; mem. naval observatory eclipse exped. to Ga, 00; Sumatra, 01. Longstreth medal, Franklin Inst, 13, Potts medal, 14. A.A. (sec'y, B, 12-16, mem. exec. committee, 12-, v. pres, 17); Physical Soc. (mem. council, 13-16); Meteorol. Soc. (v. pres, 20); Astron. Soc; Wash. Philos. Soc. (sec'y, 10, pres, 19); Wash. Acad. (v. pres, 19). Solution and diffusion of metals in mercury; electric discharges; flash spectra; upper inversion, or isothermal layer, of the atmosphere; pressure effect on arc spectra; double reversal; spectroscopic and general radiation and absorption problems; physics of the air.
- Hun, Dr. Henry**, 149 Washington Ave, Albany, N. Y. **Medicine*. Albany, March 21, 54. Ph.B, Sheffield Sci. Sch, Yale, 74, hon. A.M, 14; M.D, Harvard, 79. Asst. physics, Sheffield Sci. Sch, Yale, 74-75; prof. nervous diseases, Albany Med. Col, 85-15. Am. Physicians (sec'y, v. pres. and later pres); Neur. Ass. (pres). Tubal pregnancy; alcoholic paralysis; cerebral localization; myxedema; acute ascending paralysis; thrombosis of posterior, inferior, cerebellar artery; insanity; disease and immunity; myasthenia gravis; gliomatous hypertrophy of the pons; the venous pulse; diagnosis of nervous diseases.
- Hungerford, Cha(rl)e(s) W(illiam)**, 514 E. C St, Moscow, Idaho. *Plant pathology*. Fillmore Co, Minn, Feb. 26, 85. B.S, Upper Iowa, 10; M.S, Wisconsin, 15. Supt, high sch, Houston, Minn, 10-13; asst. bot. and plant path, Wisconsin, 13-15; scientific asst, U. S. Dept. Agr, 15-17; asst. pathologist, 17-19; *plant pathologist, Idaho Exp Sta, 19-* A.A; Phytopath. Soc. Cereal pathology; rust of grains.
- Hungerford, Prof. H(erbert) B(arker)**, University Heights, Lawrence, Kans. *Entomology*. Mahaska, Kans, Aug. 30, 85. A.B, Kansas, 11, A.M, 13; Ph.D, Cornell, 18. Principal, pub. schools, Haddam, Kans, 04-06; supt, Enterprise, 06-09; instr. *entom, Kansas, 11-13*, asst. prof, 13-16, assoc. prof, 17-19, *prof, 20-* Entom. surveys of Kans, Colo. and Mont. A.A; Entom. Soc; Ass. Econ. Entom. Biology of aquatic Hemiptera; Corixidae.
- Hunt, Miss Caroline L(ouisa)**, U. S. Department of Agriculture, Washington, D. C. *Food economy*. Chicago, Ill, Aug. 23, 65. A.B, Northwestern, 88. Teacher domestic econ, Lewis Inst, 96-01; prof. Wisconsin, 03-08; *specialist in food prep. and use, office home econ, U. S. Dept. Agr, 09-* Home Econ. Ass.
- Hunt, Dr. Franklin L(ivingston)**, Bureau of Standards, Washington, D. C. *Physics*. Manchester, N. H, Sept. 3, 83. B.S, Mass. Inst. Tech, 09, Ph.D, 19; A.M, Harvard, 13; Berlin, 13-14; Paris, 19-20; Cambridge, 20. Asst. physical chem, Mass. Inst. Tech, 09-10, physics, 10-11; Harvard, 15-16; instr, Mass. Inst. Tech, 11-13, 15-17; asst. physicist, *Bur. Standards, 17-18*, assoc. physicist, 18-20, *physicist, 20-* Representative in Europe, *Bur. Standards, 19-20*. A.A; Physical Soc; Wash. Philos. Soc. Aerodynamics; electrolytic conduction of aqueous solutions; X-rays.
- Hunt, Prof. H(arrison) R(andall)**, University, Miss. *Zoology*. Conneaut, Ohio, March 7, 89. B.S, Allegheny, 12; A.M, Harvard, 13, Ph.D, 16. Instr. zool, West Virginia, 16-18, asst. prof, 18-19; *prof. biol. and head of dept, Mississippi, 19-* A.A; Soc. Zool; Soc. Mammal. Experimental morphology, histology and teratology.
- Hunt, Dr. J(ames) Ramsay**, 46 W. 55th St, New York, N. Y. *Neurology*. Philadelphia, Pa, Feb. 1, 74. M.D, Pennsylvania, 93; Vienna; Berlin; Paris. Assoc. prof. neur, Columbia, 08-14. Consulting neurologist, various hospitals; Col, M.C, A.E.F. Am. Physicians; Neur. Ass. (pres, 19); Soc. Clin. Invest; Psychopath. Ass; N. Y. Neur. Soc. (pres, 09). Psychiatry; neuropathology.
- Hunt, John H(erman)**, General Motors Corporation, Dayton, Ohio. *Electrical engineering*. Saranac, Mich, 82. B.S.(E.E), Michigan, 05. Instr. elec. eng, Washington (St. Louis), 06-07; asst. prof, Ohio State, 07-08, assoc. prof, 08-11, prof, 11-12; elec. engineer, Packard Motor Car Co, 13; research engineer, Dayton Eng. Lab. Co, 13-20; *head, elec. div, Gen. Motors Research Corp, 20-* A.A; Elec. Eng; Automotive Eng; Soc. Automobile Eng. Ignition apparatus for internal combustion engines.
- Hunt, N(icholas) Rex**, 8 N. Maple St, Clarendon, Va. *Plant pathology*. Pullman, Wash, Dec. 31, 85. B.S, Wash. State, 07; M.S, California, 09. Teacher science, high sch, Pullman, Wash, 07-08; asst. botanist, Wash. Exp. Sta, 09-12; expert, B. C. Dept. Agr, 12-13; scientific asst. plant path, *bur. plant indust, U. S. Dept. Agr, 13-15*, asst. plant pathologist, 15-18, *asst. pathologist, 18-20, fed. hort. board, 20-* A.A; Phytopath. Soc. Forest tree rusts; European poplar canker; potato wart; soil sterilization.
- Hunt, Prof. Reid**, Harvard Medical School, Boston, Mass. **Pharmacology, Toxicology*. Martinsville, Ohio, April 20, 70. A.B, Hopkins, 91, fellow, 94-96, Ph.D, 96; Bonn, 92; Cornell, 95; M.D, Col. Physicians and Surg, Baltimore, 96; Chicago, 97; Frankfort, 02-04. Asst. physiol, Hopkins, 92-94; tutor, Columbia, 96-98; assoc. and later assoc. prof. pharmacol, Hopkins, 98-03; *prof. pharmacol, U. S. Pub. Health Service, 04-13; Harvard Med. Sch, 13-* Special expert in pharmacol, U. S. Dept. Agr, 01; U. S. Treas. Dept; pharmacologist, C. W. S; Mass. Dept. of Health; assoc. ed, 'Am. Year-book of Med.' Int. Physiol. Cong, Vienna, 10. Nat. Acad; A.A; Physiol. Soc; Soc. Biol. Chem; Soc. Pharmacol. (sec'y, 10, pres, 15-); Am. Physicians; Am. Acad; Chem. Soc; U. S. Pharmacopoeia Conv. (pres). Physiology and pharmacology of the circulation; thyroid; nitriles; quinin; arsphenamin; cholin compounds; alcohol.
- Hunt, Prof. Thomas F(orsyth)**, Berkeley, Calif. *Agriculture*. Ridott, Ill, Jan. 1, 62. B.S, Illinois, 84, M.S, 94, hon. D.Agr, 04; hon. Sc.D, Mich. Agr. Col, 07. Asst. to Ill. state entomologist, 85-86; asst. agr, Illinois, 86-88; asst. agriculturist, Ill. Exp. Sta, 88-91; prof. agr, Pa. State, 91-92; Ohio State, 92-03, dean, col. agr. and domestic science, 96-03; prof. agron,

- Cornell, and manager, univ. farms, 03-07; director, sch. agr., Pa. State, 07-12; *prof. agr. and dean, col. agr., California*, 12-, director, Exp. Sta, 12-19. Soc. Prom. Agr. Sci. (sec'y, 99, pres, 07-09). Cultural methods with farm crops; feeding experiments with farm animals.
- Hunt, Prof. W(alter) F(rederick)**, Mineralogical Laboratory, Ann Arbor, Mich. *Mineralogy*. Cincinnati, Ohio, Sept. 6, 82. A.B., Michigan, 04, A.M., 05, Ph.D., 15. Instr. miner, Michigan, 06-12, asst. prof., 12-18, *assoc. prof.*, 18- Asst. Mich. Geol. Surv. 06; asst. chemist, U. S. Geol. Surv. 12. A.A.; Geol. Soc.; Miner. Soc.; Chem. Soc.; Mich. Acad. Sulphur and celestite; sulphur deposits of Sicily; crystallography and composition of American minerals.
- Hunter, Dr. Albert C(layton)**, U. S. Department of Agriculture, Washington, D. C. *Bacteriology*. East Providence, R. I., Feb. 23, 93. B.S., R. I. Col., 15; M.S., Brown, 17, Ph.D., 18. *Bacteriologist*, Narragansett Bay Oyster Co., 16-18; *bur. chem., U. S. Dept. Agr.*, 18- Soc. Bact.; Pub. Health Ass. Bacteriology of shellfish and canned fish; fish decomposition.
- Hunter, Prof. Andrew**, University of Toronto, Toronto, Ont., Can. *Biological chemistry*. Edinburgh, Scotland, Sept. 28, 76. M.A., Edinburgh, 95, B.S., 99, M.B., Ch.B., 01; Berlin and Heidelberg, 05-07. Asst. physiol., Edinburgh, 02-05; Carnegie research fellow, 05-08; demonstrator physiol., Leeds, 08; asst. prof. biochem., Cornell, 08-14; biochemist, U. S. Pub. Health Service, 14-15; *prof. path. chem., Toronto*, 15-19, *biochem.*, 19- A.A.; Chem. Soc.; Physiol. Soc.; Soc. Exp. Biol.; Soc. Biol. Chem.; fel. Royal Soc. Can.; London Physiol. Soc. Precipitins; protein hydrolysis; intracellular enzymes; urocanic acid; iodine in pituitary; metabolism in pellagra; blood creatinin.
- Hunter, A(ndrew) F(rederick)**, Normal School Building, Toronto, Can. *Anthropology*. Innisfil Township, Ont., Dec. 31, 63. B.A., Toronto, 89, M.A., 92. Ed. and publisher, 'Barrie Examiner,' 89-95; with Can. Geol. Surv., 04-08; *sec'y and librarian, Ont. Hist. Soc.*, 13- A.A.; Royal Astron. Soc. Can. (recorder, 18); Can. Inst.; Ont. Archeol. Ass. (treas.). Archeology; geology and physical science; Canadian history.
- Hunter, Prof. Charles A(xtell)**, Nittany Apartment, State College, Pa. *Bacteriology*. Blue Rapids, Kans., July 30, 93. B.S., Kansas State, 15; M.S., Wisconsin, 16. Asst. bacter., Kans. Exp. Sta., 13-15; agr. bacter., Wisconsin, 15-16; instr. bacter. and bot., Florida, 16-17; asst. prof. bacter., Pa. State, 17-19, *assoc. prof.*, 19-, *bacteriologist, Exp. Sta.*, 17- Soc. Bact.; Pub. Health Ass. Silage; animal diseases.
- Hunter, Prof. G(eorge) W(illiam)**, Knox College, Galesburg, Ill. *Zoology, Pedagogy*. Mamaroneck, N. Y., April 7, 73. Col. City of N. Y., 91-93; A.B., Williams, 95, A.M., 96; fellow, Chicago, 96-98; Ph.D., N. Y. Univ., 18. Teacher biol., Hyde Park High Sch., Chicago, 98-99; head, dept. biol., DeWitt Clinton High Sch., N. Y. City, 99-19; *prof.*, Carleton, 19-20; *Knox*, 20- Lecturer methods of teaching, N. Y. Univ., 06-08, 14-16; director edue, war work council, Wash. Dist., Y. M. C. A., 18-19. A.A.; Inst. Social Sci.; Nat. Educ. Assoc. Anatomy and cytology of Tunicata; pedagogy of biology teaching in secondary schools.
- Hunter, Dr. J(oseph) Rufus, Raleigh, N. C.** *Chemistry*. Apex, N. C., June 6, 65. A.B., Wake Forest, 85, A.M., 89; Ph.D., Hopkins, 95. Teacher, private acad., Apex, N. C., 85; Rutherfordton, N. C., 87; Clayton, N. C., 88; instr. chem., Wake Forest, 88-89; prof. physics and math, State Nor. Sch., Oshkosh, Wis., 91-93; chem., Richmond, 95-05; *in life insurance business*, 05- Chem. Soc.; Chem. Gesell. Anilids of orthosulphobenzoic acid.
- Hunter, Dr. M(atthew) A(lbert)**, Rensselaer Polytechnic Institute, Troy, N. Y. *Physical chemistry*. Auckland, N. Z., Nov. 9, 78. B.S., New Zealand, 00, M.A., 01; 1851 exhibition science research scholar, London, 02, D.Sc., 04; Göttingen and Paris, 04-05. With Gen. Elec. Co., Schenectady, 06-08; asst. prof. physics and electrochem., *Rensselaer*, 08-10, *prof. electrochem.*, 10- Chem. Soc.; Electrochem. Soc.; Min. and Metal. Eng. Molecular aggregation of liquefied gases; decomposition velocity of nitrous oxide with change in temperature; detection and estimation of naphthalene in coal gas; electrical resistances and temperature coefficients of alloys; ammonia absorption with thiocyanates; preparation of pure titanium, uranium, vanadium and glucinum.
- Hunter, Prof. S(amuel) J(ohn)**, University of Kansas, Lawrence, Kans. *Zoology, Entomology*. Bandon, Ireland, Nov. 11, 66. Baker, 88; A.B., A.M., Kansas, 93; Cornell, 96; Woods Hole, 01, 02. Principal, high sch., Columbus, Kans., 90-91; Atchison Co. High Sch., Kans., 93-96; asst. prof. entom., Kansas, 96-99, *assoc. prof.*, 99-01, *comp. zool. and entom.*, 01-02, *head, dept. entom.*, 02-, *prof.*, 06-, *curator entom. collections*, 09- Director, state hort. inspection, Kans., 01-; state entomologist, 07- A.A.; Soc. Zool.; Ass. Econ. Entom.; Entom. Soc.; Kans. Acad.; E. Kans. Teachers' Ass. (pres, 95). Biology and taxonomy of Coccidae; osmosis as a factor in artificial parthenogenesis; morphology of artificial parthenogenesis; insect parasitology.
- Hunter, Walter D(avid)**, U. S. Department of Agriculture, Washington, D. C. *Entomology*. Lincoln, Nebr., Dec. 14, 75. A.B., Nebraska, 95, A.M., 97; LL.D., Tulane, 13. Instr. entom., Nebraska, 96-99; asst. entomologist, U. S. Exp. Sta., Ames, Iowa, 00; *investigator, div. entom., U. S. Dept. Agr.*, 01-, *in charge boll-weevil investigations*, 02- In charge southern field crop and tick investigations, 09; mem. fed. hort. board, U. S. Dept. Agr. A.A.; Ass. Econ. Entom.; Entom. Soc.; assoc. Ornith. Union; Wash. Entom. Soc.; Wash. Acad. (v. pres, 16).
- Hunter, Prof. Walter S(amuel)**, University of Kansas, Lawrence, Kans. *Psychology*. Decatur, Ill., March 22, 89. A.B., Texas, 10; Ph.D., Chicago, 12. Instr. philos., Texas, 12-14, adj. prof. psychol., 14-16; *prof., Kansas*, 16- Lecturer, Tulane, summer, 15; Iowa, summer, 20. Assoc. ed., 'Psychol. Bul'; 'Jour. Animal Behavior.' Lieut. and capt., Sanit. C., 17-18. A.A.; Psychol. Ass. Animal behavior; perception of motion; association; habit formation.

- Hunter, Prof. W(illiam) H(ammatt),** University of Minnesota, Minneapolis, Minn. *Chemistry.* Boston, Mass, Sept. 3, 82. A.B, Harvard, 04, A.M, 05, Ph.D, 10. Instr. chem, Bucknell, 05-06; prof, *Minnesota*, 09- A.A; Chem. Soc. Organic chemistry; chromoisomerism; reaction mechanism.
- Huntington, Prof. E(dward) V(ermilye),** 27 Everett St, Cambridge, Mass. **Mathematics.* Clinton, N. Y, April 26, 74. A.B, Harvard, 95, A.M, 97; Ph.D, Strasbourg, 01. Instr. math, Harvard, 95-97; Williams, 97-99; Harvard, 01-05, asst. prof, 05-15, assoc. prof, 15-19, *prof. mech*, 19- Ed, 'Annals of Math,' 02-11; major, Gen. Staff, 18-19. A.A; Math. Ass. (pres, 18); Math. Soc; Statist. Ass; Am. Acad; Math. Verein. Systems of postulates forming the bases of elementary mathematical theories.
- Huntington, Dr. Ellsworth,** Yale University, New Haven, Conn. **Geography, Geology.* Galesburg, Ill, Sept. 16, 76. A.B, Beloit, 97; A.M, Harvard, 02, Hooper fellow, 06-07; Ph.D, Yale, 09. Asst. to pres, Euphrates Col, Harput, Turkey, 97-01; mem. Pumpelly's Carnegie Institution exped. to Turkestan, 03-04; mem. R. L. Barrett's exped. to Chinese Turkestan, 05-06; instr. geog, Yale, 07-12, asst. prof, 12-15; private research, 15-17; *research assoc. geog, Yale*, 17- Research assoc, Carnegie Institution, 12-14. Mem. Yale exped. to Palestine, 09. Gill Memorial medal, Royal Geog. Soc; Maunoir medal, Soc. Geog. de Paris; Kane medal, Phila. Geog. Soc; medal, Harvard Travelers Club. A.A; Geol. Soc; Ass. Geog; Ecol. Soc. (pres, 17); Meteorol. Soc; Am. Acad. Climate in relation to land forms and deposits, geological and historical changes and to solar and cosmic relations; systematic anthropogeography; geographic relations of health and civilization.
- Huntington, Prof. Geo(rge) S(umner),** 437 W. 59th St, New York, N. Y. **Vertebrate morphology.* Hartford, Conn, March 21, 61. A.B, Trinity (Conn), 81, A.M, 83; M.D, Columbia, 84, hon. Sc.D, 04; LL.D, Jefferson Med. Col, 07. Asst. demonstrator *anat, Columbia*, 86-88, demonstrator, 88-89, lecturer, 89-90, *prof*, 90- Am. ed, 'Jour. Anat. and Physiol,' 98; assoc. ed, 'Am. Jour. Anat,' 00; ed, 'Am. Anat. Memoirs,' 18- A.A; Ass. Anat. (pres, 00-04); fel. N. Y. Acad. Vertebrate myology; visceral anatomy; comparative splanchnology; variation; significance of muscular variation; development of mammalian lymphatic system; development of venous system; morphology and development of vertebrate salivary system; morphology and development of lymphatic system in reptiles and amphibians; morphology and phylogeny of vertebrate respiratory system.
- Huntington, Dr. Thomas (Waterman),** 916 Mills Building, San Francisco, Calif. *Surgery.* Rockford, Ill, Jan. 16, 49. A.B, Vermont, 71, LL.D, 13; M.D, Harvard, 76. Chief surgeon, Cent. and South. Pacific Hosp, Sacramento, Calif, 85-99; *prof. clin. surg, California*, 99- Lieut, M. R. C; mem. San Francisco Board Health, 07; chief surgeon, Western Pacific R. R, 10-13; mem. Red Cross Commission to Italy, 17. Surg. Ass; Am. Med. Ass; British Med. Ass. Operative treatment of recent fractures; bowel stasis.
- Huntley, Louis Grow,** 2908 Shady Ave, Pittsburgh, Pa. *Geology.* Greenville, Mich, July 22, 85. B.S, Carnegie Inst. Tech, 08. *Mem. firm, Johnson, Huntley and Somers*, 15- Consulting petroleum engineer and geologist; asst. petrol. engineer, U. S. Bur. Mines, 12-13; pres, Island Oil and Transport Co, 18-19. A.A; Min. and Metal. Eng; West. Pa. Eng. Soc. Geology of oil and gas.
- Huntoon, Prof. L(ouis) D(oremus),** 115 Broadway, New York, N. Y. *Mining engineering, Metallurgy.* Paterson, N. J, Jan. 28, 69. Ph.G, N. Y. Col. Pharmacy, 90; E.M, Columbia, 95; hon. A.M, Yale, 08. Chemist and assayer, Colo, 95-96; N. Y, 96-03; consulting mining and metallurgical engineer, 03-05; asst. prof. mining and metal, Sheffield Sci. Sch, Yale, 05-08, prof, 08-11; *consulting mining engineer*, 11- A.A; Min. and Metal. Eng. (past chairman, N. Y. sect., and mem. exec. committee); Min. and Metal. Soc. (sec'y-treas, 16-19); Electrochem. Soc; London Inst. Min. and Metal. Ore concentration and metallurgy of gold and silver.
- Huntsman, Dr. A(rchibald) G(owanlock),** University of Toronto, Toronto, Can. *Biology.* Tintern, Ont, Nov. 23, 83. B.A, Toronto, 05, M.B, 07. Asst. *biol, Toronto*, 05-07, lecturer, 07-16, *assoc. prof*, 17-; *curator, Atlantic Biol. Sta*, 11-13, 16-; *biologist, Biol. Board of Can*, 16- A.A; Ecol. Soc; Soc. Zool; Fisheries Soc; Royal Soc. Can; Can. Inst. Ascidians; Decapoda; Amphipoda; plankton; herring.
- Hurd, Dr. Annie May,** U. S. Department of Agriculture, Washington, D. C. *Botany.* La Conner, Wash, July 28, 93. B.S, Washington (Seattle), 15, Denny fellow, 16-17, M.S, 17; fellow, California, 17-18, Ph.D, 18. *Asst. pathologist, office cereal investigations, bur. plant indust, U. S. Dept. Agr*, 18- Phytopath. Soc; West. Soc. Nat. Marine algae; wheat and grass seeds.
- Hurd, Dr. Henry M(ills),** 1023 St. Paul St, Baltimore, Md. **Psychiatry, Hospital organization.* Union City, Mich, May 3, 43. Knox, 55-58; A.B, Michigan, 63, M.D, 66, A.M, 70, LL.D, 95. Asst. physician, Mich. Asylum for Insane, 70-77, asst. supt, 78; supt, Eastern Mich. Asylum, Pontiac, 78-89; *Hopkins Hosp*, 89-11, *sec'y board of directors*, 11-, *prof. psychiat, Hopkins*, 89-06, *emer. prof*, 06- Ed, 'Bul. Johns Hopkins Hosp,' 90-; 'Am. Jour. Insanity,' 97-; 'Hopkins Hosp. Reports'; mem. Md. State Lunacy Commission, 08- A.A; Anthropol. Soc; emer. mem. Am. Physicians; Medico-Psychol. Ass. (sec'y, 93-97, pres, 99); Am. Acad. Med. (pres, 96); Am. Med. Ass; Folk-lore Soc. Hospitals, dispensaries and nursing; folk-lore of insanity; folk-lore of Maryland.
- Hurd, Prof. William D(aniel),** Southern Building, Washington, D. C. *Agriculture.* De Witt, Mich, Dec. 19, 75. B.S, Mich. Agr. Col, 99, M.Agr, 08. Instr. high sch, Lansing, 99-01; prof. hort, Sch. Pract. Agr. and Hort, Briarcliff Manor, N. Y, 01-03; agr, Maine, 03-06, acting dean, col. agr, 07, dean, 07-09; *director*, exten. work, Mass. Col, 09-19; *educ, soil improv. committee, Nat. Fertilizer Ass*, 19- Orchard inspector, Illinois, summer, 00; supervisor, extension work, R. I. Col, summer, 03. Agriculture; plant diseases; plant breeding and improvement;

farm crops; fertilizers; agriculture for secondary schools.

Hurlin, Dr. Ralph G (ibney), Russell Sage Foundation, 130 E. 22nd St, New York, N. Y. *Biology*. Antrim, N. H, Sept. 30, 88. A.B, Brown, 12, A.M, 13, Ph.D, 15. Asst. biol, Brown, 13-15; instr. biol, Clark Col, 16, asst. prof, 17-18, docent biol, Clark, 17-18; lieut, capt. and major, U.S.A., and ed, 'Weekly Statist. Report, War Dept,' 18-19; *statistician*, *Russell Sage Foundation*, 19- A.A. Histology; embryology.

Hursh, Prof. Ralph Kent, University of Illinois, Urbana, Ill. *Ceramics*. Woodstock, Ill, Dec. 21, 85. B.S, Illinois, 08. Stock and shipping clerk, Ohio Mining and Mfg. Co, 09; junior ceramic chemist, Bur. Standards, 09-11; asst, instr, assoc. and later *asst. prof. ceramic eng*, *Illinois*, 11- Ceramic Soc. (treas); Chem. Soc. Ceramic engineering; drying and burning of clay wares; molding clay products.

Hurst, Lewis A (lexander), U. S. Department of Agriculture, Washington, D. C. *Biochemistry*. Muncie, Ind, Dec. 14, 74. B.S, Purdue, 99. Scientific asst, bur. soils, *U. S. Dept. Agr*, 01-04, scientist, 04-06, *biochemist*, *bur. plant indust*, 16- A.A; Chem. Soc. Biochemistry of soils and plants; soil types; relation of soil conditions to plant growth; fertilizers; plant diseases.

Hurty, Dr. John Newell, 31 E. 11th St, Indianapolis, Ind. *Hygiene*. Lebanon, Ohio, Feb. 21, 52. M.D, Indiana, 86; Phar.D, Purdue, 96. Prof. hygiene and sanit. science, Indiana; *state health commissioner*, *Ind*, 96- Supt. hygiene exhibit, La. Purchase Expos, 04. A.A; Am. Med. Ass; Pub. Health Ass. (pres, 12).

Hurwitz, Dr. Samuel H (ayman), 516 Sutter St, San Francisco, Calif. *Medicine*. Poland, Sept. 6, 85. A.B, Harvard, 07, A.M, 08; M.D, Hopkins, 12. Instr. research med, Hooper Foundation, *California*, 15-17, *asst. prof. clin. med*, 17- Soc. Exp. Biol; Physiol. Soc; Am. Med. Ass. Experimental medicine and biology; functions of liver and kidney; hemorrhagic diseases; blood proteins.

Hurwitz, Prof. W (allie) A (braham), Cornell University, Ithaca, N. Y. **Mathematics*. Fulton, Mo, Feb. 18, 86. A.B, B.S, A.M, Missouri, 06; Ph.D, Göttingen, 10. Asst. math, Missouri, 05-06, summer, 08; instr, *Cornell*, 10-14, *asst. prof*, 14- Ed, 'Math. Monthly.' A.A; Math. Soc. (assoc. ed, 'Trans,' mem. council, 19-); Math. Ass. (mem. council, 19-). Analysis; differential and integral equations; infinite series.

Hus, Dr. Henri, New York Botanical Garden, New York, N. Y. *Botany*. Leyden, Holland, May 14, 76. B.S, California, 97, M.S, 99; Ph.D, Washington (St. Louis), 08. Asst. bot, Amsterdam, 01-03; experimenter, Mo. Bot. Garden, 05-08; instr. bot, Michigan, 08; *botanist*, U. S. Rubber Co. Exp. Sta, Sumatra; N. Y. *Bot. Garden*. Expedition to West Indies and South America, 03. Assoc. mem. Bot. Soc; Mich. Acad; St. Louis Acad. Marine algae; teratology; heredity.

Husmann, Geo (rge) C (harles) (Frederick), U. S. Department of Agriculture, Washington, D. C. *Horticulture*. Hermann, Mo, April 27, 61.

B.S.A, Missouri, 82, M.S.A, 85. Foreman, Talco vineyards and wineries, Napa, Calif, 82-87; gen. foreman, Vina wineries, Vina, Calif, 87-90; supt, Kohler and Frohling vineyards and wineries, Windsor and Glen Ellen, Calif, 90-92; asst. and later *pomologist in charge viticulture*, *bur. plant indust*, *U. S. Dept. Agr*, 01- Grand prize and gold medal, grape exhibit, Panama-Pacific Expos, 15. A.A; Pomol. Soc; Soc. Hort. Sci; Wash. Bot. Soc; Int. Viticul. Soc; hon. mem. Soc. des Viticul. de France. Viticulture; pomology.

Hussakof, Dr. L (ouis), 1537 50th St, Borough Park, Brooklyn, N. Y. *Ichthyology*, *Zoology*. New York, Nov. 19, 81. B.S, Col. City of N. Y, 00; Ph.D, Columbia, 06; Naples Zool. Sta, 09. Teacher, pub. sch, N. Y, 01-02; asst, Am. Museum Nat. Hist, 04-08, asst. curator, dept. ichthyol. and herpetol, 09-10, assoc. curator, 10-13, curator ichthyol, 14-16. A.A; Soc. Zool; Geol. Soc; Soc. Ichthyol. and Herp; Paleont. Soc; Fisheries Soc; N. Y. Acad. (sec'y, sect. biol, 09-12). Catalogs of fossil fish collections in the American Museum of Natural History and in the Buffalo Museum; evolution of fishes; fossil and existing sharks and devil fish; variation in tree foliage; history of American science.

Hussey, Prof. W (illiam) J (oseph), Ann Arbor, Mich. **Astronomy*. Mendon, Ohio, Aug. 10, 62. B.S, Michigan, 89; hon. Sc.D, Brown, 12. Principal schools, Ohio and Ill, 84-87; asst, 'Nautical Almanac' Office, 89; instr. math, Michigan, 89-91; acting director, Detroit Observatory, 91-92; asst. prof. astron, Stanford, 92-93, assoc. prof, 93-94, prof, 94-96; astronomer, Lick Observatory, 96-05; *prof. astron. and director, observatory*, *Michigan*, 05- Director, Argentine Nat. Observatory, 11-17; expert on observatory sites, Carnegie Institution, 03; in charge, Lick Observatory eclipse exped. to Egypt, 05; La Plata eclipse exped. to Brazil, 12. Lalande Prize, French Acad, 06. -A.A; Astron. Soc. (sec'y, 08-11); Math. Soc; Pacific Astron. Soc. (pres, 96); hon. mem. Soc. Astron. de Mex; for. assoc. Royal Astron. Soc. Theoretical and practical astronomy; micrometrical observations; double stars.

Huston, Prof. Henry A, 42 Broadway, New York, N. Y. *Agricultural chemistry*. Damariscotta, Maine, April 20, 58. A.B, Bowdoin, 79, A.M, 82; A.C, Purdue, 82. Asst. chem. and physics, Bowdoin, 79-80; principal and science teacher, high sch, La Fayette, Ind, 80-84; prof. physics, Purdue, 84-88, agr. chem, Purdue, and state chemist, Ind, 88-03, director, Ind. Exp. Sta, 02-03; manager, western office of propaganda dept, German Kali Works, St. Louis, 03-05, Chicago, 05-10, sec'y, Baltimore, 10-12, New York, 12-19; *tech. manager in the U. S. Potash Syndicate*, 19- Asst. state chemist, Ind, 84-86; director, Ind. Weather Service, 84-96. A.A; Agr. Chem. (pres, 95, committee on food preservatives, 95-); Chem. Soc; Ind. Acad; N. Y. Chemists Club; Landwiss. Gesell. Methods of agricultural analysis; soil improvement; swamp lands; fertilizers; phosphates; potash; the sugar-beet; composition of maize at different periods of growth; symbiotic bacteria.

- Hutcheson, Prof. T(homas) B(arksdale)**, Blacksburg, Va. *Agronomy*. Charlotte C. H., Va., March 23, 82. B.S., Va. Polytech, 06, M.S., 08; M.S.A., Cornell, 13. Instr. agron., Va. Polytech, 08-12; assoc. agronomist, Minnesota, 13-14; *agronomist*, Va. Polytech, 14- A.A.; Soc. Agron. Growth and maturity of maize.
- Hutchins, Prof. C(harles) C(lifford)**, Bowdoin College, Brunswick, Maine. **Physics*. Canton, Maine, July 12, 59. A.B., Bowdoin, 83, A.M., 86, Sc.D., 18; Harvard, 85-86; Leipzig, 99-00. *Prof. physics*, Bowdoin, 88- A.A.; Physical Soc; Am. Acad. Spectroscopy; atmospheric radiation; gaseous radiation.
- Hutchins, Lee M.**, U. S. Department of Agriculture, Washington, D. C. *Plant pathology*. Fennville, Mich., April 21, 88. B.S., Mich. Agr. Col., 13; Hopkins, 15-17, 20-21. Scientific asst., bur. plant indust., U. S. Dept. Agr., 14-17, asst. pathologist, 20. Private and lieut., Sanit. C., 17-19; bacteriologist, Univ. Montpellier. A.A.; Bot. Soc. Fruit diseases.
- Hutchins, Otis**, 212 Sixth St., Niagara Falls, N. Y. *Metallurgy*. Keene, N. H., Nov. 11, 88. B.S., Mass. Inst. Tech., 11. *Metal. engineer and director of research*, Carborundum Co., 12- Chem. Soc; Electrochem. Soc. Electrochemistry; electrometallurgy; refractories; alloys; abrasives; electric furnaces and their products.
- Hutchinson, Prof. A(ndrew) H(enderson)**, University of British Columbia, Vancouver, Can. *Botany*. York Co., Ont. B.A., McMaster, 09, M.A., 11, 13; fellow, Chicago, 13-15, Ph.D., 15. Teacher bot., Collegiate Inst., Whitby, Ont., 10; Peterborough, 11; asst. prof., Tex. Col., 15; *British Columbia*, 16-, head of dept. Bot. Soc; Phytopath. Soc; West. Acad. Nat; B. C. Acad. Morphology; cytology; fertilization; gametophytes; forests of Ontario.
- Hutchinson, Dr. Cary T(alcott)**, University Club, New York, N. Y. **Electrical engineering*. St. Louis, Mo., March 4, 66. Ph.B., Washington (St. Louis), 86; fellow, Hopkins, 88-89, Ph.D., 89. With Sprague Elec. Railway Co. and Gen. Elec. Co., 89-90; *consulting engineer*, N. Y., 90- In charge, dept. elec., Hopkins, 99-00; chief engineer, hydroelec. plant, Pa. Water Power Co; in charge electrification Great North. Ry. over Cascade Mountains. A.A.; Physical Soc; Elec. Eng. (v. pres, 99); Mech. Eng.; Franklin Inst. Determination of mercury unit; determination of absolute ohm; electromagnetic effect of convection currents.
- Hutchinson, Prof. J(ohn) I(rwin)**, Cornell Heights, Ithaca, N. Y. **Mathematics*. Bangor, Maine, April 12, 67. A.B., Bates, 89; Clark, 90-92; Ph.D., Chicago, 96. Instr. math, Cornell, 94-03, asst. prof., 03-10, prof., 10- A.A.; Math. Soc. (assoc. ed., 'Trans.' v. pres, 10). Hyperelliptic functions; theta functions; automorphic functions; surfaces.
- Hutchinson, Dr. Woods**, 26 Pemberton Square, Boston, Mass. *Medicine*. Selby, England, Jan. 3, 62. A.B., Penn (Iowa), 80, A.M., 83; M.D., Michigan, 84. Prof. anat., Iowa, 91-96; comp. path. and embryol., Buffalo, 96-00; sec'y., Oregon State Board of Health, 03-05; prof. clin. med., N. Y. Polyclinic, 05-09. Prof. methods of science teaching, dept. pedag., Buffalo, 96-98; lecturer diseases of animals, Med. Grad. Col., London, 99-00; lecturer biol., exten. dept., London, 99-00. A.A.; Soc. Nat; Am. Acad. Med. Tuberculosis in man and animals; cancer in mammals and birds; the pituitary body in acromegaly, gigantism and dwarfism; real shape of the tuberculous chest; pathology of uric acid in mammals and birds; gout; appendicitis; racial pathology, especially in Indians, Japanese and Chinese.
- Hutchison, Prof. C(laude) B(urton)**, Cornell University, Ithaca, N. Y. *Genetics*. Chillicothe, Mo., April 9, 85. B.S.A., Missouri, 03; fellow, Cornell, 12-13, M.S.A., 13; M.S., Harvard, 17. Asst. agron., Missouri, 08-09, instr., 09-10, asst. prof., 11-12, *prof.*, 13-14, farm crops and chairman of dept., 14-16; *plant breeding*, Cornell, 16- A.A.; Soc. Agron. Crop production; plant breeding.
- Hutchison, Dr. Miller Reese**, 233 Broadway, New York, N. Y. *Engineering*. Montrose, Ala., Aug. 6, 76. Marion Mil. Inst., 89-91; Spring Hill Col., 91-92, Ph.D., 14; Univ. Mil. Sch., 92-95; Ala. Polytech., 95-97, E.E., 13. Chief elec. engineer U. S. light-house for seventh and eighth districts, Spanish-Am. War; research and development, 99-10; chief engineer, Edison Lab., Thos. A. Edison, Inc., etc., 12-17, *eng. adviser*, Thos. A. Edison, 17-; *pres*, M. R. Hutchison, Inc., 17- Special gold medal from Queen of England, 02; gold and silver medals, La. Purchase Expos., 04; mem. Naval Con. Board, 15- Int. Elec. Congress, 04; Int. Eng. Cong., 15. Mech. Eng.; Automotive Eng.; Elec. Eng.; Radio Eng.; Naval Eng.; U. S. Naval Inst.; Radio Relay League; Royal Soc. Arts. Instruments for the deaf; sound propagators.
- Hutton, Prof. J(oseph) Gladden**, Brookings, S. Dak. *Agronomy*. Monticello, Ind., Nov. 3, 73. B.S., Chicago, 08; M.S., Illinois, 10. Asst. biol., Ind. State Nor. Sch., 99-01; principal, high sch., Beardstown, Ill., 01-03, supt. schools, 03-08; asst. geol., Illinois, 08-11; *assoc. prof. agron.*, S. Dak. Col., 11- Asst. to curator, Woods Hole, summer, 01; field asst., Ill. Geol. Surv., summer, 09; U. S. Geol. Surv., summer, 15; in charge, state soil survey, S. Dak. A.A.; Soc. Agron; S. Dak. Acad. (pres, 17); Ind. Acad; Ill. Acad. Soil fertility; soil survey.
- Huxley, Julian S(orell)**, Museum, Oxford, England. *Zoology*. London, England, June 22, 87. B.A., Oxford, 09, M.A.; scholar, at Naples, 09-10. Demonstrator zool., Oxford, 10-12; research assoc. Rice Inst., prof. biol., 13-18; *fellow*, New Col., and *senior demonstrator zool.*, Oxford, 19- Lecturer, Balliol Col., Oxford, 10-12, Newdigate prize, 08. A.A.; Soc. Nat; Soc. Zool; Ecol. Soc; Marine Biol. Ass. of the United Kingdom. Protozoa; regeneration of sponges; sexual selection in birds; reduction in ascidians; secondary sexual characters; metamorphosis; sex-inheritance.
- Hyde, Charles Gilman**, University of California, Berkeley, Calif. *Engineering*. Norwich, Conn., May 7, 74. B.S., Mass. Inst. Tech., 96. Engineer, Mass. State Board of Health, 96-00; filtration engineer, Phila., 00-02; Harrisburg, 02-05; *prof. sanit. eng.*, California, 05- Civil Eng; Pub. Health Ass; Water Works Ass; New Eng.

Water Works Ass. Hydraulic, economic and sanitary engineering.

Hyde, Dr. Edw(ard) P(echin), Nela Research Laboratory, Nela Park, Cleveland, Ohio. **Physics*. Baltimore Co, Md, Jan. 3, 79. A.B, Hopkins, 00, fellow, 01-02, fellow by courtesy, 02-06, Ph.D, 06. Lab. asst, Bur. Standards, 02-05, asst. physicist, 05-07, assoc. physicist, 07-08; director, *Nela Research Lab, Nat. Lamp Works*, 08-20, *director research*, 20- Am. mem. Int. Photometric Commission; mem. eng. and for. relations divisions and trustees for publication of tables of physical and chemical constants, and chairman, sub-committee on field glasses, Nat. Research Council; pres, U. S. Nat. Committee and v. pres, Int. Commission Illum. A.A.; Physical Soc; Illum. Eng. Soc. (pres, 10); Electrochem. Soc; Elec. Eng; Eng. Educ; Nat. Elec. Light Ass; Am. Gas Inst; cor. mem. London Illum. Eng. Soc. Theory of Matthews and Russell; Leonard photometers; Talbot's law for sectored disks; comparison of unit of luminous intensity of United States with those of Germany, England and France; geometrical theory of radiating surfaces; method of determining mean horizontal intensity of incandescent lamps; plain and frosted lamps; radiation from metals; radiating properties of metals; spectrophotometric methods; high temperature scale and temperature methods.

Hyde, Prof. E(dward) W(yllys), 814 Lincoln Ave, Cincinnati, Ohio. **Mathematics*. Saginaw, Mich, Oct. 17, 43. B.C.E, Cornell, 72, C.E, 74. Instr. eng, Cornell, 71-73; prof. *math*, Pa. Mil. Acad, 73-74; asst. prof, *Cincinnati*, 75-78, *prof*, 78- Assoc. ed, 'Annals of Math'; treas. and actuary, Columbia Life Ins. Co, Cincinnati. A.A. (sec'y, A, 85, v. pres, 91); Math. Soc; fel. Inst. Actuaries; Optical Soc. Vector and point analyses with their applications; surfaces represented by equations whose coefficients are homogeneous functions of the roots of a given algebraic equation.

Hyde, F(rederick) S(ackett), 215 Schermerhorn St, Brooklyn, N. Y. *Chemistry*. Brooklyn, Sept. 24, 68. Ph.B, Columbia, 93. With L. C. Tiffany, 93-94; asst. chemist, Brooklyn Health Dept, 94-98; asst. anal. chem, Columbia, 98-99; chemist, Joseph Dixon Crucible Co, 99-04; with Dr. H. N. Potter in research work, Westinghouse Elec. Co, 05-07; *consulting chemist*, 07- Chem. Soc; Soc. Chem. Indust. Identification of acetanilid, phenacetin and quinin; graphitoid silicon; assay of graphite by blast and fusion; graphitic acid; sodium nitroprussid.

Hyde, Dr. Ida H(enrietta), University of Kansas, Lawrence, Kans. *Physiology*. Davenport, Iowa, Sept. 8, 63. Illinois, 81; A.B, Cornell, 91; fellow, Bryn Mawr, 91, 91-93; Strasbourg, 93; Col. Alumnae European fellow, 94-95; Hearst research fellow, 95-96; Ph.D, Heidelberg, 96; Naples Zool. Sta, 96; Berne, 96; Radcliffe, 97; Harvard Med. Sch, 97; Liverpool, 04. Teacher, pub. schools, Chicago, 81-88; asst. biol, Bryn Mawr, 91; prof. histol. and anat, Ingalls and Dr. Sargent's Prep. Sch, Cambridge, Mass, 97-00; assoc. prof. *physiol*, Kansas, 99-05, *prof*, 05- Prof. biol, Hyannis Nor. Sch, summers, 99-01; asst. physiologist, Woods Hole, 02-03. Hon. life

mem. Am. Women's Table, Naples (sec'y, 97-00). *Physiol. Soc.* Comparative studies of respiration and circulation; the nervous system and the sense organs.

Hyde, Prof. Jesse E(arl), Adelbert College, Cleveland, Ohio. *Geology, Paleontology*. Rushville, Ohio, May 2, 84. A.B, Ohio State, 06; A.M, Columbia, 07; Harvard, 08. Asst. physiog, Harvard, 08; paleont, Columbia, 09-11; asst. prof. *geol*, Queen's (Can), 11-15; *assoc. prof*, *Western Reserve*, 15- Asst. geologist, Ohio Geol. Surv, summers, 04-05, 07-11, 15-; paelontologist, Can. Geol. Surv, summers, 12-14. A.A; Geol. Soc; Paleont. Soc; Ohio Acad. (v. pres, 19); N. Y. Acad. Paleozoic stratigraphy; physiography; Mississippian and Pennsylvanian of Ohio and Nova Scotia.

Hyde, John, 2947 Tilden St, N. W, Washington, D. C. *Anthropology, Geography*. Stalybridge, England, Dec. 16, 48. Stamford Acad; Manchester. Assoc. ed, 'Bankers' Monthly,' 85-86; expert special agent, U. S. Census, 90-94; ed, 'Nat. Geog. Mag,' 95-01; chief, bur. statist, U. S. Dept. Agr, 97-05; mem. U. S. Geog. Board, 99-05. Mem. jury awards, Trans-Miss. Expos, 98; La. Purchase Expos, 04; expert, U. S. Commission to Paris Expos, 00; U. S. Special Commission to Europe, 01, 03, 05; contributing ed, 'Japan Mail,' 06-09. A.A. (v. pres, 01); fel. Royal Statist. Soc; fel. Royal Geog. Soc; fel. Scottish Antiq. Soc; hon. fel. Tokyo Statist. Soc; Int. Inst. Statist. Economics; economic effects of disease; food and population; religious festivals and the unity of religion.

Hyde, Dr. Roscoe R(aymond), 310 W. Monument St, Baltimore, Md. *Zoology*. Cory, Ind, March 23, 84. A.B, Ind. Nor. Sch, 08; A.B, A.M, Indiana, 09; fellow, Columbia, 12-13, Ph.D, 15. Asst. embryol, Indiana, 08-09; instr, asst. prof. and later prof. and head, dept. zool, Ind. Nor. Sch, 09-19; *assoc. immunol, sch. hygiene and pub. health*, Hopkins, 19- Lecturer genetics, Terre Haute Vet. Col, 10-19; fellow, Hopkins, 18-19. A.A; Soc. Zool; Ind. Acad. Degeneration; inbreeding; genetics of inbreeding; *Drosophila*; multiple allelomorphs; mechanism of immunity reactions.

Hyer, Dr. R(obert) S(tewart), Dallas, Tex. *Physics*. Oxford, Ga, Oct. 18, 60. A.B, Emory, 81, A.M, 84; LL.D, Central, 00; Baylor, 10. *Prof. physics, Southwestern*, 82-, *pres*, 98- Fel. Tex. Acad. Electric waves; thermal coefficient in conductivity; lowering of freezing-points by solutions.

Hylan, Dr. John P(erham), 97 William St, Stoneham, Mass. *Psychology*. Fremont, N. H, Aug. 27, 70. Harvard, 91-95; Leipzig and Heidelberg, 99-00; Ph.D, Clark, 01. Instr. psychol, Illinois, 97-98, asst. prof, 98-99; asst. philos, Harvard, 00-05. Prof. psychol, Sloyd Training Sch, Boston, Mass. Psychol. Ass. Psychology of attention; psychology of religion; fatigue.

Hyman, Dr. L(ibbie) H(enrietta), University of Chicago, Chicago, Ill. *Zoology*. Des Moines, Iowa, Dec. 6, 88. B.S, Chicago, 10, Ph.D, 15. Asst. *zool*, Chicago, 10-17, *research asst*, 17- Soc. Zool. Regeneration; ameiboid movement;

oxygen consumption of organisms; metabolism of lower invertebrates.

Hyslop, J(ames) A(ugustus), U. S. Department of Agriculture, Washington, D. C. *Entomology*. Chicago, Ill, July 7, 84. B.S., Mass. Col, 08; M.S., Wash. State, 11. *Entomologist, cereal and forage insect investigations, bur. entom., U. S. Dept. Agr, 08-* Lab. asst., Mass. Col, summer, 05; in charge gipsy moth work, Conn, summer, 06. A.A.; Entom. Soc; Ass. Econ. Entom; Wash. Entom. Soc; Cambridge Entom. Club. Cereal and forage insects; North American Elateridae.

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Ibsen, Prof. Heman L(auritz), Kansas State Agricultural College, Manhattan, Kans. *Genetics*. Chicago, Ill, Sept. 16, 86. B.S., Wisconsin, 12, fellow, 12-13, M.S., 13, Ph.D., 16. Asst. exp. breeding, Wisconsin, 13-16, genetics, 16-17, zool, 17-18; *asst. prof. animal husbandry, Kansas State, 19-* A.A.; Soc. Nat; Soc. Zool. Animal genetics; inheritance and reproduction in rodents.

Iddings, Dean Edward John, Moscow, Idaho. *Animal husbandry*. Peru, Ind, March 22, 79. B.S., Colo. Agr. Col, 07. Special agent, bur. plant indust, U. S. Dept. Agr, 06; asst. to dean of agr, Colo. Agr. Col, 07-09, asst. animal husbandry, 09-10; principal, sch. practical agr, and asst. *animal husbandry, Idaho, 10-11, prof, 11-*, v. dean, *col. agr, 13-15, dean, 15-*, dean agr, and director, *Exp. Sta, 18-* Field commissioner, Dry Farming Cong, summer, 09, ed, 'Bul,' summer, 10. A.A.; Soc. Animal Production; Idaho Live Stock Ass. (pres). Feeding of swine and sheep: milk production and growth in various breeds of sheep.

Ihseng, Pres. Magnus C(olbjarn), Blairsville, Pa. *Mining engineering*. Christiania, Norway, May 2, 55. Brooklyn Polytech, 72; C.E., E.M., Columbia, 75, Ph.D. Instr. physics, Columbia, 75-81; prof. eng, Colo. Sch. Mines, 81-93; dean, sch. mines, Pa. State, 93-99; prof. mech. eng, Brooklyn Polytech, 99-06; *pres, Blairsville Col, 06-* Min. Eng. Velocity of sound through woods; coefficient of elasticity of metals; a stoichiometric table; an antidote for white damp.

Iles, George, Park Avenue Hotel, New York, N. Y. *Physics*. Gibraltar, June 20, 52. Pub. schools, Montreal, Can. Ed, 'Little Masterpieces of Science.' A.A.; British Ass. Popular explanation of invention and discovery; electricity.

Illick, J(ohn) T(heron), University of Nanking, Nanking, China. *Zoology*. Cherry Valley, Pa, Dec. 3, 88. A.B., Taylor, 10; Syracuse, 12, A.M., 13; Woods Hole, 12, 13. Instr. science, Rust, 10-11; asst. zool, Syracuse, 12-13; instr, West Virginia, 13-16; *head, science dept, Nanchang Acad, 16-20; dept. zool, Univ. Nanking, 20-* Head, dept. zool, West Virginia, summer, 15. A.A. Excretory system of Gonionemus.

Illick, Prof. J(oseph) S(imon), New Cumberland, Pa. *Forestry*. Easton, Pa, Sept. 16, 84. A.B., Lafayette, 07; B.F., Biltmore Forest Sch, 11, F.E., 14; Polytech, Darmstadt, 12; Munich, 12. Instr. biol. Pa. State Forest Acad, 07-10, prof. forestry, 12-17, acting director, 17-19; *chief, research, Pa. dept. forestry, 20-* A.A.; Soc.

Foresters; Pa. Eng. Soc. Pennsylvania trees; tree distribution; forest organization.

Illingsworth, Prof. J(ames) F(ranklin), College of Hawaii, Honolulu, Hawaii. *Entomology*. Lenark, Ill, May 11, 70. B.S., Pomona, 00; A.M., Stanford, 01; Ph.D., Cornell, 12. Asst. zool, Pomona, 97-99; Stanford, 01; head, dept. biol, Broadway High Sch, Seattle, Wash, 01-10; *prof. entom, Col. of Hawaii, 12-* Introducer, parasitic sugar insects, Colonial Sugar Ref. Co, Australia, 13; entom. investigator, Queensland Govt, 17-21. A.A.; Entom. Soc; Cooper Ornith. Club; Wash. State Audubon Soc. (pres, 09). Economic entomology; fruit flies; house flies; fleas; dermestids; cockroaches; ants; white grubs; sugarcane pests and their parasites.

Ingall, Elfric Drew, Geological Survey of Canada, Ottawa, Can. *Geology*. England, May 13, 58. Assoc. Royal Sch. Mines, England, 78. Mining geologist, *Can. Geol. Surv, 84-08, in charge borings div, 08-* Can. Min. Inst. Mining districts of Canada.

Ingalls, Prof. N. W(illiam), Western Reserve Medical School, Cleveland, Ohio. *Embryology*. La Grange, Ohio, Aug. 10, 80. B.S., Baldwin, 01; M.D., Western Reserve, 05. Demonstrator *anat, Western Reserve, 05-06, instr, 06-09, asst. prof, 09-13, assoc. prof, 13-* Ass. Anat. Early stages in human development.

Ingalls, Walter Renton, 115 Broadway, New York, N. Y. *Mining engineering, Metallurgy*. Lynn, Mass, Oct. 25, 65. B.S., Mass. Inst. Tech, 86. Engineer and supt. for various companies, 86-05; ed, 'Eng. and Mining Jour,' and 'The Miner. Indust,' 05-19. Mem. jury of awards, La. Purchase Expos, 04; chief, Can. Commission on Zinc Resources of British Columbia, 05-06. Min. Eng; Min. and Metal. Soc. (pres); Electrochem. Soc; Soc. Chem. Indust; British Inst. Min. and Metal. Metallurgy of zinc and cadmium; zinc resources of British Columbia; metallurgical mill construction; lead smelting and refining.

Ingalsbe, F(rank) R(ichmond), Federal Building, Missoula, Mont. *Geology, Mining*. Oakfield, N. Y, Aug. 23, 78. B.S., Middlebury, 03; Mass. Inst. Tech, 06. Geologist, Cleveland-Cliffs Iron Co, 17; instr. geol, Lehigh, 06-08, asst. prof, 08-11; mineral examiner and later *recreation engineer, U. S. Forest Service, 11-* Asst. geologist, U. S. Geol. Surv, 08-11; geologist, Bethlehem Steel Co, 10-11. Economic geology in relation to mining; geology of the Coeur d'Alene mining district, Idaho.

Ingersoll, Ernest, Authors Club, New York, N. Y. *Zoology*. Monroe, Mich, March 13, 52. Oberlin, 67-71; museum comp. zool, Harvard, 72-73. Ed. asst. zool, 'Standard Dict,' 92-95, 10-; lecturer zool, Chicago, 01; ed. zool, 'New Int. Encyclopedia,' 02-03; collaborator, Smithsonian Inst. Boston Soc. Nat. Hist; Davenport Acad; Nuttall Ornith. Club; N. Y. Linnean Soc. Nests and eggs of American birds; oyster industries of United States; book of the ocean; Nature's calendar; wild life of orchard and field; life of mammals; wit of the wild.

Ingersoll, Prof. Leonard R(ose), University of Wisconsin, Madison, Wis. *Physics. New

- York, N. Y., June 1, 80. B.S., Colo. Col., 02; Ph.D., Wisconsin, '05. Instr. *physics*, Wisconsin, 05-08, asst. prof., 08-10, *assoc. prof.*, 10- Mem. Smithsonian exped. to Mt. Wilson, Calif., 05, 06, 09. A.A.; Physical Soc. Efficiency of the Nernst glower; measurement of high temperatures with the Nernst glower; magnetic rotatory polarization in the infra-red spectrum; reflecting power of metals; dispersion of metals in the infra-red spectrum; polarization by gratings.
- Ingham, Prof. L(eslie) H(oward)**, Baltimore City College, Baltimore, Md. *Chemistry*, Cleveland, Ohio, June 7, 67. A.B., Dartmouth, 89, A.M., 92; Ph.D., Pennsylvania, 94. Electrician, Brush Elec. Co., 89-91; asst. chem., Kenyon, 91-93, Bowler prof. physics and chem., 94-07; *head, dept. science*, Baltimore City Col., 08- Prof. physics, Chautauqua, 92-95; first asst. chemist, mining bldg., Columbian Expos., 93; chemist and assayer, Cuyahoga Gold Mining and Milling Co. Chem. Soc. Constitution of certain native sulphids of the tetrahedrite family; electrolytic estimation of nitric acid; modification of cyanid process.
- Ingram, Prof. Edward L(overing)**, University of Pennsylvania, Philadelphia, Pa. *Engineering*, *Electricity*, Philadelphia, Sept. 9, 62. C.E., Columbia, 85. Inspector, draftsman, asst. engineer, U. S. Govt., 85-91; asst. engineer, Int. Boundary Surv., U. S. and Mex., 91-95; practising civil engineer, 95-01; with eng. dept., N. Y. C. and H. R. R. R., 01; expert aid (civil engineer), Navy Yard, N. Y., 01-06; asst. prof. civil eng., Pennsylvania, 06-11, *prof. railroad eng. and geod.*, 11- A.A.; *assoc. mem.* Civil Eng.; R. R. Eng.
- Imman, Dr. Thomas G(eorge)**, 240 Stockton St., San Francisco, Calif. *Medicine*, Perth Co., Ont., July 24, 72. Ph.G., Calif. Col. Pharmacy, 92; M.D., Cooper Med. Col., 94; California, 00-03; Frankfurt, Berlin, Paris, 13-14. Asst. demonstrator anat., Cooper Med. Col., 95-00, instr. applied anat., 00-11; *asst. neur.*, Stanford, 15- A.A.; Am. Med. Ass. Anatomy; nervous system; psychology; circulation; cerebro-spinal fluid; human medulla.
- d'Invilliers, E(dward) V(incent)**, 518 Walnut St., Philadelphia, Pa. *Geology*, *Mining*, Philadelphia, Aug. 2, 57. B.S., Pennsylvania, 78, Sc.D., 18. Asst. geologist, Second Pa. Geol. Surv., 78-88; *consulting geologist and mining engineer*, 88- Geol. Soc.; Philos. Soc.; Franklin Inst. Geology and practise of bituminous coal and iron ore mining.
- Ireland, Gen. Merritte Weber**, U.S.A., Office of the Surgeon General, Washington, D. C. *Medicine*, Columbia City, Ind., May 31, 67. M.D., Detroit Col. Med., 90; Jefferson Med. Col., 91. Asst. surgeon, U.S.A., 91-96, capt. asst. surgeon, 96-99, major surgeon, 99-01, 03-11, major, M.C., 03-11, lieut. col., 11-17, col., 17-18, brig. gen., 18, major gen., 18-, asst. surgeon gen., 18, surgeon gen., 18- Chief surgeon, A.E.F.
- Irish, H(enry) C(lay)**, Board of Education, St. Louis, Mo. *Horticulture*, Emerald Grove, Wis., April 22, 68. B.S., S. Dak. Col., 91; M.S., Iowa State, 97. Hort. asst., Mo. Bot. Garden, 94-02, supt., 03-12; asst. prof. hort., Iowa State, 13-14; *supervisor, sch. gardens*, Board of Educ., St. Louis, 14- A.A.; Soc. Hort. Sci.; Soc. Prom. Agr. Sci.; Pomol. Soc. Garden peppers; garden beans; American peaches.
- Irons, Prof. E(rnest) E(dward)**, 5626 Dorchester Ave., Chicago, Ill. *Medicine*, Council Bluffs, Iowa, Feb. 17, 77. B.S., Chicago, 00, fellow, 00-01, M.D., 03, Ph.D., 12. Asst. bacter., Chicago, 01-03, *med.*, Rush Med. Col., 05-07, *assoc.*, 07-09, instr., 09-12, asst. prof., 12-18, *assoc. prof.*, 19- Attending physician, Presb. Hosp.; attending physician, Cook Co. Hosp. A.A.; Am. Physicians; Ass. Path. and Bact.; Soc. Bact.; Soc. Clin. Invest.; Chicago Path. Soc. (pres., 14). Internal medicine; methods in water analysis; blastomycosis; gonococcal infections; focal infections in relation to arthritis and the eye.
- Irvin, Prof. Oscar W(illiam)**, Toledo University, Toledo, Ohio. *Physics*, Greenville, Ky., June 29, 88. B.S., Kentucky, 10. Asst. *physics*, Kentucky, 10-12; *prof.*, Toledo, 12- Instr., Sayre Inst., 10. A.A.; Physical Soc.; Ohio Acad.
- Irving, Dr. Thomas Patrick**, Notre Dame, Ind. *Physics*, Clyman, Wis., July 7, 80. A.B., Notre Dame, 04; Ph.D., Catholic Univ., 09. Prof. physics, Notre Dame, 09-12; rector, Holy Cross Seminary, 12-19; *director of studies*, Notre Dame, 19- Physical Soc.; Ind. Acad. Electrical character of light radiation.
- Irwin, Prof. Frank**, 1625 Arch St., Berkeley, Calif. *Mathematics*, Englewood, N. J., June 5, 68. A.B., Harvard, 90, B.S., 92, A.M., 94, Ph.D., 08. Instr. *math.*, Harvard, 94; Princeton, 08-11; California, 11-18, *asst. prof.*, 18- Math. Soc.; Math. Ass. Invariants of differential expressions.
- Isaacs, Schachne**, Air Service Medical Research Laboratory, Mitchell Field, L. I., N. Y. *Psychology*, Cincinnati, Ohio, Dec. 8, 88. A.B., Cincinnati, 10, A.M., 12. Asst. psychol., Cincinnati, 12-15, instr. and asst. psychol. clinic, 15-17; *psychologist*, Bur. Mines, 17; *Med. Research Lab.*, A. S., U.S.A., 17- Fellow psychol., Soc. Am. Fellowships in French Universities, 20-22. A.A.; Psychol. Ass. Psychological effects of various drugs; oxygen want.
- Isely, Dwight**, Bentonville, Ark. *Entomology*, Fairview, Kans., Aug. 15, 87. A.B., Fairmount, 10; A.M., Kansas, 13; Schuyler fellow, Cornell, 13-14. *Scientific asst., bur. entom.*, U. S. Dept. Agr., 14- Asst., Bur. Fisheries, 11; entom. sect., Kansas Biol. Surv., 12; field asst., Kans. Entom. Commission, 13. A.A.; Entom. Soc.; Wash. Entom. Soc. Kansas Eumenidae; the cherry leaf-beetle; deciduous fruit insects.
- Isely, Prof. F(rederick) B.**, Culver-Stockton College, Canton, Mo. *Zoology*, Fairview, Kans., June 20, 73. B.S., Fairmount, 99; M.S., Chicago, 09; Woods Hole, 09. Instr. *biol.*, high sch., Wichita, Kans., 01-06; Univ. Prep. Sch., Tonkawa, Okla., 06-12; *prof.*, Central Col. (Mo.), 12-20; *prof. and dean*, Culver-Stockton, 20- Temporary asst. Bur. Fisheries, 10-13. A.A.; Soc. Zool.; Ecol. Soc.; Okla. Acad. (sec'y., 04-06). Kansas Orthoptera; growth and migration of mussels; Unionidae of Oklahoma; family traits.
- Isham, Dr. George S(now)**, 1340 N. State St., Chicago, Ill. *Astrophysics*, Chicago, Oct. 8, 59. A.B., Yale, 81; M.D., Northwestern, 84, A.M., 86.

- A.A.; Astron. Soc; Chicago Acad. (v. pres, 13). Spark and arc spectra.
- Ishida, Dr. Yoshio**, University of Chicago, Chicago, Ill. *Physics*. Shimaneken, Japan. B.S., Chicago, 11, Ph.D. 16. Research asst. *physics*, Chicago, 14-19, *research instr*, 19- Electronics; properties of gases.
- Itano, Prof. Arao**, 7 E. Pleasant St, Amherst, Mass. *Biology*. Okayamaken, Japan, April 21, 88. B.S., Mich. Agr. Col, 11; Ph.D., Mass. Col, 16. Asst. chem, Mich. Exp. Sta, 11-12, asst. soil bacteriologist, 12-13; asst. *microbiol*, Mass. Col, 13-16, instr, 16-17, asst. prof, 17-18, *assoc. prof*, 19- Soc. Bact. Relation of hydrogen ion concentration to the physiological activities of bacteria.
- Ittner, Dr. Martin H(ill)**, Colgate and Co, Jersey City, N. J. *Chemistry*, *Physics*. Berlin Heights, Ohio, May 2, 70. Ph.B., Washington (St. Louis), 92, B.S., 94; A.M., Harvard, 95, Ph.D., 96. Asst., Harvard, 94; private asst. to Prof. Jackson, 95; Dr. Wolcott Gibbs, 96; *chief chemist*, Colgate and Co, 96- Int. Cong. Applied Chem. Chem. Soc; Soc. Chem. Indust; Chem. Eng; Soc. chim. indust; Chem. Gesell. Organic chemistry; engineering.
- Ives, F(rederick) E(ugene)**, 1327 Spruce St, Philadelphia, Pa. **Photography*. Litchfield, Conn, Feb. 17, 56. Pub. schools. In charge, photog. lab, Cornell, 74-78; *commercial enterprises*, 78- Twenty medals and prizes for inventions and discoveries from Am. and foreign societies including Rumford medal, 12. A.A.; Micros. Soc; Physical Soc; hon. mem. Phila. Photog. Soc; Franklin Inst; fel. Royal Photog. Soc; fel. Royal Micros. Soc. Special photographic processes and applications, with special reference to orthochromatic photography; trichromatic photography and photoengraving; inventor of parallax stereogram; glass sealed copies Rowland diffraction gratings.
- Ives, Dr. Herbert E(ugene)**, 32 Laurel Place, Montclair, N. J. **Physics*. Philadelphia, Pa, July 31, 82. B.S., Pennsylvania, 05; fellow, Hopkins, 06-08, Ph.D., 08. Asst. and asst. physicist, Bur. Standards, 08-09; *physicist*, Nat. Elec. Lamp Ass, Cleveland, Ohio, 09-12; United Gas Improv. Co, 12-18; in charge aerial photog. research, Air Service, U.S.A., 18-19; *West. Elec. Co*, 19- Longstreth medal, Franklin Inst, 06, 15, 18. A.A.; Physical Soc; Illum. Eng. Soc. (v. pres, 11-12); Optical Soc; Philos. Soc; Phila. Physics Club (pres, 17). Diffraction color photography; Lippmann color photography; illumination; photometric instruments and measurements; intermittent vision; radiometry and physical photometry; photoelectricity; artificial daylight; Welsbach mantle; aerial photography.
- Ives, Prof. Howard C(hapin)**, 769 Main St, Worcester, Mass. *Civil engineering*. Cheshire, Conn, March 20, 78. Ph.B., Yale, 98, C.E., 00. Civil engineering, 99-00; instr. civil eng, Worcester, 00-03; asst. prof, Pennsylvania, 03-06; *railroad eng*, Worcester, 06-12, *prof*, 12- Civil Eng; Eng. Educ; R. R. Eng; Water Works Ass. Stereotomy; railroad engineering.
- Ives, Dr. J(ames) E(dmund)**, Clark University, Worcester, Mass. *Physics*. London, England, Sept. 19, 65. Ph.D., Clark, 01. Asst. curator, Acad. Nat. Sci, Phila, 87-93; instr. physics, Drexel Inst, Phila, 93-97; Cincinnati, 01-03; scientific expert, DeForest Wireless Tel. Co, N. Y., 03-05; asst. prof. *physics*, Cincinnati, 05-09, *assoc. prof*, 09-12; hon. fellow, Clark, 12-16, *research assoc. and lecturer*, 16- Lieut, Sig. C, 18-19, capt, 19-20. Silver medal, La. Purchase Expos, 04. A.A.; Physical Soc; Radio Eng; Am. Acad; Phila. Acad; Soc. de Physique. Marine invertebrates; theory of the induction coil; wireless telegraphy; electric oscillations; wireless telegraphy; discharge of electricity through gases.
- Ives, Prof. J(udson) D(unbar)**, John B. Stetson University, De Land, Fla. *Biology*. Alfred, Maine, Feb. 19, 84. A.B., Wake Forest, 05, A.M., 06; Chicago, 08, 14-15, 16-17; Woods Hole, 09. Lab. asst. biol, Wake Forest, 04-06, instr, 06-14; *prof. science*, Ouachita, 15-16; biol, Mt. Allison, 17-18; biol. and geol, Col. of Charleston, 18-20; *biol*, Stetson, 20- A.A.; N. C. Acad. Regeneration; the gall fly, *Diastrophus nebulosus*.
- Ivy, Dr. A(ndrew) C(onway)**, Loyola University School of Medicine, Chicago, Ill. *Physiology*. Farmington, Mo. B.S., Chicago, 16, M.S., 17, Ph.D., 18. Instr. *physiol*, Chicago, 18-19; *assoc. prof*, Loyola, 19- A.A.; Physiol. Soc. Gastrointestinal tract; brain; glands of internal secretion.

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- Jack, Prof. John G(eorge)**, East Walpole, Mass. *Forestry*. Chateaugay, Que, April 15, 61. *Lecturer*, Arnold Arboretum, 91-; lecturer landscape hort, Mass. Inst. Tech, 99-08; instr. forestry, Harvard, 03-08, *asst. prof. dendrol*, 08- With U. S. Geol. Surv; U. S. Bur. Forestry. A.A.; Forestry Ass; Soc. Foresters; Bot. Soc; Am. Acad; Mass. Hort. Soc; Boston Soc. Nat. Hist; Dendrol. Gesell. Dendrology; arboriculture; horticulture; economic entomology.
- Jackling, Daniel C**, Hobart Building, San Francisco, Calif. *Mining engineering*. Near Appleton City, Mo, Aug. 14, 69. B.S. and Metal.E, Mo. Sch. Mines, 92. Asst. prof. chem, Mo. Sch. Mines, 91-93; metallurgist and manager of metal. construction and plants, Colo. and Utah, 93-03; managing director, *Utah Copper Co*, *Ray Consol. Copper Co*, *Chino Copper Co*; *pres*, *Butte and Superior Mining Co*; *Mesabi Iron Co*; *Nev. Consol. Copper Co*; *v. pres*, *Nev. North Ry.* Min. Eng; Min. and Metal. Soc.
- Jackson, A(braham) Wendell**, Care L. S. Jackson, 9 Desbrosses St, New York, N. Y. *Mineralogy*, *Geology*. Chelsea, Mass, Feb. 13, 55. Ph.B., California, 74; Leipzig, 75; Freiberg, 76. Instr. chem, California, 74, miner, 77, prof. miner, petrog. and econ. geol, 86-90; consulting engineer, New York and Boston, 91-96; pres. and gen. manager, Cent. Elec. Construction Co, and Atlantic Eng. Co, N. Y., 96-05; *consulting mining engineer*, 05- A.A.; Geol. Soc; Am. Geog. Soc; Calif. Acad; hon. mem. San Francisco Mechanics Ass; Geol. Gesell. Minerals and rocks of California.
- Jackson, Prof. Charles Loring**, 383 Beacon St, Boston, Mass. **Chemistry*. Boston, April 4,

47. A.B., Harvard, 67, A.M., 70; Heidelberg and Berlin, 73-75. Asst. chem., Harvard, 68-71, asst. prof., 71-81, prof., 81-99, Erving prof., 99-12, emer. prof., 12- Nat. Acad.; A.A.; Chem. Soc.; Am. Acad. (cor. sec'y); British Ass.; Chem. Gesell. Organic selenium compounds; substituted benzyl compounds; curcumin; turmerol; preparation of borneol; difluorbenzoic acid; benzotrisulphonic acid; sodic zincate; trinitro compounds; behavior of nitrobenzols containing halogens; orthoquinones; theory of malonic ester reactions.
- Jackson, Prof. C(larence) M(artin)**, University of Minnesota, Minneapolis, Minn. **Anatomy*. What Cheer, Iowa, April 12, 75. Fellow, Missouri, 97-99, B.S., 98, M.S., 99, M.D., 00; Chicago, 00-01; Leipzig, 03-04; Berlin, 04. Instr. anat., Missouri, 99-00, asst. prof. in charge anat. and histol., 00-02, prof., 02-13, dean, med. sch., 09-13; prof. and director, dept. anat., Minnesota, 18-, acting dean, grad. sch., 17-18. Mem. ed. board, 'Anat. Record'; ed. fifth edition, 'Morris's Human Anat.' A.A.; Soc. Nat.; Ass. Anat. (v. pres., 16); Am. Med. Ass.; Anat. Gesell. Human and comparative anatomy, histology and embryology; experimental morphology; effects of inanition upon growth and structure.
- Jackson, Daniel D(ana)**, Columbia University, New York, N. Y. *Chemistry, Bacteriology*. Gloucester, Mass., Aug. 1, 70. B.S., Mass. Inst. Tech., 93; Harvard Med. Sch., 96-97; M.S., N. Y. Univ., 08. Analyst, Boston Water Works, 93-95; bacteriologist, Worcester, Mass., 95; biologist, Mass. State Board of Health, and lecturer, Mass. Inst. Tech., 95-97; chief chemist, Mt. Prospect lab., Brooklyn Dept. Water Supply, N. Y. City, 97-04; director, laboratories, Dept. Water Supply, Gas and Elec., N. Y. City, 04-12; lecturer chem. eng., Columbia, 11-13, asst. prof., 13-17, assoc. prof., 17-18, prof., 18- Chem. Soc.; Soc. Chem. Indust.; Micros. Soc.; Pub. Health Ass.; N. Y. Chemists Club; Brooklyn Eng. Club; Brooklyn Inst. Chemical engineering; chemistry and biology of water supply; boiler treatment; coal; oil; asphalt and cement; water supply and sewage.
- Jackson, Dr. D(ennis) E(merson)**, University of Cincinnati Medical School, Cincinnati, Ohio. **Pharmacology*. Ridgeport, Ind., Sept. 3, 78. A.B., Indiana, 05, A.M., 06, Ph.D., 08; Chicago, summers, 05-09, M.D., Rush Med. Col., 13. Asst. physiol., Indiana, 04-06; pharmacol. and physiol. chem., Chicago, 06-07; instr. pharmacol., Indiana, 07-08, asst. prof. physiol. and pharmacol., 08-10; assoc. pharmacol., Washington (St. Louis), 10-15, assoc. prof., 15-18; prof. pharmacol. and therapeut., Cincinnati, 18- Special expert, div. pharmacol., hygienic lab., U. S. Pub. Health Service, summer, 18; assoc. ed., 'Jour. Lab. and Clin. Med.' A.A.; Soc. Pharmacol.; Physiol. Soc.; Am. Med. Ass.; Soc. Exp. Biol.; Chem. Soc. Adrenalin; uranium; magnesium; vanadium; opium alkaloids; nitrous oxid; arsphenamin; ethyl chlorid; ethyl bromid; pulmonary action of drugs; physiological control of lungs; anaphylaxis; anesthesia; pharmacological methods; asthma; aconite; pituitary extracts and histamin.
- Jackson, Prof. Dugald C(aleb)**, Massachusetts Institute of Technology, Cambridge, Mass. **Electrical engineering*. Kennett Square, Pa., Feb. 13, 65. B.S., Pa. State, 85, C.E., 88; Cornell, 85-87. Instr. physics, Cornell, 86-87; v. pres. and engineer, West. Eng. Co., Lincoln, Nebr., 87-89; asst. chief engineer, Sprague Elec. Railway and Motor Co., N. Y., 89-90; chief engineer, cent. dist., Edison Gen. Elec. Co., 90-91; prof. elec. eng., Wisconsin, 91-07; prof. and head of dept., Mass. Inst. Tech., 07- Consulting engineer and expert for various corporations; lieut. col., corps engineers, A.E.F., 18-19; commendation of commander in chief, A.E.F.; Chevalier Légion d'honneur; mem. jury awards, Columbian Expos., 93; Pan-Am. Expos., 01. A.A.; Physical Soc.; Elec. Eng. (pres., 10); Mech. Eng.; Civil Eng.; Eng. Educ. (pres., 06); Am. Acad.; Inst. Elec. Eng. Gt. Britain; Soc. française des Elec. Applied electricity.
- Jackson, Dr. Dunham**, University of Minnesota, Minneapolis, Minn. **Mathematics*. Bridge-water, Mass., July 24, 88. A.B., Harvard, 08, A.M., 09; Ph.D., Göttingen, 11. Instr. math., Harvard, 11-16, asst. prof., 16-19; prof., Minnesota, 19- Capt., ordnance dept., 18-19. Math. Soc.; Am. Acad. Trigonometric and other series.
- Jackson, Dr. Hartley H(arrad) T(hompson)**, Biological Survey, Washington, D. C. *Zoology*. Milton, Wis., May 19, 81. A.B., Milton, 04; A.M., Wisconsin, 09; Ph.D., George Washington, 14. Instr. science, high schools, 04-08; asst. zool., Wisconsin, 09-10; asst. biologist, biol. surv., U. S. Dept. Agr., 10- Field naturalist, Wis. Geol. and Nat. Hist. Surv., summers, 08, 09. A.A.; Soc. Nat.; Ecol. Soc.; assoc. Ornith. Union; Soc. Mammal. (cor. sec'y); Wis. Acad.; Wis. Nat. Hist. Soc.; Wash. Acad.; Wash. Biol. Soc. Ecology of vertebrates; zoogeography; systematic mammalogy; behavior of amphipods.
- Jackson, Dr. Henry**, 380 Marlborough St., Boston, Mass. *Medicine*. Boston, Oct. 25, 58. A.B., Harvard, 80, M.D., 84. Visiting physician, Boston City Hosp.; instr. clin. med., Harvard Med. Sch. (retired, 19). Am. Physicians; Am. Acad.
- Jackson, Prof. H(enry) Louis**, State Chemist, Boise, Idaho. *Chemistry*. Utica, N. Y., Feb. 8, 79. B.S., Mass. Inst. Tech., 05; M.S., Hamilton, 09. Asst. chem., Mass. Inst. Tech., 05; sugar chemist, 06; instr. chem., Mass. Inst. Tech., 07; asst. prof. chem., in charge food investigation, Kansas, 07-13; state chemist, Idaho, 13- Chem. Soc.; Kans. Acad. The action of pyridin on salicyl chlorids; lead number of vanilla extracts; vinegar; testing for saccharin.
- Jackson, Prof. H(erbert) S(pencer)**, West Lafayette, Ind. **Botany*. Augusta, N. Y., Aug. 29, 83. A.B., Cornell, 05; Harvard, 08-09. Asst. mycol. and instr. bot., Del. Col. and Exp. Sta., 05-08; Austin teaching fellow, Harvard, 08-09; prof. bot. and plant path., Oregon Col., 09-15; chief in bot., Purdue Exp. Sta., 15- Instr. bot., Harvard, summer, 09; prof. plant path., Cornell, summers, 16, 17. A.A.; Bot. Soc.; Phytopath. Soc. (pres., Pacific div., 15); Ind. Acad. Mycology; rusts and smuts; plant pathology; rusts of fruits and cereals.
- Jackson, Dr. Holmes C(ondict)**, 338 E. 26th St., New York, N. Y. **Physiology*. New York, Feb. 18, 75. Ph.B., Yale, 96, Ph.D., 99; Strasbourg

- and Berne, 00-01. Asst. physiol. chem, Yale, 96-00; instr. Univ. and Bellevue Hosp. Med. Col, 01-03, asst. prof, 03-05; adj. prof. and director, laboratories physiol. chem. and exp. physiol, Albany Med. Col, 05-09; *prof. physiol. and director, physiol. lab, Univ. and Bellevue Hosp. Med. Col, 09-* A.A; Soc. Nat; Physiol. Soc; Soc. Exp. Biol. (sec'y-treas, 13-); Ass. Path. and Bact; Harvey Soc; Soc. Biol. Chem. Physiology and clinical medicine.
- Jackson, Dr. L(ambert) L(incoln)**, Jamesburg, N. J. *Mathematics*. Binghamton, N. Y, April 14, 70. A.B, Michigan, 97, A.M, 99; B.Pd, Mich. Nor. Col, 00; Ph.D, Columbia, 06. Instr. math, Mich. Nor. Col, 91-00; prof, State Nor. Sch, Brockport, N. Y, 00-06; *head, educ. dept, D. Appleton and Co, 06-*; asst. supt, schools, Montclair, N. J, 13-18; supt, N. J. State Home for Boys, Jamesburg, 18-19; *asst. commissioner educ, N. J, 20-* Joint author math. articles, 'Int. Ency.' Math. Soc. The teaching of mathematics in the sixteenth century.
- Jackson, L(awrence) O(scar)**, 2347 King St, Denver, Colo. *Entomology*. Denver, March 26, 90. A.B, George Washington, 20. Preparator entom, biol. surv, U. S. Dept. Agr, 14-15, scientific preparator, 15-20. Entom. Soc; Wash. Entom. Soc; Wash. Biol. Soc. Bremidae; fosorial Hymenoptera.
- Jackson, Dr. Leila**, 637 S. Wood St, Chicago, Ill. *Pathology*. Fond du Lac, Wis, May 15, 71. A.B, Ripon, 95; M.D, Rush Med. Col, 08. Lab. worker, St. Luke's Hosp, Chicago, 10-11; Michael Reese Hosp, 11-12; serologist and research worker, St. Luke's Hosp, 12-17; *research worker, McCormick Inst. for Infectious diseases, 17-* Contract surgeon, U.S.A. Ass. Path. and Bact. Experimental Streptococcus; myocarditis; arthritis; nephritis; experimental scurvy; poliomyelitis.
- Jackson, Dr. R(ichard) F(ay)**, Bureau of Standards, Washington, D. C. *Chemistry*. Boston, Mass, Jan. 2, 81. A.B, Harvard, 03, Ph.D, 17. Asst. physicist, *Bur. Standards, 07-16*; *assoc. chemist, 17-* Mem. Int. Commission on Sugar Analysis. Chem. Soc. Polarimetry; phase rule; homogeneous catalysis; sugar analysis.
- Jackson, Dr. Robert T(racy)**, Peterborough, N. H. **Paleontology*. Dorchester, Mass, July 13, 61. B.S, Harvard, 84, Sc.D, 89. Instr. paleont, Harvard, 92-99, asst. prof, 99-09. Assoc. paleont, museum comp. zool, Harvard, 11- A.A. (sec'y, F, 98); Soc. Nat; Paleont. Soc; Geol. Soc. (v. pres, 19); Am. Acad. Anatomy, structure and phylogeny of Pelecypoda and Paleozoic Echini; localized stages in development of plants and animals; development and morphology of Echini.
- Jackson, Dr. T(homas) F(ranklin)**, Bloomington, Ind. *Geology*. Glen Allen, Mo, Feb. 20, 82. A.B, Indiana, 13, A.M, 14, fellow, 14-15, Ph.D, 16. Teaching fellow, Indiana, 13; *consulting geologist*. Ind. Acad. Stratigraphy; paleobotany.
- Jacobs, Prof. Elbridge C(hurchill)**, University of Vermont, Burlington, Vt. *Chemistry, Mineralogy*. Ogunquit, Maine, Feb. 15, 73. B.S, Mass. Inst. Tech, 97; A.M, Columbia. Asst. mining
- and metal, Mass. Inst. Tech, 97-99; instr. *chem. and miner, Vermont, 99-01*, asst. prof, 01-04, *prof, 04-* Asst. state geologist, Vt. Chem. Soc; Am. Geog. Soc. Analytical chemistry; Vermont mineral deposits.
- Jacobs, Dr. Henry Barton**, 11 Mt. Vernon Place, Baltimore, Md. *Medicine*. Norwell, Mass, June 2, 58. A.B, Harvard, 83, M.D, 87. Asst. bot, Harvard, 83-85; assoc. med, Hopkins, 96-04. Lecturer on prevention of tuber; director, Md. State Sanatorium; pres, Md. Hosp. for Consumptives; assoc. ed, 'Annals Med. History'; 'Rev. of Tuber.' Trustee, Hopkins Hosp; Peabody Inst; Md. Inst. Arts; Church Home and Infirmary; Hosp. for Crippled Children. A.A; Ass. Tuber. (past sec'y); Am. Med. Ass; Md. Ass. Tuber. (past pres); Int. Ass. Tuber; Soc. d'Hist. de Méd. de France. Sociology; education; suppression and cure of tuberculosis; advancement and history of medicine.
- Jacobs, Dr. Jessie M(arie)**, 2301 Rio Grande St, Austin, Tex. *Mathematics*. Wilmington, Del, Oct. 1, 90. A.B, McPherson, 14; fellow, Kansas, 15-16, A.M, 16; fellow, Illinois, 17-19, Ph.D, 19. Teacher, high schools, Kans, 11-12, 14-15; asst. Illinois, 16-17; assoc. prof. math. and physics, Rockford, 19-20; *instr. math, Texas, 20-* Math. Ass. The twenty-seven lines on a cubic surface.
- Jacobs, J(oseph) Warren**, 404 S. Washington St, Waynesburg, Pa. *Ornithology*. Waynesburg, Dec. 5, 63. Pub. schools. Hon. mem. board of visiting members, Museum Comp. Ool. Mem. advisory council, World's Cong. on Birds, Chicago, 93. Highest award, gold medal, birds' eggs, La. Purchase Expos, 04. A.A; mem. Ornith. Union; Wilson Ornith. Club; Cooper Ornith. Club; Mich. Ornith. Club; Del. Valley Ornith. Club. Oology; life histories of birds.
- Jacobs, Prof. M(erkel) H(enry)**, University of Pennsylvania, Philadelphia, Pa. *Zoology*. Harrisburg, Pa, Dec. 6, 84. A.B, Pennsylvania, 05, Ph.D, 08; Berlin, 08-09. Instr. *zool, Pennsylvania, 09-13*, *asst. prof, 13-* Capt, Sanit. C, 18-19. A.A; Soc. Nat; Soc. Zool; Physiol. Soc; Phila. Acad. Effects of dessication, high temperatures and carbon dioxide on organisms; physiological characters of species.
- Jacobs, Dr. W(alter) A**, Rockefeller Institute for Medical Research, New York, N. Y. *Chemistry*. New York, Dec. 24, 83. A.B, Columbia, 04, A.M, 05; Ph.D, Berlin, 07. Fellow *chem, Rockefeller Inst, 07-08*, asst, 08-10, assoc, 10-12, *assoc. mem, 12-* A.A; Soc. Exp. Biol; Soc. Biol. Chem; Chem. Soc; Therapeut. Soc; Harvey Soc; Chem. Gesell. Physiological chemistry; chemotherapy; splitting of amino acids into optically active components; nucleic acids; sugars; synthesis of sugars; synthesis of bactericidal compounds of hexamethylene tetramin; aromatic arsenic compounds; synthesis in cinchona series.
- Jacobson, Prof. C(arl) A(lfred)**, Morgantown, W. Va. *Chemistry*. Grantsburg, Wis, Jan. 25, 76. B.S, Carleton, 03, M.S, 07; Ph.D, Hopkins, 08; Cracow, Geneva, Upsala, and Halle, 11-13. Fellow and research chemist, Rockefeller Inst, 08-09; prof. agr. chem, Nevada, and chief chem-

- ist, Exp. Sta, 09-18; *prof. chem, West Virginia*, 20- A.A.; Chem. Soc. Electrical conductivity; phosphatids; poisonous plants; chlorophyll; enzymes; saponin; chemical apparatus.
- Jacobson, Dr. Clara**, 7556 Saginaw Ave, Chicago, Ill. *Physiology*. Chicago, Ill, July 21, 87. B.S., Chicago, 09, M.S. 10, fellow, 10-11, Ph.D. 16, M.D. Rush Med. Col. 13. Intern, Cook Co. Hosp, 14-15; *physician in charge, Grand Crossing Dispensary, Municipal Tuber. Sanitarium*, 17- Glands of internal secretion; tuberculosis.
- Jacobson, Dr. Conrad**, Peter Bent Brigham Hospital, Boston, Mass. *Medicine*. Chicago, Ill, Oct. 29, 79. B.S., Beloit, 00; M.D., Hopkins, 11. Asst. prof. chem, Armour, 06-08; asst. surg, Hopkins, 11-12; asst. and later instr, Harvard Med. Sch, 12-19; asst. res. surgeon and later res. surgeon, *Peter Bent Brigham Hosp*, 12- Ass. Path. and Bact. Surgery; pituitary gland; spinal fluid; Eek fistula animal.
- Jacobus, Dr. D(avid) S(chenck)**, 85 Liberty St, New York, N. Y. *Mechanical engineering, Physics*. Ridgefield, N. J, Jan. 20, 62. M.E., Stevens, 84. Instr. and asst. prof. exp. mech, Stevens, 84-98, prof. exp. mech. and eng. physics, 98-03, *in charge of Carnegie Lab. of Eng*, 00-, *prof. exp. eng*, 03- Advisory engineer, The Babcock and Wilcox Co, 06-; special lecturer, dept. exp. eng, Stevens, 06- A.A. (sec'y, D, 93, v. pres, 04); Math. Soc; Mech. Eng. (manager, 00, v. pres, 03); Min. Eng; Elec. Eng; Eng. Educ; Naval Archit. and Marine Eng; Soc. Refrig. Eng. (director, 04, pres, 06); Franklin Inst. Steam engineering.
- Jacoby, Prof. Harold**, 39 Claremont Ave, New York, N. Y. *Astronomy*. New York, March 4, 65. A.B., Columbia, 85, Ph.D. 96. Asst. astronomer, U. S. eclipse exped. to W. Africa, 89-90; vol. asst., Cape of Good Hope Observatory, 90; adj. prof. astron, Columbia, 94-04, *prof*, 04-, *head, dept. astron*, 05- A.A.; Astron. Soc. (ed, 07-09); Math. Soc. (treas. and ed, 'Bul'); fel. N. Y. Acad. (sec'y); fel. Royal Astron. Soc; Astron. Gesell. Application of photography to astronomical measurements of precision; stellar parallax; star clusters; variation of latitude; aberration of light; polar photography; navigation.
- Jacoby, Prof. Henry S(ylvester)**, 105 Harvard Place, Ithaca, N. Y. *Bridge engineering*. Springtown, Pa, April 8, 57. C.E., Lehigh, 77. Mem. topog. corps, Second Pa. Geol. Surv, 78; transitman, gaging Red River and Atehafalaya River, 79; chief draftsman, U. S. Engineer's Office, Memphis, Tenn, 79-85; instr. civil eng, Lehigh, 86-90; asst. prof. *bridge eng. and graphics*, Cornell, 90-94, assoc. prof, 94-97, *prof*, 97- A.A. (sec'y, D, 95, v. pres, 01); Civil Eng; Eng. Educ. (sec'y, 00-02, ed, 'Proc,' 00, 01, pres, 15); R. R. Eng. (chairman, committee on wooden bridges and trestles); Wash. Acad. Bridge stresses and design; graphic statics; stresses in metallic arches and in reinforced concrete arches; structural details.
- Jacques, Dr. William White**, 469 Beacon St, Boston, Mass. *Physics*. Haverhill, Mass, Aug. 30, 55. B.S., Mass. Inst. Tech, 76; A.M., Ph.D., Hopkins, 79. Expert, Am. Bell Telephone Co, 80-97. Lecturer elec. eng, Mass. Inst. Tech, 87-90. Am. Acad. Electricity; light; heat; acoustics.
- Jaffa, Prof. Myer Edward**, University of California, Berkeley, Calif. *Chemistry*. Sydney, Australia, Oct. 6, 57. Ph.B., California, 77, M.S., 96. Asst. chemist, tenth census, 79-80; asst, agr. dept, California, 80-81; asst. chemist, Northern Transcontinental Surv, 81-83; first asst. and chemist, dept. viticulture, *California*, 83-89, instr. agr, 93-96, asst. prof. in charge agr. chem, 96-06, *nutrition*, 06-08, *prof*, 08- Food expert, U. S. Dept. Agr, 00; director, bur. food and drugs, Calif. State Board of Health. Chem. Soc; Agr. Chem. (pres, 04). Agricultural chemistry; soils; water; cattle and human foods; nutrition of man and poultry.
- Jaggard, Dr. T(homas) A(ugustus)**, Volcano House, Hawaii. *Geology*. Philadelphia, Pa, Jan. 24, 71. A.B., A.M., Harvard, 94, Ph.D., 97; Heidelberg and Munich, 94-95. Instr. geol, Harvard, 95-03, asst. prof, 03-06; prof. and head of dept, Mass. Inst. Tech, 06-12; director, Hawaiian Volcano Observatory, 12-19; *volcanologist, U. S. Weather Bur*, 19- Asst. geologist, U. S. Geol. Surv, 98-04. Geol. Soc; Am. Acad; Am. Geog. Soc; Wash. Acad. Experimental geology; volcanology; physical mineralogy; geophysics; the Caribbean eruptions of 1902; volcanology of Aleutian Islands, Hawaii, Japan, Italy, New Zealand and Central America.
- Jagger, Ivan C(laude)**, U. S. Department of Agriculture, Washington, D. C. *Plant pathology*. East Palmyra, N. Y, Aug. 12, 89. B.S.A., Cornell, 11, fellow, 11-13; M.S., Wisconsin, 13. Instr, Cornell, 13-14; asst. prof, plant path, Rochester and Cornell, 14-18; *pathologist, bur. plant indust, U. S. Dept. Agr*, 18- Phytopath. Soc. Diseases of vegetables.
- James, Prof. Charles**, New Hampshire College, Durham, N. H. *Chemistry*. Northampton, England, 80. F.I.C., London, 07. Chemist, Nat. Refining Co, 05-06; asst. prof. *inorg. chem, N. H. Col*, 06-12, *prof*, 12- Nichols medal, Chem. Soc, 11. Chem. Soc; London Chem. Soc. Rare metals.
- James, Prof. G(eorge) O(scar)**, Washington University, St. Louis, Mo. *Mathematics*. Bowers Hill, Va, Aug. 1, 73. A.B., Hopkins, 95, Ph.D., 99. Instr. physics, Utah, 96-97; math. and astron, Lehigh, 02-03; math, *Washington (St. Louis)*, 03-08, asst. prof. astron. and math, 08-13, *prof. applied math. and dean of col*, 18- Math. Soc. Approximate longitudes from observations of the moon in the polaris vertical circle; relation between empirical and inertial trihedrons of gravitational astronomy; philosophy of relativity theory.
- James, George Wharton**, 1098 N. Raymond Ave, Pasadena, Calif. *Ethnology, Archeology*. Gainsborough, England, Sept. 27, 58. Litt.D., Santa Clara, 07. Ed, 'The Basket,' 03-04; co-editor, 'The Craftsman,' 04-05. Popular lecturer, Stanford, Calif. Acad, Princeton, Columbia, Drexel Inst, Franklin Inst, New York Board of Educ, Brooklyn Inst, Teachers Col, etc. Geol. Soc; Pacific Astron Soc; S. Calif. Acad; Royal Astron. Soc; Royal Micros. Soc; Royal Hist. Soc; Victoria Inst. Symbolism of Indian basketry designs; folk-lore; present social con-

- ditions of the Indians of California and the Amerinds of the southwest; the old Franciscan missions in California and the southwest; the Colorado desert; mission architecture; California history and literature.
- James, Prof. Glenn**, Carnegie Institute of Technology, Pittsburgh, Pa. *Mathematics*. Wabash, Ind., Oct. 2, 82. A.B., Indiana, 05, A.M., 10; Ph.D., Columbia, 17. Instr. math, Mich. Agr. Col., 05-08; Purdue, 08-17, asst. prof., 17-19; *Carnegie Inst. Tech.*, 19-20, *assoc. prof.*, 20-Math. Soc.; Math. Ass. Theory of divergent series.
- James, Henry D(uvall)**, 12 Trenton Ave, Swissvale Station, Pittsburgh, Pa. *Electrical engineering*. Baltimore, Md., Sept. 21, 74. B.S., Pennsylvania, 95, M.E., 96. *Manager, control eng. dept., Westinghouse Elec. and Mfg. Co.* Elec. Eng.; West. Pa. Eng. Soc. (v. pres. and director). Control of electric motors.
- James, Prof. Walter B.**, 7 E. 70th St, New York, N. Y. *Medicine*. Baltimore, Md., May 11, 58. A.B., Yale, 79, A.M., 06; M.D., Columbia, 83, LL.D., 04. Asst. pathologist, N. Y. Hosp., 88-90; visiting and consulting physician, Bellevue, Presb. and Roosevelt Hospitals, and Hosp. for Ruptured and Crippled, 90-02; lecturer med, Columbia, 01-02, Bard prof., 02-09, prof. clin. med., 09-18. Pres., Trudeau Sanitarium, 16. A.A.; emer. mem. Am. Physicians; N. Y. Acad. Med.
- Jamieson, Dr. George S(amuel)**, 3914 McKinley St, N. W., Washington, D. C. *Chemistry*. Bridgeport, Conn., June 7, 79. Ph.B., Yale, 01, Ph.D., 04. Instr. anal. chem., Sheffield Sci. Sch., Yale, 04-09, asst. prof., 09-18, anal. research chemist, 18-19; *chemist in charge, oil, fat and wax lab, bur. chem., U. S. Dept. Agr.*, 19- A.A.; Chem. Soc.; Wash. Acad. Organic, inorganic and analytical chemistry; mineralogy; methods for various elements; vegetable oils.
- Janney, Dr. Nelson W(ilson)**, Good Samaritan Hospital, Los Angeles, Calif. *Biochemistry*. Philadelphia, Pa., Sept. 13, 81. B.S., Pennsylvania, 02, M.D., 06; Munich, 11; D.Chem., Marburg, 12. Research worker, Herter Lab, N. Y. City, 12; director, metab. lab, Montefiore Home and Hosp., 12, adj. attending physician, 18; asst. prof. med, N. Y. Post-Grad. Med. Sch., and attending physician, Hosp., 17-19; *director, Mem. Metab. Clinic, Santa Barbara*, 19- Chief med. service, Base Hosp., 99, A.E.F., 18. Soc. Biol. Chem.; Ass. Study Int. Secretions; Am. Med. Ass.; Chem. Gesell. Diseases of metabolism; influence of the thyroid gland on metabolism; basal metabolism in diabetes; influence of diet on intestinal flora.
- Jansky, Prof. Cyril M(ethodius)**, 2117 Jefferson St, Madison, Wis. *Electrical engineering*. Richland Co, Wis., March 15, 70. A.B., Valparaiso, 91; B.S.(E.E.), Michigan, 04. Research asst, Bur. Standards, 04-05; prof. *elec. eng.* and acting dean, sch. applied science, Oklahoma, 05-08; *prof., Wisconsin*, 08- A.A.; assoc. mem. Elec. Eng.; Prague Soc. Physics and Math. Determination of E.M.F. of Clark and Weston cells; the coulometer; electrical meters; direct current machinery; principles of the telephone and radio-telegraphy.
- Jardine, James T(ertius)**, Agricultural Experiment Station, Corvallis, Oregon. *Forestry*. Cherry Creek, Idaho, Nov. 28, 81. B.S., Utah Col., 05; Chicago, 05-06. Instr. English, Utah Col., 05-07; special agent, U. S. Forest Service, 07-08, deputy forest supervisor, 08-10, inspector of grazing, 10-20, in charge, range investigations and surveys, 20; *director, Oregon Agr. Exp. Sta.*, 20- Lecturer, Washington (Seattle), 10-11; Montana, 10-11; Colo. Col., 11; forest sch., Yale, 14-16. Soc. Foresters; Ecol. Soc.; Wash. Acad.; Wash. Bot. Soc. Range management; livestock production; native pastures; economic botany.
- Jardine, Pres. W(illiam) M(arion)**, Kansas State Agricultural College, Manhattan, Kans. *Agriculture*. Oneida Co, Idaho, Jan. 16, 79. B.S.A., Utah Col., 04; Illinois, summer, 06; LL.D., Campbell, 16. Asst. agron., Utah Col., 04, instr., 05, prof., 05-06; asst. cerealist in charge, dry land cereal investigations, U. S. Dept. Agr., 07-10; agronomist, *Kansas State, and Exp. Sta.*, 10-13, dean and director, 13-18, *pres.*, 18- Lecturer, grad. sch., Mich. Agr. Col., 12. Mem. jury awards, Panama-Pacific Expos., 15; pres. Int. Dry Farming Cong. and Soil Products Expos., 15-16; Int. Wheat Cong., 20. A.A.; Soc. Agron. (pres., 16); Inst. Social Sci.; Nat. Educ. Ass. (v. pres., 20); Kans. Teachers. Ass. Dry farming; agronomy; farm tenancy; land settlement; rural life.
- Jarvis, Dr. N(athan) S(turgis)**, 1 W. 64th St, New York, N. Y. *Medicine*. Baltimore, Md., 60. Baltimore City Col.; M.D., Bellevue, 84. Intern, Bellevue Hosp., 84-86; lieut. and asst. surgeon, U.S.A., 87-92, capt., 92-98, major and brig. surgeon, U. S. Vols., Spanish-Am. War, 98-99, capt., retired, 01; *practising physician*, 01- Hancock prize, Mil. Surg. Inst., 05. A.A.; Am. Med. Ass.; Ass. Mil. Surg. Surgery; hygiene; military medicine.
- Jarvis, Prof. Royal P(reston)**, Cananea Consolidated Copper Co, Cananea, Sonora, Mex. *Metallurgy*. Riverton, Iowa, Feb. 13, 75. E.M., Colo. Sch. Mines, 97; A.M., Columbia, 07, Ph.D., 09. Assayer and chemist, Bimetallic Smelting Co, 97-00; chemist and asst. supt., Cia. Metal. de Torreón, Torreón, Mex., 01-03; prof. mining and metal, Wash. State, 03-06; Tennessee, 07-14; chief chemist, *Cananea Consol. Copper Co.*, 15-18, *chief geologist*, 18- Min. Eng. Ore dressing; electro-metallurgy; jigging; the effect of the presence of certain addition-agents upon the coherence of electrolytically deposited copper, lead and silver.
- Jastrow, Prof. Joseph**, 237 Langdon St, Madison, Wis. **Psychology*. Warsaw, Poland, Jan. 30, 63. A.B., Pennsylvania, 82, A.M., 85; fellow, Hopkins, 85-86, Ph.D., 86. *Prof. psychol., Wisconsin*, 88- In charge, sect. psychol., Columbian Expos., 93; non-res. lecturer psychol., Columbia, 10; ed., 'Conduct of Mind' series. A.A. (sec'y, H., 90, v. pres., 91); Soc. Nat.; Psychol. Ass. (pres., 00). Development, analysis and correlation of mental processes; abnormal psychology; the subconscious; the stereoscope; visual interpretation; character and temperament; psychology of war; belief, judgment and their irregular forms.

- Jeans, Prof. Philip C(harles)**, 500 S. Kingshighway, St. Louis, Mo. *Pediatrics*. Hillsboro, Ohio, Jan. 3, 83. A.B., Kansas, 04; M.D., Hopkins, 09. *Assoc. prof. pediat.*, Washington (St. Louis). Am. Med. Ass.; *Pediat.* Soc. Clinical pediatrics; heredity of syphilis.
- Jeffers, Hamilton M(oore)**, Lick Observatory, Mt. Hamilton, Calif. *Astronomy*. Sewickley, Pa., Oct. 13, 93. A.B., California, 17. Asst. astron., California, 16-18, instr., 18-19, *fellow*, Lick Observatory, 19- A.A.; Astron. Soc.; Pacific Astron. Soc. Theoretical astronomy; orbits of comets and minor planets.
- Jefferson, Prof. Mark (Sylvester William)**, Ypsilanti, Mich. *Geography*. Melrose, Mass., March 1, 63. A.B., Boston, 89; Harvard, 97, A.M., 98. Asst. astronomer, Argentine Nat. Observatory, Cordoba, 83-86; teacher and supt. schools, 89-96, 98-01; *prof. geog.*, State Nor. Col., Ypsilanti, Mich., 01- Instr. geog., summer schools, Harvard, 98, 00; Michigan, 03; Yale, 07; California, 20; assoc. ed., 'Jour. Geog.', 01-; 'Bul.' Am. Geog. Soc., 10-; Am. Geog. Soc. exped. to Chile, Argentina and Brazil, 18; chief, div. geog., Am. Peace Commission, Paris, 19. Geol. Soc.; Ass. Geog. (pres, 17); Mich. Acad. (v. pres, 03, 04, pres, 07). Geography of tides; river meanders; beach cusps and rainfall of Great Lakes; distribution of man; distribution of temperatures.
- Jeffrey, Prof. E(dward) C(harles)**, 47 Lakeview Ave., Cambridge, Mass. **Botany*. St. Catherines, Ont., May 21, 66. B.A., Toronto, 88, hon. D.Sc., 18; Ph.D., Harvard, 98. Lecturer biol., Toronto, 92-02; asst. prof. veg. histol. and gen. morphol., Harvard, 02-07, *prof. plant morphol.*, 07- A.A.; Soc. Nat.; Bot. Soc.; Geol. Soc.; Paleont. Soc.; Am. Acad. Morphology and experimental morphology of vascular plants; evolution of fossil plants; structure of coal and lignites.
- Jeffries, Dr. Zay**, 2800 Harvard Ave., Cleveland, Ohio. *Metallurgy*. Willow Lake, S. Dak., April 22, 88. B.S., S. Dak. Sch. Mines, 10, Met.E., 14; Sc.D., Harvard, 18. Instr. metal, Case, 11-16, asst. prof., 16-17; *director research*, Aluminum Castings Co., 17-; *consulting metallurgist*, Gen. Elec. Co., 14- Lecturer non-ferrous metals and their alloys, Harvard, 20. Min. and Metal. Eng.; Physical Soc.; Soc. Test. Mat.; Automotive Eng.; Franklin Inst.; Royal Soc. Arts; British Inst. Metals; Faraday Soc. Metallurgy; alloys.
- Jehle, Dr. R(obert) A(ndrew)**, West Raleigh, N. C. *Plant pathology*. B.S.A., Minnesota, 05, M.S.A., 10; fellow, Cornell, 11-12, Ph.D., 15. Asst., Minnesota, 09-10; prof. science and agr. high sch., Wheaton, Minn., 10-11; asst. plant pathologist, Kansas State, 12-13; instr. plant path., Cornell, 13-14; asst. plant pathologist, Cuban Exp. Sta., Santiago, 14-15; Fla. State Plant Board, 15-17; *extension pathologist*, N. C. Exp. Sta., 17- Phytopath. Soc. Brown rot of orchard fruits.
- Jelliffe, Dr. Smith Ely**, 64 W. 56th St., New York, N. Y. *Neurology*, *Psychiatry*. New York, Oct. 27, 66. A.B., Brooklyn Polytech, 86; M.D., Columbia, 89, A.M., Ph.D., 00; Munich, Berlin, Paris, 06-09. Prof. pharmacog., N. Y. Col. Pharmacy, 95-07; clin. asst., dept. neur., Columbia, 99-09; instr. pharmacol. and therapeut., 02-06; prof. psychiat., Fordham, 07-12; assoc. prof. diseases of mind and nervous system, N. Y. Post-Grad. Med. Sch., 12-17. Ed., 'Med. News,' 00-06; managing ed., 'Jour. Nervous and Mental Disease,' 01-; assoc. ed., 'N. Y. Med. Jour,' 06-08, 16-19; 'Psychoanalytic Rev,' 15-; 'Mental Disease Monograph,' new series, 09- Visiting physician, City Hosp.; Hosp. for Nervous Diseases, 06-16; asst., Neur. Inst., 09-14. Neur. Ass.; Am. Med. Ass.; Psychopath. Ass.; Medico-Psychol. Ass.; N. Y. Acad. Med.; N. Y. Neur. Soc. (pres, 13); cor. mem. Soc. neur. de Paris. Clinical investigations; diseases of the nervous system; psychology of unconscious; psychoneuroses; multiple sclerosis; convulsive disorders; dementia precox.
- Jenkins, Dr. E(dward) H(opkins)**, Drawer 1, New Haven, Conn. **Agricultural chemistry*. Falmouth, Mass., May 31, 50. A.B., Yale, 72, Ph.D., 79; Leipzig, 75-76. Chemist, Conn. Exp. Sta., 77-00, v. director, 84-00, *director*, 00-, *treas.*, 01- Chairman, Conn. Sewerage Commission, 97-03. A.A.; Soc. Prom. Agr. Sci. Agricultural chemistry; culture, cure and fermentation of tobacco.
- Jenkins, Prof. George B(ain)**, Iowa State University, Iowa City, Iowa. *Anatomy*. Bardstown, Ky., Dec. 19, 74. M.D., Hosp. Col. Med. (Ky), 98; Kentucky Med. Sch., 00. Intern., City Hosp., Louisville, 98-99, asst. med. supt., 99-03; prof. anat., Kentucky Med. Sch., 05-08; Louisville, 08-12; asst. anat., Hopkins, 12-13; *prof. anat.*, histol. and embryol., Louisville, 13; *anat.*, Iowa. Ass. Anat. Embryology; anatomy; neurology.
- Jenkins, Olaf P(itt)**, State College of Washington, Pullman, Wash. *Geology*. Greencastle, Ind., Feb. 9, 89. A.B., Stanford, 13, A.M., 15. Asst. geologist, Tenn. Geol. Surv., 13-16; asst. prof. econ. geol., Wash. State, 16-18; geologist, Ariz. Bur. Mines, 18-19; Sinclair Cons. Oil Corp., 19-20; *asst. prof. econ. geol.*, Wash. State, 20- Asst. geologist, Stanford exped. to Brazil, 11; Gypsy Oil Co., 16; Wash. State Geol. Surv., 17; field geologist, South. Pacific R. R. Co., 18. A.A.; Min. Eng. Stratigraphy; economic geology.
- Jenkins, Prof. Oliver P(eebles)**, Stanford University, Calif. *Physiology*, *Ichthyology*. Bantam, Ohio, Nov. 3, 50. A.B., Moores Hill, 69, A.M., 71, LL.D., 16; M.S., Indiana, 86, Ph.D., 90. Prof. nat. sciences, Moores Hill, 76-82; Ind. State Nor. Sch., 83-86; biol., DePauw, 86-91; *physiol.*, Stanford, 91-16, *emer. prof.*, 16- A.A.; Soc. Nat.; Physiol. Soc.; Calif. Acad.; Ind. Acad.; Cooper Ornith. Club; West. Soc. Nat. Nervous system of invertebrates; Hawaiian, American and Mexican fishes.
- Jenks, Prof. Albert Ernest**, University of Minnesota, Minneapolis, Minn. *Anthropology*, *Ethnology*. Ionia, Mich., Nov. 28, 69. B.S., Kalamazoo, 96; Chicago, 97; hon. fellow, Wisconsin, 98-99, Ph.D., 99. *Prof. anthrop.*, Minnesota. A.A.; Anthropol. Ass.
- Jenks, Prof. Leon E.**, University of Buffalo, Buffalo, N. Y. *Chemistry*. Deansville, N. Y., Oct. 20, 76. B.S., Hamilton, 05, M.S., 08; Cornell, 14-17. Prof. physical and metal. chem., Cooper Union, 17-18; *asst. prof. anal. chem.*, Pittsburgh, 18-19; *chem.*, Buffalo, 19- Chem. Soc. Metallurgical and analytical chemistry.

- Jennemann, Rev. V(incent) L(ouis), S.J.**, St. Ignatius College, Chicago, Ill. *Chemistry*. Jan. 22, 83. A.B., St. Louis, 08, A.M., 17. *Prof. chem.*, Campion, 09-11; St. Mary's (Kans.), 11-13; Detroit, 18-19; St. John's (Ohio), 19-20; *St. Ignatius*, 20- Inorganic chemistry.
- Jenness, D(iamond)**, Victoria Memorial Museum, Ottawa, Can. *Anthropology*. Wellington, N. Z., 86. M.A., New Zealand, 08; Oxford, 11. *Anthropologist*, *Can. Geol. Surv.* Ethnologist, Can. arctic exped, 13-16. Fel. Royal Anthropol. Inst. Ethnology of Goodenough Island; Papua; the Copper Eskimos.
- Jenney, Dr. W(alter) P(roctor)**, 1417 Park Road, N. W., Washington, D. C. *Geology*. Fairhaven, Mass., Jan. 11, 49. E.M., Columbia, 69, hon. Ph.D., 76. Mining engineer, Dorn Gold Mining Co., S. C., 71; geologist, Tex. Pacific R. R. Surv., 72; E. Ky. R. R., 73-74; in charge, U. S. Surv. Black Hills, 75-77; manager, Parker Mining Co., Wood River, Idaho, 84-87; mining engineer, Union Pacific R. R., 88; geologist in charge, div. of zinc, U. S. Geol. Surv., 89-92; special geol. investigations, Fremont and Elkhorn R. R. and Black Hills, F. and P. R. R., 94; Burlington R. R., 96; consulting mining geologist, 96-09; investigator ship forms, Navy Yard, Washington, D. C., 09-17; with U.S.N., 17-18; *investigator, plant breeding, U. S. Dept. Agr.*, 19- Naval architecture; action of metallic salts on the growth of plants; inducing mutation in maize by intense fertilization of the soil.
- Jennings, Prof. H(erbert) S(pencer)**, Johns Hopkins University, Baltimore, Md. *Zoology*, *Genetics*. Tonica, Ill., April 8, 68. B.S., Michigan, 93, Sc.D., 18; Morgan and Parker fellowships, Harvard, 95-97, A.M., 95, Ph.D., 96; Jena, 96-97; LL.D., Clark, 09. Asst. zool., Michigan and Harvard, 92-95; prof. bot., Mont. Col., 97-98; instr. zool., Dartmouth, 98-99; Michigan, 99-01, asst. prof., 01-03; Pennsylvania, 03-06; assoc. prof. physiol. zool., *Hopkins*, 06-07, prof. exp. zool., 07-10, *Henry Walters prof. zool. and director, biol. lab.*, 10- Director, biol. surv. of Great Lakes, U. S. Fish Commission, 01; research asst., Carnegie Institution, 03-04; trustee, Woods Hole; assoc. ed., 'Jour. Exp. Zool'; 'Genetics.' Walker prize, Boston Soc. Nat. Hist. Nat. Acad.; A.A.; Soc. Nat. (pres., 11); Soc. Zool. (pres., 09); Soc. Exp. Biol.; Philos. Soc.; Am. Acad.; Phila. Acad.; Wash. Acad.; hon. fel. Royal Micros. Soc. Behavior and genetics, especially of lower organisms.
- Jennings, Prof. O(tto) E(mery)**, Carnegie Museum, Pittsburgh, Pa. *Botany*. Olena, Ohio, Oct. 3, 77. B.S.(Agr.), Ohio State, 03; Ph.D., Pittsburgh, 11. Florist, Ohio State, 01-02, asst. bot., 02-04; custodian bot., *Carnegie Museum*, 04-07, asst. curator, 07-15, *curator*, 15-; instr. paleobot., *Pittsburgh*, 11-14, *prof. bot.*, 14- Assoc. ed., 'Ohio Naturalist,' 03-04; ed., 'Bryologist,' 13-; instr. in charge of bot. lake lab., Ohio State, 05, ecol., 10; lecturer bot., Pittsburgh and Allegheny Kindergarten Col., 10; Carnegie Museum bot. expeditions to Isle of Pines, 10, northwest. Ont., summers, 12-17, Wash., 15. A.A. (gen. see'y, 18); Bot. Soc.; Ecol. Soc.; Paleont. Soc.; Sullivant Moss Chapter; Fern Soc.; Ass. Prof.; Ass. Geog.; Mus. Ass.; Ohio Acad.; West. Pa. Bot. Soc. (pres., 07-09, see'y, 09-); Wash. Biol. Soc.; Pittsburgh Acad. (pres., sect. biol. and geol., 16-); Ottawa Field Nat. Club. Systematic botany and ecology of western Pennsylvania, Isle of Pines and northwestern Ontario; paleobotany of western Pennsylvania and Oligocene of western Montana.
- Jennings, Prof. Walter L(ouis)**, 18 Boynton St., Worcester, Mass. *Chemistry*. Bangor, Maine, Nov. 15, 66. A.B., Harvard, 89, A.M., 90, Ph.D., 92. Asst. prof. *chem.*, *Worcester*, 94-01, *prof.*, 01- A.A.; Chem. Soc.; Am. Acad.; Chem. Gesell. Products of the dry distillation of wood; constitution of rosanilin and para-rosanilin; condensation of phenols with sugars; synthetic glucosids; cyanogen chlorid.
- Jennison, Prof. H(arry) M(illiken)**, Montana State College, Bozeman, Mont. *Botany*. Worcester, Mass., June 24, 85. B.S., Mass. Col., 08; A.M., Wabash, 11; Woods Hole, summers, 09-11; Washington (St. Louis), 15-16. Instr. bot., Mass. Col., 08-10; Wabash, 10-11; *Mont. Col.*, 11-13, *asst. prof. bot. and bacter.*, 13- Extension botanist, Mont. Col., 18- A.A.; Phytopath. Soc. Plant pathology and physiology.
- Jensen, Cha(rles) A.**, U. S. Department of Agriculture, Washington, D. C. *Agriculture*. Denmark, Nov. 4, 73. B.S., Utah Col., 97 and 99; Nebraska, 04-05. Bur. soils, U. S. Dept. Agr., 00-07, bur. plant indust., 07-10; with Am. Beet Sugar Co., 11-13; bur. plant indust., U. S. Dept. Agr., 14-19; *Nat. Orange Co.*, 19- Asst. biol., Utah Col., 96-97, chem., 97-99. A.A. Agronomy; soils; soil infertility; alkali; seasonal nitrification in situ; physiology of crop plants; mottle leaf of citrus; water requirements of citrus plants.
- Jensen, Dr. C(hristian) N(ephi)**, Cornell University, Ithaca, N. Y. *Plant pathology*. Ephraim, Utah, June 18, 80. B.S.A., Utah Col., 08; M.S.A., Cornell, 09, Ph.D., 12; fellow, California, 10. Principal and instr., pub. schools, 97-03; instr., Snow Acad., 05-07; Utah Col., 07-08, prof. plant path., 12-13; pres., Brigham Young Col., 13-20. A.A.; Phytopath. Soc.; Utah Acad. (v. pres., 13).
- Jensen, (Estelle) Louise, (Mrs. E. C. Stakman)**, 1366 Raymond Ave., St. Paul, Minn. *Plant pathology*. Minneapolis, Minn., May 25, 88. A.B., Minnesota, 09, fellow, 11-12; A.M., Smith, 10. Instr. high sch., Brookings, S. Dak., 10-11; xylotomist, forest products lab., Wisconsin, 12-13; *instr. mycol.*, *Minnesota*, and *mycologist*, *Exp. Sta.*, 13- A.A.; Phytopath. Soc. Imperfect fungi on cereals.
- Jensen, Prof. Gerhard H.**, Pullman, Wash. *Plant physiology*. Denmark, Oct. 5, 68. B.S., Cornell, 99; Ph.D., Chicago, 06. Instr. biol., State Nor. Sch., Wis., 99-01; *bot.*, Northwestern, 03-05, asst. prof., 05-07, assoc. prof., 07-11, prof. and head of dept., 11-14; asst. prof., *Wash. State*, 14-16, *assoc. prof.*, 16- Investigator, bur. plant indust., U. S. Dept. Agr., summers, 16- A.A.; Bot. Soc.; Pharmaceut. Ass.; Am. Geog. Soc. Physiology, pathology, morphology and toxicity of wheat; growth of alfalfa.
- Jensen, Jens, 60 E. Van Buren St.**, Chicago, Ill. *Landscape gardening*. Dybbøl, Denmark, Sept.

- 13, 60. Agr. Col., 78-80. Supt. Humboldt Park, Chicago, 94-00, *gen. supt., West Park System*, 06- Consulting landscape architect, West Chicago Parks. A.A.; Am. Geog. Soc.; Ill. Acad. Destruction of the oak at Lake Geneva; plant acclimatization; parks.
- Jepson, Prof. W(illis) L(inn)**, University of California, Berkeley, Calif. **Botany*. Vacaville, Calif., Aug. 19, 67. Ph.B., California, 89, Ph.D., 99; Cornell, 95; Harvard, 96; Kew and Berlin, 05-06. Asst. bot., California, 91-94, instr., 95-98, asst. prof., 99-18, *prof.*, 18- Ed., 'Erythea,' 93-00. Soc. Foresters; West. Soc. Nat.; Wash. Acad.; Calif. Bot. Soc. (pres); Calif. Acad.; Sierra Club; Save the Redwoods League (councilor). Taxonomy, special morphology, geographic distribution, life-history and habits of west American, especially Californian, seed-plants.
- Jesse, Prof. R(ichard) H(enry), Jr**, 810 Hillcrest Ave, Columbia, Mo. *Chemistry*. Princess Anne, Md., Jan. 4, 84. A.B., Missouri, 02; A.M., Harvard, 07, Ph.D., 09. Austin teaching fellow, Harvard, 08; instr. applied chem., Illinois, 09-12, assoc. chem., 12; *prof.*, Montana, 12- Carnegie research asst., Harvard, 09. Chem. Soc.; Chem. Gesell.; Verein Chem. Atomic weights; thermochemistry; gas analysis; sewage disposal.
- Jewett, Dr. Frank B(aldwin)**, 463 West St., New York, N. Y. **Physics, Electrical engineering*. Pasadena, Calif., Sept. 5, 79. A.B., Throop, 98; Ph.D., Chicago, 02. Research asst., Chicago, 00-02; instr. physics, Mass. Inst. Tech., 02-04; transmission and protection engineer, Am. Telephone and Telegraph Co., 04-12; asst. chief engineer, West. Elec. Co., 12-16, *chief engineer*, 16- Lieut. col., Sig. C., 17-18. Trustee, Eng. Foundation; mem. various committees, Nat. Research Council. D. S. medal, 19. Nat. Acad.; Physical Soc.; Elec. Eng. (past v. pres); Eng. Educ.; N. Y. Telephone Soc. (past pres). Vapor density of sodium vapor; magnetic change of resistance in bismuth; effect of pressure on insulation resistance.
- Jewett, Prof. F(rank) F(anning)**, 73 S. Professor St., Oberlin, Ohio. *Chemistry, Mineralogy*. Newton Corner, Mass., Jan. 8, 44. A.B., Yale, 70, A.M., 73; Göttingen, 74-75; Berlin, 95-96. Teacher science, Norwich Free Acad., 70-72, 73-74; *prof. chem.*, Univ. of Japan, 77-80; *chem. and miner.*, Oberlin, 80-12, *emer. prof.*, 12- A.A.; Chem. Soc.; Chem. Gesell. Qualitative analysis; inorganic chemistry; electrochemistry.
- Jickling, Dr. R(obert) L(ee)**, National Aniline and Chemical Co., Marcus Hook, Pa. *Chemistry*. Ph.D., Michigan, 15. *Research chemist*, 15-
- Job, Rev. Herbert K(eightley)**, West Haven, Conn. *Ornithology*. Boston, Mass., Nov. 29, 64. A.B., Harvard, 88; grad., Hartford Theol. Sem., 91. Pastor, Congregational Church, N. Middleboro, Mass., 91-98; Kent, Conn., 98-08; *state ornithologist, Conn.*; *lecturer ornith.*, Conn. Col.; *official lecturer, Nat. Ass. Audubon Societies*; *mem. ed. staff*, 'Outing.' Mem. Ornith. Union. Waterfowl; wild birds of America.
- Job, Robert**, 84 Antoine St., Montreal, Can. *Chemistry*. Boston, Mass., Oct. 10, 66. A.B., Harvard, 90. Asst. chemist, P. and R. R. R., 92-97, chemist, 97-06; *mem. firm of Booth, Garrett and Blair*, 06-10; *v. pres.*, Milton Hersey Co., 10- A.A.; Chem. Soc.; Soc. Chem. Indust.; Min. Eng.; Soc. Test. Mat.; Franklin Inst.; Can. Inst. Chem. Industrial chemistry; steel rails; bearing metals; iron castings; oils; paints and varnishes.
- Job, Dr. Thesle T(heodore)**, 706 S. Lincoln St., Chicago, Ill. *Anatomy*. Boone Co., Iowa, Dec. 24, 85. A.B., Simpson, 12; fellow, Iowa, 15-17, M.S., 15, Ph.D., 17; Woods Hole, 16. Asst., Simpson, 10-12; teacher science, high sch., Dillon, Mont., 12-14; instr. animal biol., Iowa, 17-18; *assoc. prof. anat.*, Loyola, 18- Iowa Univ. exped. to Barbados, 18. A.A.; Ass. Anat.; fel. Iowa Acad. Development, and microscopic and gross anatomy of the lymphatics.
- Jobling, Prof. James W(esley)**, College of Physicians and Surgeons, New York, N. Y. **Pathology*. Steubenville, Ohio, Aug. 2, 76. M.D., Tenn. Med. Col., 97. Director, Serum Lab., Manila, P. I., 02-04; assoc., Rockefeller Inst., 04-09; pathologist, Michael Reese Hosp., 09-13; *assoc. prof. path.*, Columbia, 13-14; Vanderbilt, 14-18; *prof.*, Columbia, 18- A.A.; Am. Physicians; Ass. Path. and Bact.; Soc. Exp. Path.; Harvey Soc.; Soc. Bact.; Soc. Exp. Biol.; Soc. Cancer Research; Chicago Path. Soc. Antimeningitis serum; malignant tumors in small animals; ferments and antiferments; pellagra.
- Jodidi, Dr. Samuel L.**, U. S. Department of Agriculture, Washington, D. C. *Chemistry, Plant pathology*. Kovno, Russia, Oct. 6, 67. Ph.D., Giessen, 94. Research chemist, Mich. Exp. Sta., 08-09; in charge soil chem. research, Iowa Exp. Sta., 09-13, *org. chemist, bur. plant indust.*, U. S. Dept. Agr., 13- A.A.; Chem. Soc.; Bot. Soc.; Wash. Acad.; Mich. Acad. Physiological and biological chemistry; organic chemistry; plant pathology and physiology.
- Joerg, W(olfgang) L(ouis) G(ottfried)**, American Geographical Society, New York, N. Y. *Geography*. Brooklyn, N. Y., Feb. 6, 85. Leipzig, 04; Columbia, 04-06; Göttingen, 06-11. Asst. ed., 'Bul.' Am. Geog. Soc., 11-15; *assoc. ed.*, 'Geog. Rev.' 15-20, *ed. research series*, 20- A.A.; Ass. Geog. Tectonic lines of North American Cordillera; natural regions of North America; maps for locating earthquake epicenters; cartography; methods of geography.
- Joffe, S(olomon) A(chillovich)**, 32 Nassau St., New York, N. Y. *Mathematics, Actuarial science*. Petropavlovka, Russia, May 9, 68. M.S., N. Y. Univ., 93; Chicago, 93, fellow, 94-95. Asst. math., Columbia, 97; instr., N. Y. Ethical Culture High Sch., 97-98; mathematician, foreign dept., Mutual Life Ins. Co., 98-10, *asst. actuary*, 10- A.A.; Math. Soc.; Math. Ass.; Statist. Ass.; fel. Actuarial Soc.; Circolo Mat. di Palermo; Soc. astron. de France. Mortality tables; Bernoullian numbers; Eulerian numbers; quintic equations; Diophantine analysis.
- Johannsen, Prof. Albert**, University of Chicago, Chicago, Ill. **Geology*. Belle Plaine, Iowa, Dec. 3, 74. B.S., Illinois, 94; Utah, 98; fellow, Hopkins, 02-03, Ph.D., 03. Geol. asst., Md. Geol. Surv., 01-03; *asst. geologist*, U. S. Geol. Surv., 03-, acting chief, sect. petrol., 07-10; *asst. prof. petrol.*, Chicago, 10-14, *assoc. prof.*, 14-18, *prof.*, 18- Lecturer petrol., Chicago, 09; *assoc. ed.*,

- 'Jour. Geol.' 10-; petrographer, Inst. Geol. de Mex, 19- A.A; Geol. Soc; Chicago Geog. Soc. Petrology.
- Johannsen, Prof. O(skar) A(ugustus)**, College of Agriculture, Ithaca, N. Y. *Entomology*. Davenport, Iowa, May 14, 73. B.S. Illinois, 94; A.M. Cornell, 02, Ph.D. 04. Eng. worker, Chicago, 94-99; instr. civil eng, Cornell, 99-04, asst. prof, 04-09; prof. entom. Maine, and entomologist, Exp. Sta, 09-12; *prof. biol. Cornell*, 12-18, *entom.*, 18- A.A; Entom. Soc; Soc. Zool; Ass. Eeon. Entom. Limnology; biology and taxonomy of Diptera; medical entomology; insect histology and morphology; parthenogenesis in insects.
- Johns, Dr. Carl O(scar)**, U. S. Department of Agriculture, Washington, D. C. **Biological chemistry*. Vinköl, Sweden, Aug. 19, 70. A.B. Bethany (Kans), 99, A.M. 02; Ph.B. Yale, 04, Ph.D. 06. Instr. nat. hist, Bethany (Kans), 99-03; asst. chem. Sheffield Sci. Sch, Yale, 04-06, instr. 06-11, asst. prof. 11-14; *org. chemist, bur. chem, U. S. Dept. Agr.*, 14-15, *in charge protein investigation lab*, 15-, *in charge scientific personnel*, 17-, *in charge color lab*, 20- Detailed to Joint Commission on Reclassification of Govt. Salaries, 19- A.A; Chem. Soc. (councilor, 17-); Soc. Biol. Chem; Wash. Chem. Soc; Wash. Acad. Synthesis of pyrimidins, purins and halogen and nitroamino acids; furfurans; cyanogenesis; hydrocyanic acid; proteins and amino acids; saponins; toxicity of metals.
- Johnson, Dr. A(aron) G(uy)**, University of Wisconsin, Madison, Wis. *Plant pathology*. Sept. 1, 80. Washington (St. Louis); B.S. S. Dak. Col. 07; M.S. Purdue, 11; Ph.D. Wisconsin, 14. Bot. asst. Mo. Bot. Garden, 03-06; asst. bot. and hort. S. Dak. Col. 06-08; asst. botanist, Purdue Exp. Sta, 08-11; asst. bot. and plant path, *Wisconsin*, 11-12, *plant path*, 12-13, instr. and later asst. prof, 13-; *pathologist, office cereal investigations, bur. plant indust, U. S. Dept. Agr.*, 14- A.A; Bot. Soc; Phytopath. Soc; Wis. Acad. Unattached forms of plant rusts; diseases of cereals.
- Johnson, Prof. Arden R(ichard)**, 615 Michigan Ave, Evanston, Ill. *Physical chemistry*. Rutland, Wis, Sept. 21, 84. B.S. Wisconsin, 06, M.S. 08, Ph.D. 11. Instr. chem, Wisconsin, 06-08; prof, De Paul, 08-12, assoc. prof. theoret. chem, Iowa State, 12-13; chemist, C. F. Burgess Laboratories, 14; director, Indust. Chem. Laboratories, 15-18; *asst. prof, physical chem, Northwestern*, 18- A.A; Chem. Soc. (sec'y-treas, Iowa sect, 12); Electrochem. Soc; Wis. Acad. Boron; metallic calcium; osmosis of optical isomers; photo-chemistry; deposition of metal coatings from vapor phase.
- Johnson, B(ertrand) L(eroy)**, U. S. Geological Survey, Washington, D. C. *Geology*. Boston, Mass, May 11, 82. B.S.(Min.E), Mass. Inst. Tech, 05. Hydrologic aid, *U. S. Geol. Surv.*, 05-06, junior geologist, 07-10, asst. geologist, 11-12, assoc. geologist, 12-20, *geologist*, 20- Geol. Soc; Min. and Metal. Eng; Wash. Acad; Wash. Geol. Soc. (treas, 17). Titaniferous iron ores; Pleistocene terracing and underground waters in the North Carolina coastal plains; coal fields of southern Wyoming; soil movements in Alaska;
- tungsten, tin, copper and gold deposits in Alaska; occurrence of chalmersite (CuFe_2S_3) in Alaskan copper ores; silver resources of the world; foreign mineral resources.
- Johnson, Dr. Buford J(ennette)**, Johns Hopkins University, Baltimore, Md. *Psychology*. Thomson, Ga, Aug. 23, 80. A.B. Lagrange, 95; A.M. Hopkins, 15, Ph.D. 16. Assoc. psychologist, Lab. of Social Hygiene, Bedford Hills, N. Y., 16-17; Bur. Educ. Exp, N. Y. City, 17-20; *assoc. prof. psychol, Hopkins*, 20- Instr. educ. psychol, Hopkins, summers, 18, 19. A.A; Psychol. Ass; S. Soc. Philos. and Psychol; N. Y. Soc. Exp. Educ. Psychology of children; practise effects; motor abilities of young children.
- Johnson, Dr. Charles E(ugene)**, University of Kansas, Lawrence, Kans. *Zoology*. Christiania, Norway, April 24, 80. A.B. Minnesota, 06, A.M. 07, Ph.D. 12. Instr. comp. anat. of vertebrates, Minnesota, 12-18; *assoc. prof. zool, Kansas*, 20- A.A; Soc. Zool; Ass. Anat; Soc. Mammal; Ornith. Union. Vertebrate embryology and anatomy; mammalogy; ornithology.
- Johnson, C(harles) M(orris)**, 731 Orchard St, Avalon, Pa. *Chemistry*. Alliance, Ohio, Aug. 15, 69. Ph.B. Ph.M. Pittsburgh, 89. Asst. chemist, Park Steel Co, 89-90; *chief chemist, Crucible Steel Co. of Am*, 00-, *supt. tungsten works*, 09-, *director, research dept*, 17- A.A; Chem. Soc; Soc. Test. Mat; Steel Treat. Soc; British Iron and Steel Inst. Determination of carbon in iron, steel, ferro-alloys and plumbago; determination of nickel in the presence of chromium, iron and manganese; formation of white scale on steel; annealing of alloy steels; analysis of special steels, steel-making alloys and graphite; gravimetric determination of manganese; tungsten ores.
- Johnson, Dr. Cha(rlie)s W(illis)**, University of Washington College of Pharmacy, Seattle, Wash. *Chemistry*. Concord, Ind, Sept. 23, 73. Ph.C. Michigan, 96, B.S. 00, Ph.D. 03. Asst. instr. chem, Michigan, 98-01; instr. Iowa, 01-02; asst. prof, *Washington (Seattle)*, 03-04, *prof. pharmacut. chem. and dean, sch. of pharmacy*, 04- A.A; Chem. Soc; Pharmaceut. Ass; Wash. State Pharmaceut. Ass. Oxidation products of morphin.
- Johnson, C(harles) W(illison)**, Boston Society of Natural History, Boston, Mass. **Natural history*. Morris Plains, N. J, Oct. 26, 63. Pub. and private schools. *Curator, museum, Wagner Free Inst, Phila*, 88-03; *Boston Soc. Nat. Hist*, 03- Assoc. ed, 'Nautilus', 90- A.A; Soc. Zool; Entom. Soc; Am. Acad; Boston Soc. Nat. Hist; Phila. Acad; Wash. Entom. Soc; Conchol. Soc. of Gt. Britain and Ireland; London Malacol. Soc. Diptera; recent and fossil Mollusca; Diptera of New England.
- Johnson, Prof. Douglas Wilson**, Columbia University, New York, N. Y. **Physiography, Geology*. Parkersburg, W. Va, Nov. 30, 78. Denison, 96-98; B.S. New Mexico, 01; fellow, Columbia, 02-03, Ph.D. 03; Harvard, 03-04. Teacher, pub. schools, 97-98; field asst. Univ. Geol. Surv. N. Mex, 99-01; instr. geol, Mass. Inst. Tech, 03-05, asst. prof, 05-07; physiog, Harvard, 06-12; lecturer geog, Teachers' Sch. Science, 07-12; assoc. prof. *physiog, Columbia*, 12-19, *prof*, 19- Instr,

- high sch, Albuquerque, 00-01; asst. U. S. Geol. Surv., 01, 03, 04-05; N. J. Geol. Surv., 11; director, Shaler Mem. exped., 11-12; mem. Nat. Research Council, 17-, foreign representative, div. geol. and geog., 18; major, intelligence div., A.E.F., chief, div. boundary geog., mem. Roumanian, Yugoslav, Cent. Territorial Commissions; Am. Commission to Negotiate Peace, Paris, 18-19; geog. adviser, Dept. State, 19-20; assoc. ed., 'Geog. Rev.' A.A.; Geol. Soc.; Ass. Geog.; Philos. Soc.; Am. Geog. Soc.; Nat. Highways Ass.; Am. Acad.; N. Y. Acad. (v. pres, 16-18); Wash. Acad.; Phila. Geog. Soc.; cor. mem. Royal Serbian Acad. Geology of central New Mexico; drainage modifications in the southern Appalachians; shoreline physiography; military geography.
- Johnson, Prof. Duncan S(tarr)**, Johns Hopkins University, Baltimore, Md. **Botany*. Cromwell, Conn., July 21, 67. B.S., Wesleyan, 92; Ph.D., Hopkins, 97. Assoc. bot., Hopkins, 98-01, assoc. prof., 01-06, *prof.*, 06-, *director, bot. lab. and bot. garden*, 09- In charge crypt. bot., biol. lab., Brooklyn Inst., 96-11; bot. expeditions to tropics, 03, 06, 10, 19; war work, bur. plant indust., U. S. Dept. Agr., 18. A.A. (pres, G, 12); Bot. Soc. (sec'y, 07-10); Ecol. Soc. Development of sporophyte of Marsiliaceae; embryology of dicotyledons; development of the Piperaceae, Chloranthaceae and Hepaticae; ecological distribution of marine Algae; flowering and fruiting habits of Cactaceae and Myrtaceae.
- Johnson, Dean Edw(ard) C(arl)**, Washington State College, Pullman, Wash. *Plant pathology, Farm management*. Otisco, Minn., April 18, 80. A.B., Minnesota, 06, A.M., 07; George Washington, 10-11. Instr. bot., Minnesota, 06-07; asst. plant pathologist, U. S. Dept. Agr., 07-08, plant pathologist in charge cereal disease work, 08-12; supt. Farmers Institutes and state leader farm demonstration work, Kansas State, 12-15, *dean*, div. col. exten., 15-18; *col. agr.*, Wash. State, and *director, Exp. Sta.*, 19- A.A.; Bot. Soc.; Phytopath. Soc.; Soc. Agron.; Ass. Farmers Inst. Workers; Wash. Bot. Soc. (sec'y, 11). Cereal diseases.
- Johnson, Prof. E(lbe) H(erbert)**, Kenyon College, Gambier, Ohio. *Physics*. Traverse City, Mich., Aug. 9, 87. A.B., Olivet, 11, A.M., 13; Wisconsin, 11-14; Chicago, summers, 16, 17. Asst. physics, Olivet, 09-11; asst. instr., Wisconsin, 11-14; asst. prof., Kenyon, 14-15, physics and chem., 15-17, assoc. prof. *physics*, 17-18, *prof.*, 18- A.A.; Physical Soc.; Ill. Eng. Soc.; Ass. Prof.; Cent. Ass. Sci. and Math. Teachers; Ohio Acad. History of physics; scientific education.
- Johnson, Prof. Franklin P(aradise)**, New Haven Hospital, New Haven, Conn. *Surgery*. Hannibal, Mo., Jan. 7, 88. A.B., Missouri, 08, A.M., 10; Ph.D., Harvard, 12; M.D., Hopkins, 20. Instr. histol., Harvard Med. Sch., 10-12; asst. prof. anat., Missouri, 12-13, assoc. prof., 13-18, *prof.*, 18-19. Sec'y, Mo. State Anat. Board, 13-18; house officer, New Haven Hosp., 20- Human embryology.
- Johnson, George A(rthur)**, 150 Nassau St., New York, N. Y. *Hydraulic engineering, Sanitary engineering*. Auburn, Maine, May 26, 74. Water supply, purification and sewage investigator for various cities, 95-00; private practise, 01-02; in charge, filtration plant, Little Falls, N. J., 02-03; field director for N. Y. City, sanit. surv., Hudson River watershed, 03-04; investigator sanit. works, foreign countries, 05-06; *private practise; consulting engineer to numerous cities and states*, 06-; mem. Johnson and Benham. Major, lieut. col. and col., construction div., U.S.A., 18-20. A.A.; Water Works Ass.; Pub. Health Ass.; Civil Eng.; Mech. Eng.; Cons. Eng.; Ass. Eng. Soc.; New Eng. Water Works Ass.; Pa. Eng. Soc.; N. J. Sanit. Ass.; Boston Soc. Civil Eng. Public sanitation; bacteriology; water supply, filtration and purification; sewage; shell-fish conservation; Oriental water works; epidemics; typhoid fever; public utilities.
- Johnson, Prof. George E(dwin)**, University of Porto Rico, Rio Piedras, P. R. *Zoology*. Clear Lake, S. Dak., May 3, 89. B.S., Dakota Wesleyan, 13; M.S., Chicago, 16. Instr. biol., North Dakota, 16-17; zool., Michigan, 17-18; *prof. biol.*, Univ. Porto Rico, 18- Soc. Mammal. Ecology, habits and life histories of animals; habits and hibernation of the ground squirrel.
- Johnson, Dr. Harry (Isaac)**, Roanoke College, Salem, Va. *Physical chemistry*. Hagerstown, Md., Jan. 23, 89. A.B., A.M., Roanoke, 12; Ph.D., Hopkins, 17. Prof. nat. sciences, Daleville, 12-14; asst. prof. *chem.*, Louisville, 17-19; N. C. Col., 19-20; *prof.*, Roanoke, 20- Chem. Soc. Conductivity.
- Johnson, Dr. H(arry) M(iles)**, B. F. Goodrich Co., Akron, Ohio. *Psychology*. Nelson, Mo., May 16, 85. A.B., Missouri Valley, 09; fellow, Hopkins, 11-12, Ph.D., 12; Chicago, summer, 11. Asst. psychologist, Nela Research Lab., 12-13, assoc. psychologist and later psychologist, 14-18; chief, psychol. sect., Air Service, Med. Research Lab., 19-20; *consulting psychologist*, B. F. Goodrich Co., 20- Lieut. Sanit. C., 18, capt., 18- A.A.; Psychol. Ass.; Optical Soc. Pattern vision in vertebrates; audition and habit formation in the dog; physiological optics; selection and classification of aviators.
- Johnson, Dr. Herbert P(arlin)**, Cedaredge, Colo. **Zoology*. Nahant, Mass., Sept. 23, 64. A.B., Harvard, 89, A.M., 90, Austin fellow, 00-01; Clark, 91-92; Ph.D., Chicago, 94. Asst. prof. zool., California, 94-00; assoc. prof. bacter. med. dept., St. Louis, 03-09. Asst. biol., Williams, 90-91; instr., Des Moines, 94; zool., Chautauqua, 94. A.A.; Soc. Nat.; Soc. Zool.; Calif. Acad. Infusoria; Sporozoa; faunistic and systematic study of Polychaeta; etiology of malarial diseases; mosquitoes and malaria; ieterohematuria of sheep.
- Johnson, Prof. James**, University of Wisconsin, Madison, Wis. *Horticulture*. Deerfield, Wis., May 11, 86. B.S.A., Wisconsin, 09, M.S., 11, Ph.D., 18. Asst. hort., Wisconsin, 09-11, instr., 11-16, asst. prof., 16-20, *assoc. prof.*, 20- A.A.; Phytopath. Soc.; Bot. Soc. Soil diseases; soil sterilization and disease resistance; diseases of tobacco.
- Johnson, Dr. J(ames) M(cIntosh)**, Public Health Service, Washington, D. C. *Chemistry*. Newberry, S. C., Aug. 15, 83. B.S., Newberry, 02, A.M., 03; Ph.D., Hopkins, 08. Asst. chem.

- Newberry, 02-03; principal schools, Newberry, 03-04; lecture asst, Hopkins, 06-08, Carnegie research asst, 06-08, asst. med, 08-09; chemist, Nashville, Tenn, 09-10; instr. math, high sch, Birmingham, Ala, 10; asst. org. chemist, bur. chem, U. S. Dept. Agr, 10-18; *org. chemist, hygienic lab, U. S. Pub. Health Service, 18-* Chem. Soc. Organic chemistry; acetyl derivatives of sugars; edible oils; vitamins in nutrition; trinitrotoluene poisoning.
- Johnson, Prof. James Richard**, University of Kentucky, Lexington, Ky. *Mechanics*. Louisa, Ky, Oct. 11, 68. B.S. Kentucky, 93. Asst. prof. math, Kentucky, 93-05; prof. math. and mech, Nevada, 05-07; math, Ky. State Nor. Sch, 07-16; practising engineer, 16-19; *prof. applied mech, Kentucky, 19-* Soc. Test. Mat. Materials of construction.
- Johnson, Dr. J(ohn) B(ertrand)**, 463 West St, New York, N. Y. *Physics*. Sweden, 87. B.S., North Dakota, 13, M.S., 14; Ph.D., Yale, 17. *Research engineer, Western Elec. Co, 17-* A.A.; Physical Soc. Infra-red absorption; ionization in gases.
- Johnson, Prof. John C(hristopher)**, Gunnison, Colo. *Zoology*. Sterling, Colo, Feb. 25, 91. A.B., Colo. State Teachers Col, 11; M.S., California, 15, fellow, 18-19, Ph.D, 19. Instr. biol. and agr, Colo. State Nor. Sch, 11-14; asst. zool, California, 14-15; prof. biol, Colo. State Teachers Col, 15-18; *prof. biol, head, science dept. and dean, Colo. State Nor. Sch, 19-* Colo. Acad. Cultivation of tissues from amphibians; life cycle of Echinostoma.
- Johnson, Prof. John S. A.**, Blacksburg, Va. *Mechanical engineering*. Cismont, Va, Aug. 10, 78. B.S., Va. Polytech, 98, M.E., 99. Instr, *Va. Polytech, 98-00*, asst. prof. mech. eng, 00-06, *prof. applied mech. and exp. eng, 07-* Mech. Eng; Soc. Test. Mat. Materials of engineering; power transmission.
- Johnson, Prof. L(ewis) J(erome)**, 90 Raymond St, Cambridge, Mass. *Civil engineering, Political science*. Milford, Mass, Sept. 24, 67. A.B., Harvard, 87, C.E., 88; Polytech. Zürich, 88-89; Ecole des Ponts et Chaussées, Paris, 89-90. Instr. civil eng, Harvard, 90-92; practising engineer, Chicago, 92-94; *instr. civil eng, Harvard, 94-96*, asst. prof, 96-06, *prof, 06-* Civil Eng; Eng. Educ; Soc. Test. Mat; Concrete Inst; Am. Acad; Boston Soc. Civil Eng. Reinforced concrete, particularly proportioning of concrete, design of footings and web reinforcement for beams; site value system of revenue; distribution of stress in the general case of flexure; floor loads due to crowds of people.
- Johnson, Nathan (Clarke)**, 149 Broadway, New York, N. Y. *Mechanical and civil engineering*. Pittston, Pa, March 9, 82. M.E., Cornell, 06, fellow, 12-13, M.M.E., 13. Practising elec, mech. and civil engineer, 06-15; *consulting engineer, 15-* Lecturer concrete, Cooper Union, 15-16. Mech. Eng; Civil Eng; Soc. Test. Mat; Concrete Inst; Phila. Eng. Club. Microstructure of hydraulic cements and cement products; machines used in cement and concrete industry; building construction.
- Johnson, Prof. Roger A(rthur)**, 1762 W. Minnehaha St, St. Paul, Minn. *Mathematics*. Gardner, Mass, June 9, 89. A.B., Amherst, 10; A.M., Harvard, 11, Ph.D., 13. Instr. *math, Western Reserve, 13-17; prof, Hamline, 17-* Math. Soc; Math. Ass. Modern geometry.
- Johnson, Prof. Roswell H(ill)**, 1039 Murrayhill Ave, Pittsburgh, Pa. *Geology*. Buffalo, N. Y., Oct. 9, 77. Brown, 95-96; Harvard, 96-99; B.S., Chicago, 00; M.S., 00; M.S., Wisconsin, 03; California; Columbia. Instr. zool, high sch, Sioux Falls, S. Dak, 00-01; asst. vert. anat, Wisconsin, 01-03; instr. biol. and agr, State Nor. Sch, Cheney, Wash, 03-05; research asst, sta. for exp. evolution, Carnegie Institution, 05-08; *consulting geologist, 08-*; *prof. oil and gas production, Pittsburgh, 16-* Commissioner, Pa. Topog. and Geol. Surv, 17-19. A.A.; Geol. Soc; Ass. Petrol. Geol; Inst. Petrol. Technol; Petrol. Inst; Min. Eng; Eugenics Research Ass; Statist. Ass. Evolution; eugenics; accumulation and production of petroleum and natural gas.
- Johnson, Prof. S(amuel) Arthur**, State Agricultural College, Fort Collins, Colo. *Entomology*. Morristown, N. J, Dec. 13, 67. B.S., Rutgers, 91, M.S., 95. Principal pub. sch, Elkhart, Ill, 93-95; West Denver High Sch, Colo, 96-02; asst. zool, *Colo. Agr. Col, 02-07, assoc. prof, 07-*, *dean of faculty, 13-* Institute instr, Colo. Agr. Col, 03-; instr, Teachers' Nor. Institutes, 08-A.A.; Ass. Econ. Entom. Economic entomology; potato flea-beetle.
- Johnson, Dr. Sydney E(vans)**, 2421 S. Dearborn St, Chicago, Ill. *Anatomy*. Lansing, Minn, May 1, 89. A.B., Washington (Seattle), 13, M.S., 14; fellow, Northwestern, 14-16, Ph.D., 16. Instr. *anat, Northwestern, 16-18, assoc, 19-* Ass. Anat. Osteology; sense organs of the lateral canal system; sympathetic nervous system.
- Johnson, Prof. T(homas) C(arskadon)**, Virginia Truck Experiment Station, Norfolk, Va. *Horticulture, Botany*. Long Reach, W. Va, Jan. 1, 70. B.S.A., West Virginia, 96, A.M., 00; fellow, Cornell, 02-03. Acting prof. hort, Missouri, 01-02; asst. horticulturist, W. Va. Exp. Sta, 03-06, instr. hort. and bot, West Virginia, 03-05, asst. prof, 05-07; supt, *Va. Truck Exp. Sta, 07-09, director, 09-* A.A.; Soc. Hort. Sci. (pres, 17); Soc. Agron; Farm Econ. Ass. Spraying plants; plant breeding; malnutrition of plants; fertilizer requirements of certain truck crops and soils.
- Johnson, Prof. Treat Baldwin**, Yale University, New Haven, Conn. *Chemistry*. Bethany, Conn, March 29, 75. Ph.B., Yale, 98, Ph.D., 01. Instr. chem, *Sheffield Sci. Sch, Yale, 01-08*, asst. prof. *org. chem, 08-15, prof, 15-* Nichols medal, Chem. Soc, 18. Nat. Acad; A.A.; Soc. Biol. Chem; Chem. Soc. (asst. ed, 'Chem. Abstracts'); Conn. Acad; Chem. Gesell. Organic chemistry; biochemistry; synthetic organic chemistry; organic synthesis as applied to therapeutic substances; nucleic acid; new local anesthetics; silk fibroin; phenanthrene and its relation to morphin; histamin; tyramin; nucleosid; cyclic polypeptids.
- Johnson, Prof. W(illiam) Woolsey**, U. S. Naval Academy, Annapolis, Md. *Mathematics*. Owego,

- N. Y., June 23, 41. A.B., Yale, 62, A.M., 64. On 'Nautical Almanac' Corps, 62-64; asst. prof. math, U. S. Naval Acad., 64-70; prof., Kenyon, 70-72; St. John's (Md.), 72-81; U. S. Naval Acad., 81- Corps math. professors, U.S.N., 13- Math. Soc.; cor. mem. British Ass.; London Math. Soc. Differential calculus; integral calculus; curve tracing; differential equations; least squares; mechanics.
- Johnston, Clarence T.** University of Michigan, Ann Arbor, Mich. *Irrigation engineering*. Near Denver, Colo., Oct. 23, 72. B.S., Michigan, 95, C.E., 99. Asst. state engineer's office, Wyo., 88-91, summers, 91-95; gaging streams, Wyo., for U. S. Geol. Surv., 95-97; asst. state engineer, Wyo., 96-98; asst. chief of irrig. investigations, U. S. Dept. Agr., 98-03; state engineer, Wyo., 03-11; prof. geodesy and surv., Michigan, 11- Consulting irrig. engineer, 97-99. A.A.; Civil Eng.; Ass. State Engineers; Wyo. Soc. Eng. and Surv. Irrigation law and engineering; flow of water in canals and ditches; design of irrigation structures; coefficient of friction and value of coefficient of roughness (Kutter's formula).
- Johnston, Dr. Earl S (teinford)**, Maryland Agricultural Experiment Station, College Park, Md. *Plant physiology*. Quarryville, Pa., Feb. 5, 89. Ph.B., Dickinson, 13, A.M., 14; Ph.D., Hopkins, 17. Instr. science, Pennington Sch. for Boys, 13-14; asst. physiol., Hopkins, 14-17; assoc. plant physiologist, Md. Exp. Sta., 17- Asst. desert lab, Carnegie Institution, summer, 15. A.A.; Bot. Soc. Growth and climatic conditions; mineral nutrients.
- Johnston, Prof. John**, Yale University, New Haven, Conn. *Chemistry. Perth, Scotland, Oct. 13, 81. Carnegie scholar, St. Andrews, Scotland, 03-05, B.Sc., 03, D.Sc., 08, 1851 Exhibition scholar, Breslau, 05-07; A.M., Yale, 19. Research assoc. physical chem., Mass. Inst. Tech., 07-08; chemist, geophys. lab, Carnegie Institution, 08-16; in charge, research dept., Am. Zinc, Lead and Smelting Co., 16-17; chemist, U. S. Bur. Mines, 17-18; with Nat. Research Council, 18-19; prof. chem. and chairman of dept., Yale, 19- Mem. Nat. Research Council. A.A. (sec'y, C, 12-16); Electrochem. Soc.; Chem. Soc. (ed. board, 14-); Min. Eng.; Ceramic Soc.; Soc. Test. Mat.; Inst. Metals. Physical chemistry; geochemistry.
- Johnston, Dr. J (ohn) Allen**, Millen, Ga. *Anatomy*. Augusta, Ga., Dec. 18, 83. M.D., Georgia, 08. Asst. prof. anat., Georgia, 08-13. Asst. physician, City View Sanitarium, Nashville, Tenn., 09-10; health commissioner, Walke Co., Ga., 20- Am. Med. Ass. Embryology; chondrocranium of the albino rat.
- Johnston, Prof. J (ohn) B (lack)**, University of Minnesota, Minneapolis, Minn. *Neurology. Belle Center, Ohio, Oct. 3, 68. Ph.B., Michigan, 93, Ph.D., 99; Smithsonian table, Naples Zool. Sta., 04-05; Freiburg, 05. Asst. and instr., zool., Michigan, 93-99; asst. prof., West Virginia, 99-00, prof., 00-07; asst. prof. anat. of nervous system, Minnesota, 07-08, assoc. prof. comp. neur., 08-09, prof., 09-, dean, col. science, lit. and arts, 14- Mem. ed. staff, 'Ergeb. u. Fort. d. Zool.', 07-; mem. ed. board, 'Jour. Comp. Neur.', 08- A.A.; Soc. Nat.; Soc. Zool.; Ass. Anat.; Minn. Neur. Soc.; Mich. Acad. Nervous system of vertebrates; development of heart and blood vessels in Amphibia; circulation in earthworms; morphology of vertebrate head; evolution and morphology of the mechanisms of correlation in the vertebrate nervous system; vertebrate fore-brain and cerebral cortex; university education and administration.
- Johnston, John R (obert)**, Obrapia 37½ (altos), Havana, Cuba. *Plant pathology*. Ludlow, Vt., June 19, 80. B.S., Harvard, 02, M.S., 04. Plant path. lab, bur. plant indust., U. S. Dept. Agr., 05-10; pathologist, Estacion Exp. de los Productores de Azucar, Rio Piedras, P. R., 10-14; Estacion Exp. Agron. Santiago, Cuba, 14-17; chief, office veg. sanit., 16-; prof. plant path., Univ. Havana, 18-20; director trop. research, United Fruit Co., 20- Bot. exped. to Margarita, Venezuela, 01; Gray Herbarium exped. to Margarita and Trinidad, 03; sugar cane disease surv. of Santo Domingo, P. R. Board of Commissioners of Agr., 11; sugar cane disease surv. of south. U. S., U. S. Dept. Agr., 13. A.A.; Bot. Soc.; Wash. Bot. Soc. Flora of Margarita, Venezuela; coconut, sugar cane and banana diseases; entomogenous fungi.
- Johnston, R (obert) A (ngus)**, Geological Survey of Canada, Ottawa, Can. *Mineralogy*. Reach, Ont., July 5, 67. Toronto. Asst. chemist, Can. Geol. Surv., 87-07, mineralogist, 07- Fel. Royal Soc. Can. Rocks; meteorites.
- Johnston, W (illiam) A (lfred)**, Geological Survey of Canada, Ottawa, Can. *Geology*. Aberarder, Ont., Jan. 24, 74. M.A., Queen's (Can.), 03, B.S., 05; Yale. *Geologist*, Can. Geol. Surv., 05- Geol. Soc.; fel. Am. Geog. Soc. Pleistocene geology of Canada.
- Johnston, Prof. William A (tkinson)**, Massachusetts Institute of Technology, Cambridge, Mass. *Mechanical engineering*. Boston, Mass., Aug. 31, 68. B.S., Mass. Inst. Tech., 92. Asst. mech. eng., Mass. Inst. Tech., 92-94, instr., 94-00, asst. prof., 00-06, assoc. prof., 06-12, prof. theoreti. and applied mech., 12- A.A.; Mech. Eng.; Soc. Test. Mat. Applied mechanics; strength of materials.
- Johnstone, Dr. J (ohn) H (amilton) L (ane)**, Dalhousie University, Halifax, Can. *Physics*. Picton, N. S., 91. M.Sc., Dalhousie, 13; 1851 Exhibition scholar, London, 14-16; Ph.D., Yale, 16. Instr. physics, Dalhousie, 12-14, 19-20, asst. prof., 20- Physical Soc.; N. S. Inst. Radioactivity; electrical conductivity.
- Johonnott, Prof. Edwin S (heldon)**, 2245 N. 10th St., Terre Haute, Ind. *Physics. Richmond, Ill., Nov. 9, 68. B.S.; Rose, 93, M.S., 97; Hopkins, 95-96; fellow, Chicago, 97-98, Ph.D., 98. Examiner, U. S. Patent Office, 94; prof. physics and math, Drury, 94-95; asst., Chicago, 98-99; assoc. prof. physics, Rose, 99-09, prof., 09- A.A.; Physical Soc. Thickness of thin liquid films; Rayleigh's alternate current phasemeter; loss of energy by hysteresis in iron; alternating currents; arc and spark phenomena in transformers.
- Jonas, Dr. A (nna) I (sabel)**, 91 W. Commerce St., Bridgeton, N. J. *Geology*. Bridgeton, Aug.

- 17, 81. A.B. Bryn Mawr, 04, A.M. 05, Ph.D. 12. Demonstrator, geol. lab, Bryn Mawr, 05-06, asst. curator, geol. museum, 08-09; dept. geol. and invertebrate paleont, Am. Museum Nat. Hist, 16-17; cashier, Williamstown Glass Co, 17-19; *geologist, Md. and Pa. Geol. Surveys*, 19- A.A.; Wash. Geol. Soc. Petrology; stratigraphy; metamorphic rocks.
- Jonas, Dr. A (ugust) F (rederick)**, 106 S. 31st Ave, Omaha, Nebr. *Surgery*. Arlington, Wis, June 12, 58. M.D., Bennett Col, 77; Munich, 84; Berlin, Vienna, Paris. Prof. surg. col. med. Nebraska; *chief surgeon, Union Pacific R. R.*, 98- Surgeon, Nebr. M. E. Hosp; Douglas Co. Hosp; Wise Mem. Hosp. Surg. Ass. (v. pres); Am. Med. Ass. (v. pres); Acad. Ry. Surg. (pres); West. Surg. and Gynec. Ass. (pres).
- Jones, Prof. Adam Leroy**, Columbia University, New York, N. Y. *Philosophy, Psychology*. Dunlap, Ill, July 2, 73. A.B., Williams, 95; Ph.D., Columbia, 98. Asst. philos., Columbia, 98-01, lecturer, 01-02, tutor, 02-05; preceptor, Princeton, 05-09; adj. prof., Columbia, 09-11, *assoc. prof.*, 11- Instr., summer sch., Columbia, 01-03. A.A.; Philos. Ass.; Psychol. Ass. Early American philosophers; logic and scientific method; esthetics; educational administration.
- Jones, Prof. A (rthur) T (aber)**, 78 N. Elm St, Northampton, Mass. *Physics*. Vassalboro, Maine, Sept. 9, 76. B.S., Chicago, 99; fellow, Clark, 11-13, Ph.D. 13. Teacher, high schools, Chicago, 00-02; asst. *physics*, Purdue, 02-03, instr., 03-06, asst. prof., 06-11; Iowa State, 13-14; *Smith*, 14-19, *assoc. prof.*, 19- Asst. physicist, Bur. Standards, summer, 18. A.A.; Physical Soc. Acoustics.
- Jones, Chancellor Cecil Charles**, Fredericton, N. B., Can. *Mathematics*. Boundary Creek, N. B., Feb. 11, 72. B.A., New Brunswick, 97, A.M., 99, Ph.D. 02; A.B., Harvard, 98; Chicago, 04; LL.D., Toronto, 07; Bates, 20. *Prof. math*, Acadia, 98-06; *New Brunswick*, 06-, *chancellor*, 06- Mem., Can. Conservation Commission; N. B. Board of Education. Math. Soc. Education.
- Jones, Prof. C (lement) R (oss)**, Morgantown, W. Va. *Mechanical engineering*. Knottsville, W. Va., April 19, 71. B.S., C.E., West Virginia, 94, M.E., 97; M.M.E., Cornell, 00. Assoc. principal, West Virginia Col, 94-95; asst. mech. eng., *West Virginia*, 95-97, instr., 97-99, asst. prof., 99-01, prof., 01-11, *dean, col. eng.*, 11- Consulting engineer. A.A.; Mech. Eng.; Eng. Educ.; Soc. Test. Mat. Specific heat of super-heated steam; analysis of flue gases; losses in transmission of power by belting; fuel value of natural gas; effect of condensance on operation of induction motors.
- Jones, Prof. Dan H (erbert)**, Ontario Agricultural College, Guelph, Ont., Can. *Bacteriology*. Stourbridge, England, Sept. 29, 75. B.S.A., Ont. Agr. Col, 08. Res. master, *Ont. Agr. Col.*, 06-08; lecturer *bacter.*, 08-15, *prof.*, 15- Soc. Bact.; Phytopath. Soc.; Can. Phytopath. Soc. Agricultural bacteriology; bacterial diseases of plants; soil bacteria.
- Jones, Dr. D (avid) B (reese)**, U. S. Department of Agriculture, Washington, D. C. *Chemistry*. Cambria, Wis, Oct. 5, 79. A.B., Ripon, 04; Ph.D., Yale, 10. Research chemist, Conn. Exp. Sta., 08-09; assoc. prof. chem., Morningside, 10-11; instr. org. chem., Wisconsin, 11-15; *org. chemist, protein investigation lab, bur. chem., U. S. Dept. Agr.*, 15- In charge org. chem., Pittsburgh, 14. Chem. Soc. Proteins; amino acids; pyrimidins; derivatives of succinic acid.
- Jones, Dr. D (onald) F (orsha)**, 321 Fountain St, New Haven, Conn. *Horticulture*. Hutchinson, Kans, April 16, 90. B.S., Kansas State, 11; M.S., Syracuse, 16; Sc.D., Harvard, 18. Asst. plant breeder, Ariz. Exp. Sta., 11-13; instr. hort., Syracuse, 13-15; *plant breeder, Conn. Exp. Sta.*, 15- Soc. Nat.; Bot. Soc. Genetics.
- Jones, Prof. E (dward) R (ichard)**, University of Wisconsin, Madison, Wis. *Engineering*. Bangor, Wis, May 20, 82. B.S.A., Wisconsin, 05, M.S., 08. Asst. instr., asst. prof. and assoc. prof. *agr. eng., Wisconsin, prof.*, 19- Soc. Prom. Agr. Eng.; Wis. Eng. Soc.; Wis. State Drainage Ass. (sec'y, 14-) Agricultural engineering; land drainage.
- Jones, Prof. Edward S (afford)**, Oberlin College, Oberlin, Ohio. *Psychology*. Madura, S. India, Aug. 18, 88. A.B., Oberlin, 10; Ph.D., Chicago, 17. Instr. *psychol.*, Northwestern, 16-17; *asst. prof.*, Oberlin, 19- Lieut. and capt, Sanit. C, 17-19. Psychol. Ass. Mental tests.
- Jones, Prof. Elmer E (llsworth)**, 1115 Church St, Evanston, Ill. *Education*. Pennville, Ind, May 31, 76. A.B., Monmouth, 94; A.M., Colorado, 00; Ph.D., Columbia, 08. *Prof. psychol. and educ.*, State Nor. Sch., Va, 02-08; hist. and philos. of educ., Indiana, 08-14; head, dept. educ., *Northwestern*, 14-20, *director, sch. educ.*, 20- A.A.; Soc. Col. Teachers Educ.; Psychol. Ass.; Ill. Acad. Individual differences; educational measurements; heredity in average American families; psychology of drawing, and music; distinguished high school students; the senile mind.
- Jones, Dr. Fred R (uel)**, U. S. Department of Agriculture, Washington, D. C. *Plant pathology*. Mercer, Maine, June 9, 84. B.S., Maine, 12; M.S., Wisconsin, 14, Ph.D. 17. *Pathologist, bur. plant indust., U. S. Dept. Agr.*, 17- A.A.; Bot. Soc.; Phytopath. Soc. Fungus diseases of leguminous forage plants.
- Jones, Dr. F (rederic) S (owden)**, Rockefeller Institute, Princeton, N. J. *Pathology*. Philadelphia, Pa, Feb. 14, 88. D.V.M., Pennsylvania, 08; Cornell, 08-09. Instr. comp. path. and bacter., N. Y. State Vet. Col, Cornell, 09-13; asst. and later assoc., *Rockefeller Inst.*, 13-16, *assoc. dept. animal path.*, 16- Mem. path. exped. to Patagonia. Ass. Path. and Bact.; Soc. Exp. Biol.; Vet. Med. Ass. Animal pathology; diseases of fowls; cancer.
- Jones, Prof. F (rederic) k S (cheetz)**, Yale University, New Haven, Conn. **Physics*. Palmyra, Mo, April 7, 62. A.B., Yale, 84, A.M., 90; Berlin, 87-88; Zürich, 88-89; LL.D., Kentucky, 15. Instr. physics, Shattuck Sch, 84-85; Minnesota, 85-89, prof., 89-09, *dean, col. eng. and mech. arts*, 02-09; *Yale Col.*, 09- Chairman, board trustees, Hotchkiss Sch, 20; Conn. board educ., 19. A.A.; Physical Soc.; Eng. Educ. Primary cells; Röntgen rays.

- Jones, Prof. George Ellis**, 73 Harwood St, Pittsburgh, Pa. *Psychology, Hygiene*. Tipton, England, June 7, 79. A.B., State Nor. Sch, Kans, 09; A.M., Clark, 13, fellow, 13-15, Ph.D., 15. Asst. prof. *educ*, Pittsburgh, 15-17, *prof*, 17- A.A.; Soc. Col. Teachers Educ; Indust. Educ; Sch. Hygiene Ass. Educational psychology; school hygiene.
- Jones, Dr. Grinnell**, Harvard University, Cambridge, Mass. **Chemistry*. Des Moines, Iowa, Jan. 14, 84. B.S., Vanderbilt, 03, fellow, 03-04, M.S., 05; A.M., Harvard, 05, Ph.D., 08. Austin teaching fellow, Harvard, 06-07; instr. chem., Illinois, 08-12; Harvard, 12-16, asst. prof., 16-17; chief chemist, *U. S. Tariff Commission*, 17-19, *consulting chemist*, 19-; *asst. prof. chem*, Harvard, 19- Chem. Soc.; Electrochem. Soc.; Am. Acad. Atomic weight of sulphur; compressibility of salts; negative coefficient of expansion of silver iodid; atomic weight of phosphorus; equilibrium iodine and iodids, bromine and bromids; electrochemistry of silver iodid, thallium and thallium salts; coal-tar products; potash; sulphur and pyrites; thorium nitrates and Welsbach mantles; fixation of atmospheric nitrogen.
- Jones, Prof. Henry A(lbert)**, University of Maryland, College Park, Md. *Botany*. Deer Park, Ill, May 6, 89. B.S.A., Nebraska, 16; Ph.D., Chicago, 18. Asst. marketing, bur. markets, U. S. Dept. Agr, 18; assoc. prof. hort, West Virginia, and assoc. horticulturist, Exp. Sta., 19-20; *prof. vegetable gardening*, Maryland, 20- Plant physiology; horticulture.
- Jones, Prof. Hilton Ira**, 302 Husband St, Stillwater, Okla. *Chemistry*. Mankato, Minn, May 9, 82. A.B., Parker, 03, A.M., Drake, 04; Ph.D., South Dakota, 16; fellow, Chicago, 08-09. Instr. science, East High Sch, Des Moines, Iowa, 04-06; chemist, B. O. and G. C. Wilson Co, 07; head, science dept, Muskogee, Okla., 09-12; assayer, Arbuckle Mining Exchange, 10-12; *head, chem. dept*, Dakota Wesleyan, 12-18; *Okla. Col*, 18- A.A.; Chem. Soc.; London Chem. Soc. Organic chemistry; preparation of rare organic chemicals.
- Jones, Dr. Horry M**, University of Illinois Medical School, Chicago, Ill. *Medicine*. Corinth, Tex, Sept. 15, 85. B.S., Chicago, 13; Ph.D., Northwestern, 16. Research asst, bur. animal indust, U. S. Dept. Agr, 15-17; *instr. path. and bacter, med. dept*, Illinois, 18- Preventive medicine; biochemistry; metabolism.
- Jones, Dr. Howard**, Park Place, Circleville, Ohio. *Medicine*. Cleveland, Ohio, 53. A.B., Hobart, 75, A.M., 84; M.D., Ohio Med. Col, 76. Prof. physiol, Columbus Med. Col, 78-84; *surgeon*, Pa. lines west of Pittsburgh; *Norfolk and West. R. R. C. and O. Ry.* Lecturer hygiene, Kenyon. A.A.; Am. Med. Ass.; Am. Acad. Med.; Nuttall Ornith. Club. Clinical medicine; biology; ornithology of Ohio.
- Jones, Prof. J C(laude)**, University of Nevada, Reno, Nev. *Geology*. Merrimac, Wis, July 2, 77. A.B., Illinois, 02; Chicago, 06-09. Instr. geol, Illinois, 04-06; research asst, Chicago, 07-09, asst. prof. *geol*, Nevada, 09-14, *prof*, 14- Geologist, Nev. Mining Lab, 10-; consulting geologist, 10- A.A.; Min. Eng. (v. chairman, Nev. sect, 17); Seismol. Soc. Economic geology; history of Lake Lahontan; earthquakes in Nevada; origin of metalliferous ore in Nevada.
- Jones, Prof. J. Shirley**, Oregon Agricultural College, Corvallis, Oregon. *Chemistry*. Garrett, Ind, Feb. 14, 76. B.S., California, 03, M.S.A., Cornell, 14. Chemist, Giant Powder Co, 04-06; prof. agr. chem, Idaho, and chemist, Exp. Sta., 06-14, director, 14-18; operating chemist, U. S. Nitrate Plant No. 1, 18-19; *prof. agr. chem*, Oregon Col, and chemist, Exp. Sta., 19- A.A.; Chem. Soc. (pres. and counselor north. intermountain sect); Soc. Chem. Indust; Ass. Prom. Agr. Sci. Soils; plant nutrition; fruit and plant composition.
- Jones, Prof. Joseph W(illiam) L(ester)**, Heidelberg University, Tiffin, Ohio. *Ethics*. East Orange, N. J., July 4, 73. A.B., Princeton, 94, A.M., 95, Ph.D., 01. *Prof. philos. and psychol*, Heidelberg (Ohio), 02- The ethics of sympathy.
- Jones, Prof. Lauder W(illiam)**, Princeton University, Princeton, N. J. **Chemistry*. New Richmond, Ohio, July 22, 69. A.B., Williams, 92; fellow, Chicago, 95-97, Ph.D., 97. Asst. chem, Chicago, 97-00, assoc., 00-02, instr., 02-07, asst. prof., 07; prof., Cincinnati, 07-18; dean, sch. chem, Minnesota, 18-20, eng. and archit, 19-20; *prof. chem*, Princeton, 20- Prof. chem, Chicago, summer, 09; chief, research sect. offense, C.W.S., 18-19. A.A.; Chem. Soc. (chairman, sect. org. chem, 19). Nitroparaffin salts; alkyl derivatives of hydroxylamine; preparation of hydroxamic acids from hydroxylamine salts of organic acids; the Beckmann molecular rearrangement; electron conception of valence; alkyl derivatives of mercury and lead; preparation of electromeres.
- Jones, Prof. L(ewis) R(alph)**, University of Wisconsin, Madison, Wis. **Plant pathology*. Brandon, Wis, Dec. 5, 64. Ripon, 82-86; Ph.B., Michigan, 89, Ph.D., 04; hon. Sc.D., Vermont, 10. Instr. nat. science, Mt. Morris Acad, Ill, 87-88; nat. hist, Vermont, 89-90, asst. prof., 91-92, assoc. prof., 92-93, prof. bot., 93-09; botanist, Vt. Exp. Sta., 90-09; *prof. plant path*, Wisconsin, 09- Special agent, bur. plant indust, U. S. Dept. Agr, 04; v. chairman, div. biol. and agr, Nat. Research Council, 20- Nat. Acad; A.A.; Soc. Nat; Bot. Soc. (v. pres, 10, pres, 13); Phytopath. Soc. (pres, 09); Soc. Prom. Agr. Sci.; New Eng. Bot. Club; Vt. Bot. Club (sec'y, 95-09); Vt. Forestry Ass. (pres, 08-09); Wis. Acad. Bacterial diseases of plants; disease resistance; relation of environment to disease.
- Jones, Prof. Lloyd T(heodore)**, University of California, Berkeley, Calif. *Physics*. Raymond, Ill, Feb. 20, 87. A.B., Lake Forest, 09, A.M., 10; M.S., Illinois, 12, Ph.D., 15. Asst. *physics*, Lake Forest, 09-10; Illinois, 10-14, instr., 14-15; *California*, 15-17, *asst. prof*, 19- Capt, Air Service, 17-19. A.A.; Physical Soc. Conduction through gases; mass variation of electron; velocity of sound.
- Jones, Dr. Louis Cleveland**, 157 Dewitt St, Syracuse, N. Y. *Chemistry*. Oak Hill, N. Y., Dec. 25, 71. A.B., Yale, 96, Ph.D., 99. Asst. to Prof. Gooch, Yale, 96-99; *chem. director*, *Somet Sol-*

- vay Co; chief chemist, Solvay Process Co; v. pres, Solvay Collieries Co; Contact Process Co; director, Nat. Aniline and Chem. Co; gen. manager, Atmospheric Nitrogen Corp; etc. A.A.; Chem. Soc; Chem. Gesell. Estimation of boric acid; coal and its by-products; coal mining; dyestuffs and intermediates; synthetic ammonia.
- Jones, Loyd A(ncile)**, Eastman Kodak Co, Rochester, N. Y. *Physics*. York, Nebr, April 12, 84. B.S., Nebraska, 08, A.M., 10. Asst. physics, Nebraska, 08-10; asst., Bur. Standards, 10-12; research physicist, Eastman Kodak Co, 15-Physical Soc; Optical Soc; Illum. Eng. Soc; Astron. Soc. Illumination; colorimetry; visual optics; photographic physics.
- Jones, Prof. Lynds**, Spear Laboratory, Oberlin, Ohio. *Zoology, Ornithology*. Jefferson, Ohio, Jan. 5, 65. Grinnell, 88-90; A.B., Oberlin, 92, M.S., 95; fellow, Chicago, 04-05, Ph.D., 05. Asst. zool. and geol., Oberlin, 92-99, instr., 99-00, acting prof., 00-01, instr. zool., 01-05, assoc. prof., 05-08, animal ecol., 08- Teacher ornith., Oberlin, 95-98, asst. curator, museum, 99-09, curator, 08-; lake lab., Ohio State, 07-08. A.A.; fel. Ornith. Union; Ecol. Soc; Ohio Acad. Bird migration; molting of birds; development of nestling feathers; pterylosis and molting of passerine birds; skeleton of Asterias; birds of Ohio.
- Jones, Prof. Marcus E(ugene)**, 959 E. Second South St., Salt Lake City, Utah. *Botany, Geology*. Jefferson, Ohio, April 25, 52. A.B., Grinnell, 75, A.M., 78. Tutor Latin, Grinnell, 75-76; prof. nat. science, Colo. Col., 79; Salt Lake Acad., 80; principal, high sch., Salt Lake City, 81-86; special expert, U. S. Treas. Dept., 89-90; geologist, R. G. W. R. R., 90-93; special field agent, U. S. Dept. Agr., 94-95; geologist, P. and I. N. R. R., 98-99. A.A.; Bot. Soc; Utah Nat. Hist. Soc. (pres., 99-) Botany and geology of the Great Plateau; climatic distribution; plant adaptation; ore reduction.
- Jones, Dr. Reginald L(amont)**, 463 West St., New York, N. Y. *Electrical engineering*. New York, Feb. 28, 86. B.S., Mass. Inst. Tech., 09, M.S., 10, Eng.D., 11. Mem. research staff, West. Elec. Co., 11-14, in charge, transmission eng. dept., 14-A.A.; Elec. Eng. Communication engineering.
- Jones, Dr. Walter**, 2621 St. Paul St., Baltimore, Md. *Physiological chemistry*. Baltimore, April 28, 65. A.B., Hopkins, 88, Ph.D., 91; Marburg, 99. Prof. nat. science, Wittenberg, 91-92; anal. chem., Purdue, 92-95; asst. *physiol. chem.*, Hopkins, 95-99, assoc., 99-01, assoc. prof., 01-08, prof., 08- Nat. Acad; Physiol. Soc. (pres., 15); Soc. Exp. Biol; Soc. Biol. Chem. Sulphonphthaleins; animal alkaloids; melanins; nucleotids; nuclein ferments.
- Jones, Prof. Wellington D(owning)**, University of Chicago, Chicago, Ill. *Geography*. Kansas City, Mo., April 4, 86. B.S., Chicago, 07. Ph.D., 14; Heidelberg, 13. Asst., *geog.*, Chicago, 08-16, asst. prof., 16- Argentine Govt. exped. to Patagonia; Univ. of Chicago expd. to China and Japan. Chicago Geog. Soc. Economic geography with special reference to Asia.
- Jopson, Dr. John H(oward)**, 1824 Pine St., Philadelphia, Pa. *Surgery*. Philadelphia, Dec. 28, 71. M.D., Pennsylvania, 93. Res. physician, Univ. Hosp., Phila., 93-95; Children's Hosp., 95; dispensary surgeon, Episcopal Hosp., 95-02; attending surgeon, Children's Hosp., and Bryn Mawr Hosp., 02-; Presb. Hosp., 05-; prof. surg., Pennsylvania, 09- Consulting surgeon, Phila. Home for Incurables; assoc. surg., Pennsylvania; major, M.R.C., 17-18; lieut. col., M.C., 18-19. Surg. Ass. (recorder, 19-); Col. Surg.; Am. Med. Ass.; Phila. Col. Physicians (councilor, 20-); Phila. Acad. Surg. (recorder, 04-14, v. pres., 20); Phila. Pediat. Soc. (pres., 04); Soc. Int. de Chirurg. General surgery; pediatrics.
- Jordan, Prof. A(rthur) M(elville)**, 200 W. Lafayette St., Fayetteville, Ark. *Psychology*. Somerton, Va., Oct. 9, 88. A.B., Randolph-Macon, 07; A.M., Trinity (N. C.), 09; Ph.D., Columbia, 19. Instr. *psychol.*, Arkansas, 14-15, asst. prof., 15-19, prof., 19- Education; interests of school children in reading.
- Jordan, Prof. Charles B(ernard)**, La Fayette, Ind. *Pharmacy*. Morrice, Mich., Nov. 5, 78. Ph.C., Michigan, B.S., M.S. *Prof. pharmacist. chem. and director, sch. pharmacy, Purdue*, 10- Pres., Am. Conf. Pharmaceut. Faculties, 18-19; mem. revision committee, U. S. Pharmacopoeia. Pharmaceut. Ass; Chem. Soc; Ass. Prof.; Ind. Acad. Pharmaceutical chemistry; crude drug assays; cinchona.
- Jordan, Dr. David S(tarr)**, Stanford University, Calif. **Ichthyology*. Gainesville, N. Y., Jan. 19, 51. M.S., Cornell, 72, L.L.D., 86; M.D., Ind. Med. Col., 75; Ph.D., Butler, 78; L.L.D., Hopkins, 02; Illinois, 03; Indiana, 09. Instr. bot., Cornell, 71-72; prof. nat. hist., Lombard, 72-73; principal, Col. Inst., Appleton, Wis., 73-74; lecturer marine bot., Anderson Sch., Penikese, 73-74; teacher nat. hist., high sch., Indianapolis, 74-75; prof. biol., Butler, 75-79; zool., Indiana, 79-85, pres., 85-91; Stanford, 91-13; chancellor, 13-16, chancellor emer., 16- Asst., U. S. Fish Commission, 77-91; U. S. commissioner in charge fur seal investigations, 96-98; investigations of waters of Alaska, Hawaii and the South Sea Islands, 01-; salmon investigation, 04. Int. Fisheries Commissioner, Gt. Britain and U. S., 08-; mem. board of directors, Int. Sch. of Peace; pres., World Peace Cong., 15. A.A. (v. pres., 01, pres., 09); mem. Ornith. Union; Philos. Soc; Nat. Educ. Ass. (pres., 14); cor. mem. Phila. Acad; Wash. Acad; Wash. Biol. Soc; Calif. Acad. (pres., 96-98, 01-03, 08); Am. Peace Soc. (v. pres.); London Eugenics Ass; Swedish Acad; New South Wales Linnæan Soc; Soc. Cent. de la Paix-Dur; Geneva Fed. Abolitionists. Zoology; genetics; geographical distribution; fishes of America, Europe, Alaska, West Indies, Hawaii, Japan, Philippines and Samoa; fossil fishes of California.
- Jordan, Prof. Edwin Oakes**, University of Chicago, Chicago, Ill. **Bacteriology*. Thomaston, Maine, July 28, 66. B.S., Mass. Inst. Tech., 88; fellow, Clark, 90-92, Ph.D., 92; Pasteur Inst., Paris, 96. Chief asst. biologist, Mass. State Board of Health, 88-90; assoc. anat., Chicago, 92-93, instr., 93-95, asst. prof. *bacter.*, 95-00, assoc. prof., 00-07, prof., 07-, chairman of dept., 14- Joint ed., 'Jour. of Infectious Diseases'; chief, serum div., McCormick Inst. for Infectious Diseases; mem. Int. Health Board, 20. A.A. (v. pres., 17); Soc. Nat; Soc. Bact.

- (pres, 05); Ass. Path. and Bact; Physiol. Soc; Soc. Exp Biol; Pub. Health Ass; Sch. Hygiene Ass. Bacterial products; biology of water bacteria; self-purification of streams; nitrification.
- Jordan, Prof. E (Iijah)**, Butler College, Indianapolis, Ind. *Philosophy*. Elberfeld, Ind, March 28, 75. A.B, Indiana, 07; A.M, Cornell, 08; Wisconsin, 08-09; Ph.D, Chicago, 11. Asst. *philos.*, Cornell, 11-12, instr, 12-13; *prof.*, Butler, 13- A.A; Philos. Ass; West. Philos. Ass. Constitutive and regulative principles in Kant; philosophy of evolution; psychology.
- Jordan, Prof. Frank C (raig)**, Allegheny Observatory, Pittsburgh, Pa. **Astronomy*. Cordova, Ill, Sept. 24, 65. Ph.B, Marietta, 89, A.M, 92; Ph.D, Chicago, 14. Instr. astron. and math, Marietta, 89-00; high sch, Portland, Oregon, 00-02; Colorado Springs, 02-05; fellow, Yerkes Observatory, 05-08; asst, Allegheny Observatory, 08-10, asst. prof. *astron.*, Pittsburgh, 10-19, *prof.*, 19- A.A; Astron. Soc. Stellar photometry; radial velocities; photometry.
- Jordan, Prof. H (arvey) E (rnest)**, University of Virginia, Charlottesville, Va. **Anatomy*. Coopersburg, Pa, Aug. 14, 78. A.B, Lehigh, 03, A.M, 04; Columbia; Ph.D, Princeton, 07. Asst. *biol.*, Lehigh, 03-04; *histol.* and *embryol.*, med. col, Cornell, 04-06; adj. prof. *anat.*, Virginia, 07-08, assoc. prof, 08-11, *prof.* *histol.* and *embryol.*, 11- Asst. *embryol.* sta. for exp. evolution, Carnegie Institution, 07; Woods Hole, 08; in charge of *histol.*, Columbia, summer, 18; investigator *embryol.*, marine lab, Carnegie Institution, Tortugas, Fla, 07, 14; Montego Bay lab, 12. A.A; Soc. Nat; Ass. Anat. (exec. committee, 18-); Soc. Zool. (exec. committee, 11-14); Soc. Exp. Biol; Micros. Soc. Human yolk sac; pineal gland; cardiac and striped muscle; blood development; primordial germ cells of loggerhead turtle embryo; spermatogenesis of opossum; histology of lymph; blood platelets and giant cells.
- Jordan, Prof. H (erbert) E (dwin)**, 1600 Kentucky St, Lawrence, Kans. *Mathematics*. Lemonville, Ont, Feb. 18, 78. B.A, McMaster, 00, M.A, 01; Ph.D, Chicago, 04. Instr. math. and science, Brandon, 04-06; math. and physics, Mich. Col. Mines, 06-11; *asst. prof. math.*, Kansas, 11- Linear groups.
- Jordan, Prof. L (yman) G (ranville)**, Bates College, Lewiston, Maine. *Chemistry*. Otisfield, Maine, March 12, 45. A.B, Bates, 70, A.M, 73, Ph.D, 95; study abroad, 08-09. Principal, Nichols Latin Sch, 70-74; high sch, Lewiston, Maine, 74-89; *prof. chem.*, Bates, 89- Trustee, sec'y board of overseers, Bates, acting pres, 94-12; pres, Lewiston Sch. Board, twelve years. Delegate, Int. Chem. Cong, London, 89. A.A; Chem. Soc; Maine Teachers' Ass. (pres). Organic chemistry; qualitative chemical analysis.
- Jordan, Dr. Stroud**, 544-60 Park Ave, Brooklyn, N. Y. *Chemistry*. Orange Co, N. C, Nov. 11, 85. A.B, North Carolina, 05, M.S, 07, Ph.D, 09. Research asst, Col. City of N. Y, 05; teacher chem. and physics, Gordon, 05-06; asst. chem, North Carolina, 06-09; instr, Mass. Inst. Tech, 09-11, *chief chemist*, Am. Tobacco Co, 11-20; *Henry Heide, Inc*, 20- Capt. C. W. S, 18-19. Chem. Soc; N. Y. Chemists Club; Alpha Chi Sigma (pres). Condensation of aldehydes with amines; cigarette paper; sugar syrups; storax; tobaccos.
- Jordan, Dr. W (hitman) H (oward)**, Geneva, N. Y. *Animal nutrition*. Raymond, Maine, Oct. 27, 51. B.S, Maine, 75, M.S, 78, hon. Sc.D, 96, LL.D, 06; Cornell, 77-78; LL.D, Mich. Agr. Col, 07; Hobart, 11. Asst, chem. lab, Conn. Exp. Sta, 78-79; instr. agr. and agr. chem, Maine, 79-80; prof. agr. chem, Pa. State, 81-85; *director*, Maine Exp. Sta, 85-96; N. Y. Exp. Sta, Geneva, 96- A.A. (v. pres, 16); Soc. Prom. Agr. Sci. Loss of proteins in silo fermentation; digestibility of various feeding stuffs; metabolic nitrogen in feces; the economy of a free use of milk in the human dietary; influence of the food upon the composition of the animal body; the food sources of milk fat; the metabolism and function of the organic phosphorous compounds in animal foods.
- Jorgensen, Lars R (asmus)**, Chronicle Building, San Francisco, Calif. *Electrical engineering*. Denmark, April 25, 76. E.E, Germany, 00. Draftsman, Gen. Elec. Co, Schenectady, N. Y, 01-03; draftsman and construction engineer, Los Angeles Edison Elec. Co, 03-05; designing engineer, Pacific Gas and Elec. Co, 05-07; mem. firm, F. G. Baum and Co, 07-14; *consulting elec. and hydraulic engineer*, 14- Norman gold medal, Soc. Civil Eng, 18. Elec. Eng. (v. pres, 19); Civil Eng. Arch dams.
- Joseph, Dr. Don R (osco)**, St. Louis University, St. Louis, Mo. *Physiology, Pharmacology*. Chatsworth, Ill, Nov. 24, 81. B.S, Chicago, 04; M.S, St. Louis, 06; M.D, 07. Asst. *physiol.*, St. Louis, 04-07; fellow, Rockefeller Inst, 07-08, asst, 08-10, assoc, 10-12; assoc. prof, *physiol.*, Bryn Mawr, 12-13; *prof.* and *director of dept.*, St. Louis, 13-, v. dean, 19- Major, M.C, 18-19. *Physiol. Soc*; Soc. Exp. Biol; Soc. Pharmacol; Harvey Soc. Effects of tissue extracts on blood pressure; cardiac rigor; antagonism between magnesium sulphate and eserin; comparative toxicities of magnesium, calcium, potassium and sodium chlorids; effects of inorganic ions of body on muscle and nerve irritability; threshold dosage of digitalis on kidney, heart and blood vessels; vasomotor center in shock; physiology and pharmacology of sphincter muscle of iris.
- Joseph, Dr. W (alter) E (dward)**, Bozeman, Mont. *Animal husbandry*. Lovett, Ind, Dec. 22, 81. B.S, Purdue, 07; scholar and fellow, Illinois, 09-12, Ph.D, 12. Asst. *animal husbandry*, S. Dak. State, 08-09; instr, Illinois, 12-13, assoc, 13-16; *assoc. prof.*, Mont. Col, 16- Soc. Animal Production. Proteins in nutrition; composition of animal bodies; digestion and metabolism in domestic animals.
- Joslin, Dr. Elliott P (roctor)**, 81 Bay State Road, Boston, Mass. *Medicine, Physiological chemistry*. Oxford, Mass, June 6, 69. A.B, Yale, 90, Ph.D, 91, hon. A.M, 14; M.D, Harvard, 95. Asst. *physiol. chem.*, Harvard Med. Sch, 98-00, theory and practise of med, 00-05, instr, 05-12, *asst. prof. med.*, 12- Consulting physician, Boston City Hosp; lieut. col, M.C, 18-19. Am. Physicians; Soc. Clin. Invest; Am. Acad; Mass. Med

- Soe. Influence of bile on metabolism; diabetes mellitus; acid intoxication in diabetes mellitus.
- Jouard, Dr. Farel (Louis)**, 1 W. 89th St, New York, N. Y. *Chemistry*. New York, April 18, 84. A.B. Columbia, 04, Ph.D. 08; M.D. Flower, 18. Asst. electrochem. Columbia, 08-10; prof. chem. N. Y. Homeop. Med. Col. 10-19; attending physician, *Flower Hosp. Dispensary*, 18, attending obstetrician, 18-; asst. attending physician, *Metrop. Hosp.*, 19-; asst. urologist, *Community Hosp. Dispensary*, 19-; attending obstetrician, *Maternity Center Ass.*, 18-; asst. attending physician, N. Y. *Post-Grad. Hosp.*, 19- Chem. Soc. Organic chemistry; physiological chemistry; electrolysis of fused salts.
- Jouët, Dr. Cavalier H (argrave)**, Columbia University, New York, N. Y. *Chemistry*. Mulford Station, Elizabeth, N. J., Nov. 7, 60. Ph.B. Columbia, 82, Ph.D. 95. Chemist, various companies, 82-97; instr. chem. Newark Tech. Sch. 97-99; asst. anal. chem. Columbia, 97-00, lecturer, 00-01, tutor, 01-10, instr. 10-12. Chem. Soc; Min. Eng; Soc. Chem. Indust. Bibliography of thorium; the Cretaceous clays of Long Island; thorium and rare earths.
- Joy, Alfred H (arrison)**, Mt. Wilson Observatory, Pasadena, Calif. *Astronomy*. Greenville, Ill, Sept. 23, 82. Ph.B. Greenville, 03; A.M. Oberlin, 04; Thaw fellow, Princeton, 10-11. Instr. Syrian Protestant Col. 04-10, prof. and director, observatory, 10-16; instr. astron. Yerkes Observatory, 14-15; astronomer, *Mt. Wilson Solar Observatory*, 15- Mem. Lick Observatory eclipse exped. to Egypt, 05. Pacific Astron. Soc; fel. Royal Astron. Soc. Stellar parallax; proper motion; spectroscopy.
- Joyce, Dr. A (sa) Willard**, 147 Clifton Ave, Newark, N. J. *Chemistry*. Annapolis, Md, May 8, 93. B.S. St. John's (Md), 13; Ph.D. Yale, 16. Asst. chem. Lehigh, 13-14; Yale, 14-16; research chemist, Calco Chem. Co. 16-19; *Chem. Foundation, Inc.*, 20- Chem. Soc. Organic chemistry; pyrimidins; aliphatic diamines; pharmaceutical chemicals.
- Joyce, C (larence) M (ason)**, 145 Walnut St, Leominster, Mass. *Chemistry*. Medford, Mass, April 1, 81. B.S. Mass. Inst. Tech. 03. *Chemist*, Arlington Co. 03-14; *Viscoloid Co.*, 14- Chem. Soc. (see'y, N. Y. sect. 06-16); Soc. Chem. Indust; Chem. Eng; Chem. Verein. Cellulose esters; camphor; standards for acid control.
- Juday, Chancey**, University of Wisconsin, Madison, Wis. *Limnology*. Ligonier, Ind, May 5, 71. A.B. Indiana, 96, A.M. 97. Teacher science, high sch, Evansville, Ind, 98-00; biologist, Wis. Geol. and Nat. Hist. Surv. 00-01; acting prof. biol. Colorado, 03-04; instr. zool. California, 04-05; biologist, *Wis. Geol. and Nat. Hist. Surv.*, 05- Lecturer zool. Wisconsin, 08- A.A.; Soc. Zool; Micros. Soc; Ecol. Soc; Wis. Acad. Biological significance of gases dissolved in lake waters; productivity of lakes.
- Judd, Prof. Charles H (ubbard)**, University of Chicago, Chicago, Ill. **Psychology, Education*. Bareilly, British India, Feb. 20, 73. A.B. Wesleyan, 94; Ph.D. Leipzig, 96; hon. A.M. Yale, 07; LL.D. Miami, 09; Wesleyan, 13. Instr. philos. Wesleyan, 96-98; prof. exp. psychol. N. Y. Univ. 98-01; psychol. and pedag. Cincinnati, 01-02; instr. psychol. Yale, 02-04, asst. prof. 04-07, prof. and director, psychol. lab. 07-09; head prof. educ. and director, sch. educ. Chicago, 09-, chairman, dept. psychol., 20- Ed. 'Mon. Supplements, Psychol. Rev.', 03-09; 'Studies from Psychol. Lab. of Yale Univ'; 'Lessons in Community and Nat. Life,' U. S. Bur. Educ. and Food Ad., 17-18; 'Sch. Rev.', 'Element. Sch. Jour.', 09- A.A. (v. pres, Q, 20); Soc. Nat; Psychol. Ass. (pres, 09); Soc. Col. Teachers Educ. (pres, 11, 16); Philos. Ass. Social psychology; educational psychology; nature and development of reading; variation and nature of visual perceptions; mental development; number ideas and their development.
- Judd, Dr. Edward Starr**, Mayo Clinic, Rochester, Minn. *Surgery*. Rochester, July 11, 78. M.D. Minnesota, 02. *Surgeon, Mayo Clinic*, 07- Assoc. prof. surg. Minnesota. Surg. Ass; Am. Med. Ass; Col. Surg; Soc. Clin. Surg. Surgery of the biliary and urinary tracts.
- Judd, Prof. Horace**, Ohio State University, Columbus, Ohio. *Hydraulics*. North Hatfield, Mass, May 4, 68. M.E. Ohio State, 97, M.S. 99. Instr. mech. eng. Ohio State, 97-99; dept. science and tech, Pratt Inst. 99-02; asst. prof. exp. eng. Ohio State, 02-09, assoc. prof. 09-18, *hydraul. eng.*, 18-20, prof., 20- A.A; Mech. Eng; Eng. Educ. Experimental hydraulics; form and velocity of jets in pilot tubes; the frictionless orifice; diaphragm orifices for flow meters; centrifugal pumps for motor fire-engines; effect of pulsations on fluid flow.
- Judd, Neil M (erton)**, U. S. National Museum, Washington, D. C. *Anthropology, Archeology*. Cedar Rapids, Nebr, Oct. 27, 87. A.B. Utah, 11; A.M. George Washington, 13. Aid, div. ethnol. U. S. Nat. Museum, 11-17, asst. curator, dept. anthrop. 18, curator *Am. archeol.*, 19- Asst. Univ. of Utah archeol. expeditions, 07-09; Sch. of Am. Archeol. expeditions, 10, 14; in charge reproduction of stone monuments of Guatemala, California-Pacific Expos, 14; field director, numerous Smithsonian Inst. archeol. expeditions. A.A; Anthrop. Ass. (treas. 16-19, mem. council, 19); Archeol. Inst. (see'y, Utah branch, 09); Wash. Acad; Ariz. Archeol. Soc. American archeology, especially of Utah, Arizona and New Mexico.
- Judson, Brig. Gen. W (illiam) V (oorhees)**, Care Adjutant General, Washington, D. C. *Engineering*. Indianapolis, Ind, Feb. 16, 65. Grad. U. S. Mil. Acad, 88; U. S. Eng. Sch. 91; A.M. Harvard, 11. In charge various works for river and harbor, fortification and lighthouse improvements. Attached to Russian army, Manchuria, 04-05; on duty, Panama Canal Commission; commissioner, D. C. 09-13; on Root mission to Russia, 17; chief, Am. military mission, Russia, 17-18.
- Just, Prof. E (rnest) E (verett)**, 412 T St, N. W., Washington, D. C. *Zoology*. Charleston, S. C, Aug. 14, 83. A.B. Dartmouth, 07; Ph.D. Chicago, 16. Instr. zool. *Howard*, 09-10, asst. prof. 10-11, assoc. prof. 11-12, prof. zool. 12-; fellow biol. Nat. Research Council, 20- A.A; Soc.

Zool. Fertilization; artificial parthenogenesis; physiology of development.

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Kabakjian, Prof. D(ician) H(adjy), University of Pennsylvania, Philadelphia, Pa. *Physics*. Armenia, Nov. 11, 75. A.B. Anatolia, 96; M.S. Pennsylvania, 07, Frazier fellow, 09-10, Ph.D, 10. Principal, Sivas Nor. Sch, 98-05; instr. *physics*, Pennsylvania, 10-14, *asst. prof*, 14-Silent discharge and ozone formation; radio-activity.

Kadesch, Dr. William H(enry), Annapolis, Md. *Physics*. Grand Rapids, Ohio, 79. B.S. Ohio Wesleyan, 06; Ph.M. Chicago, 10, Ph.D, 15. Prof. *physics*, Iowa State Teachers Col, 10-13; instr. elec. eng. and *physics*, U. S. Naval Acad, 13-18, *principal*, Calvert Sch, 18- A.A; Physical Soc. Photoelectricity.

Kahlenberg, Prof. Louis, 234 Lathrop St, Madison, Wis. **Chemistry*. Two Rivers, Wis, Jan. 27, 70. B.S. Wisconsin, 92, fellow, 92-93, M.S, 93; Ph.D, Leipzig, 95. Instr. chem, *Wisconsin*, 95-97, *asst. prof.* physical chem, 97-00, *prof*, 00-07, *prof. chem*, 07-, chairman, chem. dept. and director, course in chem, 08-19. Asst, U. S. Geol. Surv, summer, 91; assoc. ed, 'Jour. Physical Chem,' 99-; 'Jour. chem. Phys,' 03- A.A. (v. pres, C, 08); Chem. Soc; Electrochem. Soc. (v. pres, 02-04, 09-11); Wis. Acad. (pres, 06-09); Wash. Acad. The chemical, physical and physiological nature and action of solutions; specific heats and latent heats of vaporization; specific induction capacities; separation of lithium from alkalis; vapor tension; osmosis; equilibria; hydrolysis of cellulose; new solvents for cellulose, sulphur and keratin; sulphur content of keratin; single potential of aluminum and of arsenic; separation of crystalloids by dialysis; passage of boric acid through the skin; cholesterol; qualitative analysis; chemistry in daily life.

Kahn, Dr. Max, 140 W. 69th St, New York, N. Y. *Biochemistry, Medicine*. Russia, March 17, 87. M.D, Cornell, 10; A.M, Columbia, 11, Ph.D, 12. Assoc. biol. chem, Columbia, 11-15; biochemist, West. Pa. Hosp, 15-17; *director, laboratories, and chief, clinic metabolic diseases, Beth Israel Hosp*, 17-; *assoc. biol. chem, Columbia*, 19- Chief, clinic int. med, Mt. Sinai Hosp, 14-15; gastro-enterol. clinic, Beth Israel Hosp, 13-15. A.A; Chem. Soc; Soc. Exp. Biol; N. Y. Acad. Med. Diseases of metabolism; cancer; functional diagnosis.

Kalmbach, E(dwin) R(ichard), 3007 26th St, N. E, Washington, D. C. *Ornithology*. Grand Rapids, Mich, April 29, 84. Pub. schools. Asst. director, Kent Scientific Museum, 03-10; *asst. biologist, biol. surv, U. S. Dept. Agr*, 10- Mem. Ornith. Union; Wash. Biol. Soc. Economic ornithology.

Kalmus, Dr. Herbert T(homas), 110 Brookline Ave, Boston, Mass. *Physics*. Boston, Nov. 9, 81. B.S. Mass. Inst. Tech, 04; Ph.D, Zürich, 06. Principal, Univ. Sch, San Francisco, 05; research assoc, Mass. Inst. Tech, 06-07, instr. *physics*, 07-10, *asst. prof*, 10-12; *prof. electrochem. and metal*, Queen's (Can), and director,

research lab, electrochem. and metal, Can. Govt, 13-15; *pres, Kalmus, Comstock and Wescott, Inc*, 14-; *Technicolor Motion Picture Corp*, 16-; *The Exolon Co*, 19- A.A; Physical Soc; Electrochem. Soc; Chem. Eng; Soc. Test. Mat. Electrical conductivity and viscosity of fused salts; latent heat of fusion and specific heats of salts; electromotive forces in the human body; bacteriological effects of ultra-violet radiations; metallic cobalt by the reduction of the oxid; physical properties of metal cobalt; electroplating with cobalt.

Kamm, Mrs. Minnie Watson, 1004 Garfield Ave, Urbana, Ill. *Zoology*. Fostoria, Mich, Dec. 8, 86. A.B. Olivet, 09; M.S. Illinois, 13, Ph.D, 15. Teacher sciences, high sch, Oyster Bay, L. I, 09-12. Protozoology; gregarines.

Kamm, Prof. Oliver, University of Illinois, Urbana, Ill. *Chemistry*. Highland, Ill, Dec. 6, 88. B.S. Illinois, 11, M.S, 13, Ph.D, 15. Instr. chem, Michigan, 16; *Illinois*, 17-18, *asst. prof*, 18- A.A; Chem. Soc. Correlation of ionization and structure; relation between chemical constitution and physiological action; cellulose.

Kammerer, Dr. Frederic, 51 E. 66th St, New York, N. Y. *Surgery*. New York, Feb. 4, 56. Karlsruhe, 72-76; Freiburg, Leipzig and Vienna, 77-80, M.D, Freiburg, 80. Asst, surg. clinic, Freiburg, 80-85; various other clinics, Germany, 85-86; *prof. clin. surg, Columbia*, 10- A.A; Surg. Ass; N. Y. Surg. Soc; Gesell. für Chirurg; Int. Surg. Soc.

Kampmeier, Prof. Otto Frederic, College of Medicine, University of Illinois, Chicago, Ill. *Anatomy*. Clarksville, Iowa, May 7, 88. A.B. Iowa, 09; fellow, Princeton, 09-12, Ph.D, 12; Munich, 13. Instr. anat. and embryol, Pittsburgh, 12-15, *asst. prof*, 15-18; instr. med. dept, Illinois, 18-19; *assoc. prof. anat. and director of dept, Marquette*, 19-20; *assoc. prof, Illinois*, 20- Asst, Bur. Fisheries, 08. Soc. Nat; Ass. Anat; Soc. Zool. Development of the lymphatic system in vertebrates.

Kanavel, Dr. Allen B(uckner), 30 N. Michigan Ave, Chicago, Ill. *Surgery*. Sedgwick, Kans, Sept. 2, 74. A.B. Northwestern, 96, M.D, 99. Instr, *asst. prof, assoc. prof. and later prof. surg, Northwestern*, 99- Attending surgeon, Wesley Mem. Hosp. Surg. Ass; Soc. Clin. Surg; Col. Surg; Am. Med. Ass. Plastic surgery; infections; surgery of hand, brain and thyroid.

Kanolt, Dr. C(larence) W(hitney), 3311 Ross Place, Washington, D. C. *Physics*. Susquehanna, Pa, Aug. 14, 80. B.S. Columbia, 02, Ph.D, 05, Barnard fellow, 05-07; Berlin, 05; research lab, Mass. Inst. Tech, 06. Instr. chem, Adelbert, 06-09; *asst. physicist, Bur. Standards*, 09-13, *assoc. physicist*, 13-18, *physicist*, 18- Physical Soc; Wash. Acad. Combination of a solvent with the ions; ionization of water; melting points of refractory materials; thermal conductivity; low temperature.

Kantor, Dr. Jacob Robert, Indiana University, Bloomington, Ind. *Psychology*. Harrisburg, Pa, Aug. 8, 88. Ph.B. Chicago, 14, Ph.D, 17. Instr. *psychol*, Minnesota, 15-17; Chicago, 17-20; *asst. prof, Indiana*, 20- A.A; Psychol. Ass. Theoretical psychology; psychopathology.

- Kantor, Dr. John L(eonard)**, 44 W. 96th St, New York, N. Y. *Medicine*. Moscow, Russia, April 12, 90. A.B, Columbia, 08, M.D, Ph.D, 12. Intern and house physician, Mt. Sinai Hosp, 12-14; *clin. asst*, Columbia, 16-, *chief in gastro-enterol*, 19- Gastroenterologist, U.S.A., 18-19. Am. Med. Ass; Am. Röntgen Ray Soc; N. Y. Acad. Med. Gastro-enterology; Röntgen diagnosis; biochemistry; body types; atmospheric air in the digestive tract; hookworm; typhus.
- Karapetoff, Prof. V(ladimir)**, Cornell University, Ithaca, N. Y. *Engineering*. Petrograd, Russia, Jan. 8, 76. C.E, Inst. Ways of Communication, Petrograd, 97, M.M.E, 02; Darmstadt, 99-00. Instr, Eng. Colleges, Russia, 00-02; *prof. elec. eng*, Cornell, 04- Research ed, 'Elec. World'; consulting engineer, Klaxon Co. A.A; Elec. Eng; Eng. Educ. Hydraulics; electrical engineering; systematizing applications of higher mathematics to electrical, civil and mechanical engineering; theory of the electric and the magnetic circuits; acoustics of industrial establishments.
- Karpinski, Dr. Louis C(harles)**, University of Michigan, Ann Arbor, Mich. **Mathematics*. Rochester, N. Y, Aug. 5, 78. A.B, Cornell, 01; Ph.D, Strasbourg, 03; Columbia, 09-10. Instr. *math*, Berea, 98-00; State Nor. Sch, Oswego, N. Y, 03-04; *Michigan*, 04-10, asst. prof, 10-15, assoc. prof, 15-19, *prof*, 19- Math. Soc; Math. Ass; Math. Verein. History and pedagogy of mathematics; history of science.
- Karraker, Prof. P(erry) E(lmer)**, Experiment Station, Lexington, Ky. *Agronomy*. Dongola, Ill, Nov. 14, 86. B.S, Illinois, 11, fellow, Missouri, 12-13, A.M, 13. Asst. soil surv, Illinois, 11-12; research asst. *soils*, Mich. Agr. Col, 13-14; asst. prof, *Kentucky*, 14-19, *assoc. prof*, 20-A.A; Soc. Agron; Ky. Acad. Soil technique.
- Karrer, Dr. Enoch**, Bureau of Standards, Washington, D. C. *Physics*. Rich Hill, Mo, May 23, 87. A.B, Washington (Seattle), 11, A.M, 12, fellow, 12; Hopkins, 13, Ph.D, 14, fellow by courtesy, 14. Lab. asst, United Gas Improvement Co, 14-15, asst. physicist, 15-18, physicist, 18-19; *assoc. physicist*, *Bur. Standards*, 19-20, *physicist*, 20- Physical Soc; Elec. Eng; Illum. Eng. Soc; Optical Soc; Chem. Soc; Wash. Philos. Soc; Franklin Inst; Phila. Eng. Club. Physical optics; illumination; radiometry; photometry.
- Karslake, Dr. William J(ay)**, National Aniline and Chemical Co, Inc, Buffalo, N. Y. *Chemistry*. Le Roy, N. Y, April 5, 69. B.S, Lafayette, 91, M.S, 94; Ph.D, Hopkins, 95. Asst. to Dr. Wolcott Gibbs, Newport, R. I, 91-92; asst. chem, Pa. State, 92-93; demonstrator, Maryland, 94-95; lecturer, Dalhousie, 95-96; chemist with Prof. W. O. Atwater, Middletown, Conn, 96-97; *prof. chem*, Butler, 97-04; *assoc. prof*, Iowa, 04-18; *chemist*, *Nat. Aniline and Chem. Co, Inc*, 18- Chem. Soc. Oxidation products of the nitroxylenes sulphonic acids; nitration of acid-chlorids; identification of manganese and chromium in their compounds; the nitro-p-xylenes sulphonic acids; the nitro-methyl-sulphobenzoic and the nitro-sulphophthalic acids.
- Karsner, Prof. Howard T(homas)**, Lakeside Hospital, Cleveland, Ohio. **Pathology*. Philadelphia, Pa, Jan. 6, 79. B.S, Cent. High Sch, Philadelphia, 99; M.D, Pennsylvania, 03. Res. physician, Phila. Gen. Hosp, and Phila. Hosp. for Contagious Diseases, 03-06; asst. demonstrator, *path*, Pennsylvania, 07-08, demonstrator, 08-11; asst. prof, Harvard Med. Sch, 11-14; *prof*, *Western Reserve*, 14- A.A; Am. Physicians; Soc. Exp. Biol; Soc. Biol. Chem; Ass. Path. and Baet. (pres, 20); Soc. Exp. Path. Experimental pathology and immunity.
- Kasner, Prof. Edward**, Columbia University, New York, N. Y. **Mathematics*. New York, April 2, 78. B.S, Col. City of N. Y, 96; A.M, Columbia, 97, Ph.D, 99; Göttingen, 99-00. Tutor *math*, Columbia, 00-05, instr, 05-06, adj. prof, 06-10, *prof*, 10- Speaker on geom, Int. Cong. Arts and Sciences, St. Louis, 04; *assoc. ed*, 'Rev. sem. des Math.' Nat. Acad; A.A. (v. pres, 07); Math. Soc. (assoc. ed, 'Trans,' 03-, v. pres, 09); *Circolo Mat. di Palermo*. Differential geometry of dynamics; conformal geometry; geometry of divergent series; geometry of heat conduction; relativity.
- Kast, Dr. Ludwig**, 771 Madison Ave, New York, N. Y. *Medicine*. Vienna, Austria, March 2, 77. Vienna, 96-99, 00-01; Berlin, 99; M.D, Prague, 03; Path. Inst, Berlin, 03-06; Rockefeller Inst, 07. *Prof. med*, N. Y. *Post-Grad. Med. Sch*. Soc. Exp. Biol; Gastro-Enterol. Ass; N. Y. Acad. Med; N. Y. Path. Soc. Physiology and pathology of digestion; hematology.
- Katz, Frank J(ames)**, U. S. Geological Survey, Washington, D. C. *Geology*. New York, N. Y, Jan. 27, 83. A.B, Wisconsin, 05; fellow, Chicago, 06-07. Junior geologist, *U. S. Geol. Surv*, 07-10, asst. geologist, 10-11, *assoc. geologist*, 12-19, *geologist*, 19- A.A; Geol. Soc; Wash. Geol. Soc. Geology of Alaska, Maine and New Hampshire.
- Kauffman, Prof. C(alvin) H(enry)**, 1236 Prospect St, Ann Arbor, Mich. **Botany*. Lebanon, Pa, March 10, 69. Palatinate, 90-92; A.B, Harvard, 96; Wisconsin, 01-02; Cornell, 02-04; Ph.D, Michigan, 06. Principal, prep. sch, Lebanon, Pa, 97-98; teacher science, high sch, Decatur, Ind, 98-00; Nor. Col, Bushnell, Ill, 00-01; asst. *bot*, Cornell, 02-04; instr, *Michigan*, 04-10, asst. prof, 10-20, *assoc. prof*, 20- Path. inspector, fed. hort. board, U. S. Dept. Agr, 17-19. A.A; Bot. Soc; Phytopath. Soc; Ass. Prof; Mich. Acad; Wash. Bot. Soc. Cortinariaceae; Michigan fungi; biology of Saprolegniaceae; mycology.
- Kavanaugh, Prof. W(illiam) H(arrison)**, 2081 N. 63d St, Philadelphia, Pa. *Mechanical engineering*. Williamsport, Pa, Aug. 19, 73. M.E, Lehigh, 94. Principal, Miners and Mechanics Inst, 94-95; instr. mech. eng, Illinois, 97-98; draftsman and chief draftsman, Pa. R. R, 98-01; instr. mech. eng, Minnesota, 01-02, asst. prof, 02-07, *prof. exp. eng*, 07-16; *Pennsylvania*, 16- Int. jury awards, Panama-Pacific Expos, 15. Mech. Eng; Eng. Educ; Soc. Test. Mat. Experimental engineering; gas engineering.
- Kay, Prof. Edgar B(oyd)**, Tuscaloosa, Ala, and Washington, D. C. *Civil engineering*. Warriors Mark, Pa, Jan. 15, 60. C.E, Rensselaer, 83. Instr. civil eng, Rensselaer, 83-85; Union, 96-97; Cornell, 97-03; prof. eng, Alabama, 03-06, civil eng.

- and dean, col. eng, 07-12; *consulting engineer*, 12- Consulting engineer, Ala. Railroad Commission, 03-15; designer, U. S. standard incinerator; chief, hydraulic eng. sect, in charge water supply, sewerage, drainage, construct. sect, U.S.A. Eng. Educ; Munic. Eng. Ass; Ass. Eng. Societies; Int. Ass. Test. Mat; Am. Waterworks Ass. Physical tests of materials; water-supply, water power, sewerage, sewage disposal and filtration engineering; chert and chert roads; Alabama coals and iron ores; Alabama road materials; metallurgy.
- Kay, Dean G(eorge) F(rederick)**, University of Iowa, Iowa City, Iowa. *Geology*. Virginia, Ont, Sept. 14, 73. B.A., Toronto, 00, M.A., 02; fellow, Chicago, 03-04, Ph.D., 14. Principal pub. schools, Zephyr, Ont, 92-94; geologist, Lake Superior Power Co, 00-02; asst, Ont. Bur. Mines, 03; asst. prof. geol. and miner, Kansas, 04-07; *prof. geol*, Iowa, 07-, *head of dept*, 11-, *dean col. liberal arts*, 17- Junior geologist, U. S. Geol. Surv, 07-; state geologist, Iowa, 11-A.A. (see'y, E, 12-17); Geol. Soc; Iowa Acad; Iowa Conservation Ass. (pres). Economic geology; Pleistocene geology; geology and mineral resources of southwestern Oregon, Bering coal field (Alaska) and Iowa.
- Kearney, Thomas H**, U. S. Department of Agriculture, Washington, D. C. **Physiological botany*. Cincinnati, Ohio, June 27, 74. Tennessee, 90-92; Columbia, 93-94. Asst. botanist, Tenn. Exp. Sta, 92-93; asst. curator, herbarium, Columbia, 94; asst. bot, U. S. Dept. Agr, 94-95, asst. agrostologist, 95-98, asst. botanist, 98-00, asst. physiologist, 00-02, *physiologist*, 02-07, in charge, alkali and drought resistant plant investigations, bur. plant indust, 08- A.A.; Soc. Nat; Bot. Soc; fel. Am. Geog. Soc; Wash. Acad. (v. pres, 08, board managers, 17-19); Wash. Bot. Soc. (v. pres, 08, pres, 16); Wash. Biol. Soc. Genetics; ecological plant geography; physiology of arid region crop plants; Egyptian cotton; date and olive culture in northern Africa; taxonomy of Gramineae.
- Kebler, Leonard**, South St, Mt. Vernon, N. Y. *Electrical engineering*. Cincinnati, Ohio, 83. *Pres, Ward Leonard Elec. Co*, 04- Elec. Eng; Automotive Eng. Electrical control: vitreous enameling.
- Kebler, Dr. Lyman F(rederic)**, U. S. Department of Agriculture, Washington, D. C. **Chemistry, Medicine*. Lodi, Mich, June 8, 63. Ph.C, Michigan, 90, B.S, 91, M.S, 92; Jefferson Med. Col, 99; Temple, 99-03; M.D, George Washington, 06. Instr. chem, Iowa State, 88-89; Michigan, 91-92; chief chemist, mfg. chemist, Phila, 92-03; *chief, drug lab, bur. chem, U. S. Dept. Agr*, 03-07, *drug div*, 07-; *asst. prof. pharmacol. and mat. med, Georgetown*. Mem. jury of awards, Nat. Export Expos, 98; in charge drug examinations, Food and Drugs Act; Trustee, Nat. Col. Pharm. A.A.; Chem. Soc. (v. pres, 17); Am. Med. Ass. (council, pharm. chem, 05-14); Pharmaceut. Ass; Franklin Inst. Chemical, pharmaceutical, medicinal and commercial value of drugs; purity of chemical reagents; methods of assaying alkaloidal drugs; headache mixtures; alcohol in medicinal agents; medicated soft drinks; cancer remedies; drug addiction treatments; American and Norwegian codliver oils; diet therapy; uniformity of medicinal tablets.
- Keen, Prof. W(illiam) W(illiams)**, 1729 Chestnut St, Philadelphia, Pa. *Surgery*. Philadelphia; Jan. 19, 37. A.M., Brown, 59, LL.D, 91; M.D, Jefferson Med. Col, 62, hon. Sc.D, 12; LL.D, Northwestern, 03; Toronto, 04; Edinburgh, 05; Yale, 06; hon. Ph.D, Upsala, 07; LL.D, St. Andrews, 11; Pennsylvania, 19; hon. Sc.D, Harvard, 20. *Prof. surg*, Woman's Med. Col, 84-89; *Jefferson Med. Col*, 89-07, *emer. prof*, 07- Lieut, M.R.C, 09-17, major, 17-19; mem. Nat. Research Council. First Egyptian Med. Cong, 02 (hon. pres); Triennial Cong. Am. Physicians and Surg. (pres, 03). Surg. Ass. (pres, 98); Am. Med. Ass. (pres, 99); Philos. Soc. (pres, 08-17); Am. Acad; Phila. Acad; Wash. Acad; Phila. Co. Med. Soc. (pres, 89, 90); Phila. Col. Physicians (pres, 00); hon. mem. London Clin. Soc; hon. fel. Royal Col. Surg; hon. fel. Royal Col. Surg. Edinburgh; Soc. de Chirurg. de Paris; Ital. Surg. Soc. General surgery; surgery of the brain, spinal cord and nerves.
- Keenan, Thomas J**, 1026 E. 23d St, Brooklyn, N. Y. *Chemistry*. Dundee, Scotland, Aug. 29, 66. Pub. and private schools. *Ed, 'Pharmaceut. Record'*, 92-; *'Paper'*, 19- Co-editor, 'Am. Druggist', 93-11. A.A.; Chem. Soc. (councilor, 19); Electrochem. Soc; Soc. Chem. Indust; Ass. Pulp and Paper Indust. (see'y, 15-19); N. Y. Chemists Club; fel. London Chem. Soc; Soc. de Chim. indust. Pharmaceutical chemistry; papermaking; clay in papermaking.
- Keene, Prof. Edward Spencer**, 1028 Seventh St, Fargo, N. Dak. *Mechanical engineering*. Rock Island, Ill, Oct. 8, 64. B.S.(M.E), Illinois, 90; M.E, 12. Instr. meeh. eng, Illinois, 90-92; *prof, N. Dak. Col*, 92-02, *dean, meeh. arts*, 02- Mechanics of the household; sewage disposal; water supply; heating; plumbing.
- Keeney, Robert M(ayro)**, Colorado School of Mines, Golden, Colo. *Metallurgy*. Somersville, Conn, May 28, 87. E.Met, Colo. Sch. Mines, 10. Metallurgist, U. S. Bur. Mines, 13-14; asst. manager, Baker Mines Co, 14-15; metallurgist, Standard Chem. Co, 15-16; Snyder Elec. Furnace Co, 16; manager, Ferro Alloy Co, 16-18; *director, dept. metal. research, Colo. Sch. Mines*, 19- Consulting engineer, U. S. Bur. Mines and various industrial concerns, 17- Carnegie scholar, British Iron and Steel Inst, 11-12. Min. and Metal. Soc; Min. and Metal. Eng; Electrochem. Soc; British Iron and Steel Inst. Electrometallurgy; ferro-alloys; electric smelting; alloy steels.
- Keeton, Dr. R(obert) W(ood)**, 7455 Greenview Ave, Chicago, Ill. *Pharmacology, Physiology*. West Point, Miss, July 7, 83. A.B, Cumberland, 03; Chicago, 06, M.S, 13; M.D, Northwestern, 16. Asst. physiol, Illinois, 10-12; adj. prof, Albany Med. Col, 12-14; asst. pharmacol, Northwestern, 14-16; *instr, med. dept, Illinois*, 18-20, *asst. prof, pharmacol. and therapeut*, 20- Instr. physiol, Chicago, summers, 13, 15, 16. Physiol. Soc. Gastric secretion; hypophysis and carbohydrate metabolism.
- Keffer, Prof. Charles A(lbert)**, University of Tennessee, Knoxville, Tenn. *Horticulture, Forestry*.

- Des Moines, Iowa, June 11, 61. Iowa State, 83. Prof. bot. and hort, S. Dak. Col, 87-91; hort. and forestry, Missouri, 91-95; asst. chief, div. forestry, U. S. Dept. Agr, 95-99; prof. agr. and hort, N. Mex. Col, 99-00; hort. and forestry, *Tennessee*, 00-14, *director, div. exten*, 14- Forestry Ass; Pomol. Soc; Tenn. Forestry Ass; Ill. Hort. Soc; Tenn. Hort. Soc. Early growth of the apple tree; diseases of fruits and remedies; tillage.
- Keiller, Prof. W(illiam)**, State Medical College, Galveston, Tex. **Anatomy*. Midlothian, Scotland, July 4, 61. L.R.C.P, L.R.C.S, Edinburgh and Glasgow, 88, fellow Royal Col. Surgeons, Edinburgh, 90. Lecturer *anat, sch. med*, Edinburgh, 89-90; *prof, Texas*, 91- Am. Med. Ass. Human anatomy; applied anatomy; neurology.
- Keilholtz, Pierre Otis**, Continental Building, Baltimore, Md. *Electrical engineering*. Baltimore, Md, 62. Chief engineer, United Railways and Elec. Co, Baltimore; Consol. Gas. and Elec. Co; *consulting engineer*. Mem. int. jury awards, La. Purchase Expos, 04. A.A.; Elec. Eng; Naval Archit. and Marine Eng; Naval Eng; Mech. Eng. Angular variations in steam engines.
- Keiser, Prof. Edward H(arrison)**, Clayton, Mo. **Chemistry*. Allentown, Pa, Nov. 20, 61. B.S, Swarthmore, 80, M.S, 81; Ph.D, Hopkins, 84. Instr. chem, Swarthmore, 80-81; Hopkins, 84-85; prof, Bryn Mawr, 85-99; Washington (St. Louis), 99-12. Chem. Soc; Soc. Chem. Indust; Philos. Soc; Chem. Gesell. Acetylene derivatives; atomic weights; analytical methods; acid carbonates of the alkaline earth metals; colloidal compounds.
- Keith, Arthur**, U. S. Geological Survey, Washington, D. C. **Geology*. St. Louis, Mo, Sept. 30, 64. A.B, Harvard, 85, A.M, 86. Asst, U. S. Geol. Surv, 87-94, *geologist*, 94- Int. Cong. Geol, 13. Geol. Soc. (councilor, 13); Ass. Geog; Wash. Acad. (v. pres, 15); Wash. Geol. Soc. (pres, 14). Stratigraphic and structural geology in the United States, especially the Appalachian region.
- Keith, Miss Marcia A(nna)**, 1815 Ditman Ave, Brooklyn, N. Y. *Physics*. Brockton, Mass, Sept. 10, 59. B.S, Mt. Holyoke, 92; Worcester, 89; Berlin, 97-98. Teacher, pub. schools, Mass, 76-79; instr. sciences, Mich. Sem, 83-85; math, Mt. Holyoke, 85-88, head, dept. physics, 89-03; Lake Erie, 05-06; asst. to H. C. Keith, consulting engineer, 06-18. A.A.; Physical Soc.
- Keith, Dr. N(athaniel) S(hepard)**, 351 Bullitt Building, Philadelphia, Pa. *Electrochemistry, Metallurgy*. Boston, Mass, July 14, 38. M.D, N. Y. Univ, 59. Chemist and mining engineer, Colo, 60-69; *inventor in chem, metal, and elec*, 61- Scientific ed, 'Electrical World,' 84. Mem. Int. Conf. of Electricians, Phila, 84; Chicago, 93. Elec. Eng. (organizer and past sec'y); Min. Eng; Electrochem. Soc. Properties of ores and obtaining their constituents.
- Keitt, Prof. G(eorge) W(annamaker)**, University of Wisconsin, Madison, Wis. *Plant pathology*. Newberry, S. C, June 11, 89. B.S, Clemson, 09; M.S, Wisconsin, 11, Ph.D, 14. Asst. plant path, S.C. Exp. Sta, 09; special agent, bur. plant indust, U. S. Dept. Agr, 10, scientific asst, 10-13; asst. prof. *plant path, Wisconsin*, 14-17, assoc. prof, 17-20, *prof*, 20- Lieut. and later capt, C.W.S, A.E.F, 17-19; major, O.R.C, 19- Lecturer plant path, Wisconsin, 13. A.A.; Bot. Soc; Phytopath. Soc; Wis. Acad. Fruit diseases.
- Keller, Dr. Edward**, 365 W. 56th St, New York, N. Y. *Chemistry, Metallurgy*. Sauk City, Wis, March 10, 57. Polytech, Stuttgart, 77-79; Ph.D, Zürich, 81. Representative, Anaconda Copper Mining Co, 93-17. Consulting metallurgist and chemist, U. S. Bur. Mines, 13-16. A.A.; Min. Eng; Chem. Soc; Electrochem. Soc. Magnetic oxid in copper mattes; distribution of precious metals and impurities in copper; elimination of impurities from copper; electrolysis and refining of copper; labor saving appliances in the chemical works laboratory; the principles and practise of sampling metallie metallurgical materials.
- Keller, Prof. H(arry) F(rederick)**, 2313 Green St, Philadelphia, Pa. *Chemistry, Mineralogy*. Philadelphia, Dec. 15, 61. B.S, Pennsylvania, 81, Sc.D, 15; Ph.D, Strasbourg, 88. Asst. chem, Pennsylvania, 83-86, instr. org. chem, 88-90; prof. chem, Mich. Col. Mines, 90-92; Cent. High Sch, Phila, 92-15, head, dept. science, 08-15; *principal, Germantown High Sch*, 15- Chemist, Edgemoor Iron Works; chemist and assayer, various smelting works in Colo. Chem. Soc; Philos. Soc. (sec'y, 13); Franklin Inst. (manager); Chem. Gesell. Mineral species (discovery of lillianite); diacetyl and derivatives; analytical methods; dimethyl racemic acid; Chilean copper minerals; composition of copper, pigments and other materials from Indian mounds.
- Keller, Dr. Ida A(ugusta)**, 4424 Osage Ave, Philadelphia, Pa. *Plant physiology*. Darmstadt, Germany, June 11, 66. Pennsylvania, 84-86; Leipzig, 87-89; Ph.D, Zürich, 90. Asst. bot, Bryn Mawr, 86-87, lecturer, 91-93; teacher chem, *Phila. High Sch. for Girls*, 93-98, head, science dept, 98- Mem. advisory committee, Int. Plant Breeding Conf, 02. Soc. Nat; hon. mem. Pa. Hort. Soc. (prof. biol); Phila. Acad; Phila. Bot. Club (v. pres, 00-); Ass. Col. and Prep. Sch. of Middle States and Md. (v. pres, 95). Fertilization.
- Keller, W(illiam) S(impson)**, Bell Building, Montgomery, Ala. *Civil engineering*. Tusculumbia, Ala, Feb. 20, 74. B.C.E, Alabama, 93, C.E, 18. Asst. engineer, Shiloh Nat. Mil. Park, 00-05; chief engineer, Madison Co. (Tenn.) Good Roads Commission, 05-09; supt. road construction, U. S. Dept. Agr, 09-10; co. engineer, Dallas Co, Ala, 10-11; *state highway engineer, Ala*, 11- Civil Eng; Ass. State Highway Officials (treas, 19, v. pres, 20). Road construction.
- Kellerman, Karl F(rederick)**, Bureau of Plant Industry, Washington, D. C. **Plant physiology*. Göttingen, Germany, Dec. 9, 79. Ohio State, 96-99; B.S, Cornell, 00. Asst. bot, Cornell, 00-01; with U. S. Dept. Agr, 01-, assoc. chief, bur. plant indust. and mem. fed. hort. board. Ed, 'Jour. Agr. Research.' A.A.; Soc. Nat; Bot. Soc; Soc. Bact; Wash. Acad; Wash. Bot. Club. The physiology of lower plants, especially in

- connection with water supplies; soil bacteriology; nitrification in soils; life history of some soil organisms; physiological effect of copper in water; plant nutrition; citrus canker eradication.
- Kellert, Dr. Ellis**, Bender Hygienic Laboratory, Albany, N. Y. *Pathology*. Albany, July 18, 86. M.D., Albany Med. Col., 09; Harvard Med. Sch. Prof. path., Albany Med. Col., 13-16; *director, Bender Hygienic Lab.*, 13- Ass. Path. and Bact.; Ass. Cancer Research. Cancer; tuberculosis.
- Kelley, Dr. G(eorge) L(eslie)**, 6804 McCallum St., Philadelphia, Pa. *Chemistry*. Quincy, Mass., June 30, 79. B.S., Harvard, 07, Ph.D., 11. Austin teaching fellow, Harvard, 07-09, instr. chem., 09-12; *research chemist, Midvale Steel and Ordnance Co.*, 12- A.A.; Chem. Soc.; Soc. Test. Mat.; Franklin Inst. Organic chemistry; absorption; halogenated orthoquinones; steel analysis; electro-metric titrations; transmission temperatures of sodium chromate hydrates.
- Kelley, Prof. Truman L(ee)**, Teachers College, Columbia University, New York, N. Y. *Psychology*. Muskegon, Mich., May 25, 84. A.B., Illinois, 09, A.M., 11; Ph.D., Columbia, 14. Adj. prof. math., Ga. Tech., 09-10; teacher math., high sch., Fresno, Calif., 11-12; consulting psychologist, Culver Mil. Acad., 13-14; adj. prof. educ. psychol., Texas, 14-17; *asst. prof. educ. Teachers Col., Columbia*, 17- Expert, psychol. service, Sanit. C, U.S.A., and Nat. Research Council; acting prof. educ., Stanford, 20-21. Psychol. Ass.; Statist. Ass.; Nat. Soc. Study Educ.; Soc. Col. Teachers Educ.; Ass. Directors Educ. Research. Mental measurement; educational guidance; exceptional children; social statistics.
- Kelley, Prof. Walter P(earson)**, Citrus Experiment Station, Riverside, Calif. *Chemistry*. Franklin, Ky., Feb. 19, 78. B.S., Kentucky, 04; M.S., Purdue, 07; Ph.D., California, 12. Asst. chemist, Purdue Exp. Sta., 05-08; chemist, Hawaii Exp. Sta., 08-14; *prof. agr. chem., California*, 14- A.A.; Chem. Soc.; Soc. Agron.; Pacific Coast Biol. Ass. Agricultural chemistry; the influence of manganese on plants; assimilation of nitrogen by rice plants; effect of salts and of heat on soils; Hawaiian soils; transformation of nitrogen in soils; nutrition of citrus trees.
- Kellner, Dr. G(ustav) A(dolph) Hermann**, 290 Canterbury Road, Rochester, N. Y. *Physics*. Zbirow, Bohemia, July 20, 73. Berlin; Ph.D., Jena, 99. Scientific collaborator, Zeiss Works, Jena, 97-00; scientific director, Spencer Lens Co., 00-05; *director, scientific bur., Bausch and Lomb Opt. Co.*, 05- Physical Soc.; Optical Soc. (ed., 'Jour.', 17-19). Theory and construction of optical instruments.
- Kellogg, (Arthur) Remington**, U. S. Department of Agriculture, Washington, D. C. *Zoology*. Davenport, Iowa, Oct. 5, 92. A.B., Kansas, 15, A.M., 16. Biologist, museum, Kansas, 13-15; teaching fellow, California, 16-20; *asst. biologist, biol. surv., U. S. Dept. Agr.*, 20- Field naturalist, biol. surv., U. S. Dept. Agr., field seasons, 15-17. Soc. Mammal.; Paleont. Soc.; Wash. Biol. Soc. Mammalogy; pinnipeds; Microtinae; Cetacea; meadow mice; mammals of Kansas.
- Kellogg, Dr. Chester E(lijah)**, 5 Poplar Place, Framingham, Mass. *Psychology*. Melrose, Mass., Nov. 11, 88. A.B., Bowdoin, 11; A.M., Harvard, 12, Austin fellow, 12-13, Ph.D., 14. Asst. psychol., Radcliffe, 13-14; lecturer, Bryn Mawr, 14-15; instr., Minnesota, 15-16; psychol. examiner, med. dept., U.S.A., 17; lieut., Sanit. C, 18-19, capt., 19-20; *development specialist, grading and testing, war plans div., gen. staff, U.S.A.*, 20- Psychol. Ass. Alternation and interference of feelings; graphic record of maze reactions.
- Kellogg, Prof. James L(awrence)**, Williamstown, Mass. **Biology*. Kewanee, Ill., Sept. 15, 66. B.S., Olivet, 88; Ph.D., Hopkins, 92; hon. A.M., Williams, 01. Prof. *biol.*, Olivet, 92-99; asst. prof., Williams, 99-02, *prof.*, 03- Instr., Woods Hole, 92-95; investigator, U. S. Fish Commission, 89-91, 96-98; R.L. (clams), 98; N. Y. (clams), 01-03; La. (oysters), 04; Mass. (clams), 06. Soc. Nat.; Soc. Zool. Lamelli-branches; ciliary mechanisms of lamellibranchs.
- Kellogg, Prof. O(liver) D(imon)**, Harvard University, Cambridge, Mass. **Mathematics*. Linwood, Pa., July 10, 78. A.B., Princeton, 99, J.S.K. fellow, 99-02, A.M., 00; Ph.D., Göttingen, 02. Instr. math., J. C. Green Sch. of Sci., Princeton, 02-05; asst. prof., Missouri, 05-10, prof., 10-20, on leave, 18-20; with U.S.N. Exp. Sta., 18-19; lecturer *math., Harvard*, 19-20, *assoc. prof.*, 20- Assoc. prof. math., Chicago, summer, 09. A.A. (v. pres. A, 19); Math. Soc. (mem. council, 08-11); Math. Ass.; Circolo Mat. di Palermo. Integral equations; potential functions; function theory; differential equations.
- Kellogg, Prof. Vernon L(yman)**, National Research Council, Washington, D. C. **Zoology*. Emporia, Kans., Dec. 1, 67. B.S., Kansas, 89, M.S., 92; Cornell, 91-92; Leipzig, 93-94, 97-98; Paris, 04-05, 08-09; LL.D., California, 19; Brown, 20. Asst. prof. entom., Kansas, 90-93, assoc. prof., 93-94; asst. prof., Stanford, 94-95, assoc. prof., 95-96, prof., 96-20; *permanent sec'y and chairman, div. educ. relations, Nat. Research Council*. Asst. Samoan explorations, U. S. Fish Commission, 02; on staff, Belgium Relief Commission; Food Ad.; Am. Relief Ad.; mem. Inter-Allied Scientific Food Commission. A.A. (v. pres, 15, exec. committee, Pacific div, 16); Soc. Nat.; Ecol. Soc.; Entom. Soc. (v. pres, 10); assoc. Ass. Eeon. Entom.; Nature Study Soc. (v. pres, 08, 09); Kans. Acad.; Calif. Acad.; Wash. Acad.; Entom. Gesell.; Soc. entom. de France. Classification and distribution of the Mallophaga; morphology and development of mouth parts of insects; classification, structure and life history of Blepharoceridae; the scales of the Lepidoptera; phagocytosis in insects; variation in insects; inheritance, artificial parthenogenesis, regeneration and general biology of silkworms; variation, inheritance and behavior of insects.
- Kelly, E. G.**, Kansas State Agricultural College, Manhattan, Kans. *Entomology*. Fulton, Ky., July 25, 80. B.S., Kentucky, 03, M.S., 04. Asst. to state entomologist, Ill., 04-07; asst. entomologist, U. S. Dept. Agr., 07-18; *exten. entomologist, Kansas State*, 18- A.A.; Entom. Soc.; Ass. Eeon. Entom.; Wash. Entom. Soc. Aphid mairadiids; the Hessian fly and parasites; control of farm crop insects; orchard management

and orchard pests; ecology of Kansas grasshoppers.

Kelly, Prof. H(arry) M(cCormick), Cornell College, Mount Vernon, Iowa. *Zoology*. Harrisburg, Pa, May 27, 67. A.B, Bucknell, 88, A.M, 91; A.B, Harvard, 91, A.M, 93; LL.D, J. B. Stetson, 11. Asst. zool, Harvard, 91-93; instr. *biol*, Northwestern, 93-94; *prof*, Cornell (Iowa), 94- Soc. Nat; Soc. Zool; Iowa Acad. Parasites of the Unionidae.

Kelly, Prof. Howard A(twood), 1418 Eutaw Place, Baltimore, Md. **Surgery*. Camden, N. J, Feb. 20, 58. A.B, Pennsylvania, 77, M.D, 82; LL.D, Aberdeen, 06; Washington and Lee, 06. Assoc. prof. obstet, Pennsylvania, 88-89; *prof*. gynec. and obstet, *Hopkins*, 89-19, gynec. and gynec. surgeon, *Hopkins Hosp*, 99-19, *emer. prof. and consulting gynec. surgeon*, 19- A.A; fel. Gynec. Soc; Ass. Anat; Wash. Acad; hon. fel. British, Edinburgh and Glasgow Gynec. and Obstet. Societies; hon. fel. Edinburgh Royal Col. Surg; hon. fel. Irish Royal Acad. Med; assoc. for. mem. Soc. d'Obstét. de Gynéc. et de Pédiat. de Paris; for. cor. mem. Soc. de Chirurg. de Paris; Ass. française d'Urol; cor. mem. Leipzig Gesell. für Geburtshülfe; cor. mem. Vienna Royal Soc. Physicians; hon. mem. Soc. Ital. di Ostet. e Ginec. Operative and medical gynecology and abdominal surgery; the vermiform appendix and its diseases; yellow fever; myomata of the uterus; radiotherapy; medical history and biography; medical botanists.

Kelly, Prof. James P(eter), State College, Pa. *Botany*. Hamilton, Ont, June 9, 85. B.S, Col. City of N. Y, 06; A.M, Columbia, 14; Sc.D, Princeton, 20. *Assoc. prof. bot*, Pa. State, 14- A.A; Bot. Soc. Genetics of *Phlox drummondii*.

Kelly, Dr. John F(orrest), 284 W. Housatonic St, Pittsfield, Mass. *Electrical engineering*. Carrick-on-Suir, Ireland, March 28, 59. B.S, Stevens, 78, Ph.D, 98. Lab, Western Elec. Co, 79-82; Edison Lab, 79; Weston Lab, U. S. Elec. Lighting Co, 82-86, chief electrician, 86-92; Stanley Lab. Co, 92-95; *consulting elec. engineer*, 95- Pres, Teleelectric Co, 05-10. John Scott medal, Franklin Inst, 09. A.A; Elec. Eng; Econ. Ass; Inventors Guild; British Inst. Elec. Eng; Soc. française des Elec. The commercial utilization of electricity and magnetism; musical instruments; dried foods.

Kelly, William, Vulcan, Mich. *Mining engineering*. New York, N. Y, April 17, 54. A.B, Yale, 74; E.M, Columbia, 77. Pres, Pa. Board of Examiners of Bituminous Mine Inspectors, 85-89; mem. board of control, *Mich. Sch. Mines*, 97-04, chairman, 04-; mem. Public Domain Commission, 09-, chairman, 17-, mem. state highway advisory board, 19- A.A; Min. Eng. (councilor, 10-12, chairman, committee on elec. in mines); Min. and Metal. Soc; Lake Superior Min. Inst. (pres, 99); Can. Min. Inst; London Inst. Min. and Metal. Electricity in mines; mine dam; shaft sinking.

Kemble, Dr. Edwin C(rawford), Jefferson Physical Laboratory, Cambridge, Mass. *Physics*. Delaware, Ohio, Jan. 28, 89. B.S, Case, 11; A.M, Harvard, 14, Ph.D, 17. Asst. instr. physics, Carnegie Inst. Tech, 11-12, instr, 12-13; eng. physicist, Curtiss Aeroplane Co, 17-18;

instr. physics, Williams, 19; *Harvard*, 19- Physical Soc. Infra-red absorption spectra; application of quantum theory to molecular motions.

Kemmerer, Prof. Geo(rge) (Irving), 916 Van Buren St, Madison, Wis. *Chemistry*. Janesville, Wis, Feb. 25, 79. A.B, Wisconsin, 04, A.M, 06; Ph.D, Pennsylvania, 08. Asst. chem, Wisconsin, 04-06; *prof*, N. Mex. Sch. Mines, 08-14; Carroll, 14-20; *asst. prof*, Wisconsin, 20- Chemist, Wis. Geol. and Nat. Hist. Surv, summers, 07-09; Bur. Fisheries, 11-13; consulting chemist. Chem. Soc. (chairman, Milwaukee sect, 18, councilor, 19). Inorganic, analytical and industrial chemistry.

Kemp, Dr. George T(heophilus), St. James Apartments, Charles and Center Sts, Baltimore, Md. **Physiology, Histology*. Baltimore, Md, Nov. 7, 61. Baltimore City Col, 76-81; A.B, Hopkins, 83, fellow, 85, Ph.D, 86, fellow by courtesy, 87; M.D, L. I. Col. Hosp, 91. Demonstrator physiologist, Pennsylvania, 86; assoc. director physiologist and bacter, Hoagland Lab, 88-93; *prof*. physiologist, Illinois, 97-08. Lecturer physiologist, L. I. Col. Hosp, 93; electro-therapist, dept. gynec, and physician to out-door clinic, Brooklyn Eye and Ear Hosp. A.A. (see'y, K, 09-); Soc. Nat; Physiologist Soc; Ass. Anat; assoc. Am. Med. Ass; Brooklyn Path. Soc. Blood-plates; nerve and muscle physiology, especially the separation of motor and trophic nerves; black vomit of yellow fever; nitrous oxid anesthesia; relation of blood-plates to hematogenesis and to coagulation; influence of curare on muscle metabolism; poisons isolated from cultures of *Bacillus typhosus*; physiological influence of altitude, especially on the blood.

Kemp, Prof. J(acob) Garrett, Lexington, Ky. *Physics*. Baltimore, Md, Aug. 26, 77. A.B, Illinois, 06, A.M, 10, fellow, 11-12, Ph.D, 12. Instr. physics, Purdue, 06-08; Illinois, 08-11; assoc. prof, Arkansas, 12-14; acting prof. math. and astron, Baker, 14-15; *prof. physics*, Okla. Col, 15-20; *assoc. prof*, Kentucky, 20- Physical Soc. Photo-electricity; photoelectric cells.

Kemp, Prof. James F(urman), Columbia University, New York, N. Y. **Geology*. New York, Aug. 14, 59. A.B, Amherst, 81, hon. Sc.D, 06; E.M, Columbia, 84; Munich, 85-86; LL.D, McGill, 13. Instr. *geol*, Cornell, 86-88, asst. prof, 88-91; adj. prof, Columbia, 91-92, *prof*, 92- Assoc. ed, 'Sch. of Mines Quarterly'; 'Econ. Geol'; formerly geologist, U. S. Geol. Surv; manager, N. Y. Bot. Garden and formerly sec'y, board scientific directors; non-res. lecturer ore deposits, Hopkins, 05-06; econ. geol, Mass. Inst. Tech, 07-08; geol, McGill, 10; gold medal, Min. and Metal. Soc, 16. Nat. Acad. A.A. (v. pres, 00); Geol. Soc. (manager, 05, v. pres, 13); Min. Eng. (manager, 96-99, v. pres, 03-05, pres, 12, hon. mem, 14); hon. mem. Min. and Metal. Soc. (pres, 13); fel. N. Y. Acad. (pres, 05, 10); Colo. Sci. Soc; Wash. Acad; Wash. Geol. Soc; cor. mem. Christiania Acad; cor. mem. Stockholm Geol. Soc. Ore deposits; crystalline rocks; economic geology; igneous iron ores in Wyoming; several eruptive areas; Adirondack geology; several mining districts; deposits of the United States and Canada.

- Kempf, Dr. Edward J (ohn)**, St. Elizabeth's Hospital, Washington, D. C. *Psychiatry*. Jasper, Ind, July 26, 85. A.B, Indiana, 07; M.D, Western Reserve, 10. *Clin. psychiatrist, Govt. Hosp. for Insane, Washington, D. C*, 14- Psychopath. Ass; Psychoanal. Ass; Medico-Psychol. Ass. Psychopathology; autonomic functions and personality; social and sexual behavior of infra-human primates.
- Kempton, Prof. F(orrest) E(llwood)**, U. S. Department of Agriculture, Washington, D. C. *Plant pathology*. Centerville, Ind, Oct. 5, 83. B.S, Earlham, 06; M.S, Wisconsin, 13; Ph.D, Illinois, 18. Teacher, pub. schools, Wayne Co, Ind, 05-12; prof. biol, Ill. Col, 13-14; asst. bot, Illinois, 14-18; *plant pathologist*, smelter smoke investigations, St. Louis Smelting and Ref. Co, 17; *U. S. Dept. Agr*, 18-, in charge, *barberry eradication*. A.A.; Phytopath. Soc; Bot. Soc; Ill. Acad; Wash. Bot. Soc. Cytology of Entylomas; origin and development of the pycnidium; barberry eradication.
- Kendall, Dean Arthur I(saac)**, 2421 S. Dearborn St, Chicago, Ill. **Bacteriology, Hygiene*. Somerville, Mass, May 7, 77. B.S, Mass. Inst. Tech, 00, fellow, 02-03; fellow, Hopkins, 03-04, Ph.D, 04; D.P.H, Harvard, 12. Acting chief, board of health lab, Isthmian Canal Commission, Panama, 04-06; fellow, Rockefeller Inst, 06-09; instr, dept. prev. med. and hygiene, Harvard Med. Sch, 09-12; *prof. bacter. and director, Patten Research Foundation, Northwestern*, 12-, *dean, med. sch*, 16- Trustee, Wesley Mem. Hosp, 17-; Northwestern, 18-; chairman, Yellow Fever Commission, Int. Board Health, 18; service medal, Isthmian Canal Commission. Ass. Path. and Bact; Chicago Path. Soc. (pres, 17). Bacterial metabolism; chemistry of bacterial action; intestinal bacteriology.
- Kendall, Dr. E(dward) C(alvin)**, 627 Monroe St, Rochester, Minn. **Chemistry*. South Norwalk, Conn, March 8, 86. B.S, Columbia, 08, A.M, 09, Goldschmidt fellow, 09-10, Ph.D, 10. *Head, sect. chem, Mayo Foundation, asst. prof. chem, Minnesota*. Physiol. Soc; Soc. Biol. Chem; Soc. Exp. Path. Enzymes; action of pancreatic amylase.
- Kendall, Prof. James**, Columbia University, New York, N. Y. **Chemistry*. Surrey, England, July 30, 89. B.Sc, M.A, Edinburgh, 10, Sc.D, 15. Instr. chem, Columbia, 12-15, asst. prof, 15-16, *assoc. prof*, 16- A.A. (sec'y, C. 16-); Chem. Soc; London Chem. Soc. Ionic dissociation; addition compound formation; viscosity.
- Kendall, Dr. William C(onverse)**, U. S. Fish Commission, Washington, D. C. *Zoology*. Freeport, Maine, April 4, 61. A.B, Bowdoin, 85, A.M, 90; M.D, Georgetown, 96. Principal, pub. schools, Thompson, Minn, 85-87; aead, Patten, Maine, 87-89; *naturalist, U. S. Fish Commission*, 89- Bronze medal, Paris Expos. A.A; Fisheries Soc; Forestry Ass; Soc. Ichthyol. and Herp; Inst. Social Sci; Wash. Acad; Wash. Biol. Soc; cor. mem. Portland (Maine) Soc. Nat. Hist. Ichthyology; geographical distribution and natural history of fishes, especially Salmonidae and allied forms; osteological and visceral anatomy of Isospondyli.
- Kendrick, Arthur**, 45 Hunnewell Ave, Newton, Mass. *Physics*. Nashua, N. H, March 30, 65. A.B, Amherst, 87; A.M, Harvard, 91; Göttingen, 99-00. Teacher science, Leicester Acad, Mass, 87-90; asst. physics, Harvard, 92-93; asst. prof, Worcester, 93-96; *assoc. prof*, Rose, 96-01; *mfr. scientific and engineering apparatus*, 01- A.A.
- Kenerson, Prof. W(illiam) H(erbert)**, 100 Morris Ave, Providence, R. I. *Mechanical engineering*. Mass, Dec. 9, 73. M.E, Brown, 96; A.M, Harvard, 06; Sc.D, R. I. Col, 19. Instr. drawing and math, Brown, 96-99, asst. prof. mech. eng, 99-05, *assoc. prof*, 05-12, *prof*, 12-, *chairman, div. eng. Consulting engineer; supervising engineer*, Gen. Fire Extinguisher Co; director, R. I. conservation, Fuel Ad; with educ. corps, A.E.F. A.A; Mech. Eng; Eng. Educ; Soc. Test. Mat; Providence Eng. Soc. (pres). Materials of construction; power measurement; modulus of elasticity of steel; losses in power transmissions.
- Kenety, Prof. W(illiam) H(enry)**, Forest Station, Cloquet, Minn. *Forestry*. Fulda, Minn, April 24, 86. B.F, Minnesota, 11, M.S, 12. *Supt. forest exp. sta, Minnesota*, 12-, *asst. prof. forestry*, 15- A.A; Soc. Foresters; Ecol. Soc.
- Kennard, Dr. E(arle) H(esse)**, Cornell University, Ithaca, N. Y. *Physics*. Columbus, Ohio, Aug. 2, 85. A.B, Pomona, 07; B.A, Oxford (Eng), 10, B.Sc, 11; fellow, Cornell, 11-12, Ph.D, 13. Asst. physics, Cornell, 12-13, instr, 13-14; Minnesota, 14-16; *asst. prof, Cornell*, 19- A. K. Angström nocturnal-radiation exped. to Mt. Whitney, 13. Physical Soc. Unipolar induction; decay of low-temperature phosphorescence; effect of light on contact potentials; thermodynamics of fluorescence.
- Kennard, Fred(eric) H(edge)**, 246 Dudley Road, Newton Center, Mass. *Ornithology*. Brookline, Mass, Nov. 19, 65. A.B, Harvard, 88. Mem. Ornith. Union; Nuttall Ornith. Club.
- Kennedy, Dr. Clarence H(amilton)**, Ohio State University, Columbus, Ohio. *Entomology*. Rockport, Ind, June 25, 79. A.B, Indiana, 02, A.M, 03; Stanford, 14; Ph.D, Cornell, 19. Scientific asst, Bur. Fisheries, 03-04; *instr. limnol, Cornell*, 16-17; zool, N. C. Col, 18-19; *entom, Ohio State*, 19- A.A; Entom. Soc; Cooper Ornith. Club; Ohio Acad. Morphology of insects; Odonata.
- Kennedy, Dr. Cornelia**, University of Minnesota, Minneapolis, Minn. *Biochemistry*. Eau Claire, Wis, Feb. 3, 85. A.B, Minnesota, 03; M.S, Wisconsin, 16; Berliner fellow, Hopkins, 18-19, Ph.D, 19. Asst. chemist, Washburn-Crosby Flour Mills, 03-08; *instr. agr. chem, Minnesota*, 08-14, *asst. prof*, 20-, *asst. agr. biochemist, Minn. Exp. Sta*, 08- Nutrition.
- Kennedy, Dr. John J(oseph)**, Maywood Chemical Works, Maywood, N. J. *Chemistry*. Nov. 21, 91. A.B, Cornell, 12, B.Chem, 13, Ph.D, 16. *Chemist, Maywood Chem. Works*, 16- Chem. Soc. Nitration products of phenoltetrachloroph-thalein and tetrachlorofluoran.
- Kennedy, Julian**, 5400 Forbes St, Pittsburgh, Pa. *Mining engineering*. Lowellville, Ohio, March 15, 52. Ph.B, Yale, 75, hon. A.M, 00; hon.

- D.Eng, Stevens, 09. Manager, Carnegie Blast Furnaces and Steel Works, 79-88; engineer, Latrobe Steel Works, 89-91; consulting engineer, 91- Min. Eng.
- Kennedy, Prof. P(atrick) Beveridge**, University of California, Berkeley, Calif. *Agronomy*. Mt. Vernon, Scotland, June 17, 74. Ont. Agr. Col. 92; B.A.S, Toronto, 94; Ph.D, Cornell, 99. Asst. chemist, Ont. Agr. Col. 95; asst. div. agrost, U. S. Dept. Agr, 99, expert in charge exp. work, 00; asst. prof. bot. hort. and forestry, Nevada, and Nev. Agr. Exp. Sta., 00-02, prof., 02-13; asst. prof. agron, California, and Calif. Exp. Sta., 14-18, assoc. prof., 18- Economic botany; flora of California; range improvement; grasses; legumes; the genus *Trifolium*.
- Kennelly, Prof. A(rthur) E(dwin)**, Harvard University, Cambridge, Mass. **Electrical engineering*. Colaba, Bombay, India, Dec. 17, 61. Univ. Col. Sch, London, 72-75; hon. Sc.D, Pittsburgh, 95; A.M, Harvard, 06. Electrician, Eastern Teleg. Co, London, 76-86; principal elec. asst. to Thomas A. Edison, 86-94; consulting engineer, Philadelphia, 94-02; prof. elec. eng, Harvard, 02- Consulting elec. engineer, Gen. Elec. Co, 90-94; mem. elec. juries, Phila. Export Expos, Pan-Am. Expos. and La. Purchase Expos; pres, U. S. nat. committee, Int. Electrotech. Commission, 10, 16; Int. Illum. Commission, Berlin, 13. Two premiums of merit, British Inst. Elec. Eng; Longstreth and Potts medals, Franklin Inst, 17. Int. Elec. Cong, Paris, 00 (v. pres); St. Louis, 04 (gen. sec'y). A.A; Elec. Eng. (past pres); Radio Eng. (past pres); Illum. Eng. Soc. (past pres); Math. Soc; Physical Soc; hon. mem. Nat. Elec. Light Ass; hon. fel. Electro-Therapeut. Ass; Philos. Soc; Am. Acad; Pacific Astron. Soc; Franklin Inst; hon. mem. N. Y. Elec. Soc; hon. cor. mem. British Ass; fel. Royal Astron. Soc; hon. mem. British Inst. Elec. Eng. Magnetics in engineering; alternating electric currents.
- Kenney, Dr. Arthur W(ebster)**, 905 West St, Wilmington, Del. *Chemistry*. Nov. 15, 91. Ph.D, Mass. Inst. Tech, 18. Research assoc. physical chem, Mass. Inst. Tech, 17; research chemist, E. I. duPont de Nemours and Co, 18- Lieut. and capt, C.W.S., 17-18. Chem. Soc. Thermodynamic properties of carbon dioxide and of ether.
- Kennicott, Cass (Langdon)**, The Orchard, Chicago Heights, Ill. *Chemistry*. Chicago, Feb. 25, 71. Case, 93. Chemist, Nelson Morris and Co, Chicago; Dept. of Health; Consumers Ice Co; city chemist, Chicago; chief engineer, ry. dept, The Permutet Co. Chem. Soc; West. Soc. Eng; Chicago Acad; Chicago Ry. Club; Chicago Eng. Club; N. Y. Chemists Club; fel. London Chem. Soc. Milk analysis; water analysis; dust explosions; water softening; methods of mineral water analysis.
- Kennon, Prof. W(illiam) L(ee)**, University of Mississippi, University, Miss. *Chemistry*. Columbus, Miss, May 3, 82. B.S, Millsaps, 00, M.S, 01; fellow, Hopkins, 05-06, Ph.D, 06. Asst. chem, Millsaps, 00-01; prof. chem. and physics, Ky. Wesleyan, 01-03; instr. chem, Williams, 06-09; asst. prof, Mississippi, 09-11, prof. physics and astron, 11- Physical Soc. Physical properties of solutions; the direct measurement of osmotic pressure of cane-sugar solutions.
- Kenrick, Prof. Frank B(oteler)**, 77 Lonsdale Road, Toronto, Can. *Chemistry*. Send, England, Feb. 4, 74. B.A, Toronto, 94, 1851 Exhibition research scholar, 94-97, M.A, 01; Ph.D, Leipzig, 96. Asst. chem, Toronto, 97-00, lecturer, 00-07, assoc. prof, 07-19, prof, 19- Physical chemistry; equilibrium; rate of reaction; surface tension phenomena.
- Kent, Prof. F(rederick) C(harles)**, Oregon Agricultural College, Corvallis, Oregon. *Mathematics*. Monroe, Mich, May 7, 74. B.S, A.B, Michigan, 94. Instr. math, high schools, Minn, 95-03; head dept. math, Cent. State Nor. Sch, Edmond, Okla, 08-11; asst. prof. math, Oklahoma, 11-16; assoc. prof, Oregon Col, 16- Asst. teacher, Realgymnasium, Berlin, Germany, 14-15. Math. Soc; Math. Verein. Elementary transcendental functions; pedagogy of elementary mathematics.
- Kent, Dr. Grace Helen**, Grafton, Mass. *Psychology*. Michigan City, Ind, June 6, 75. A.B, Iowa, 02, A.M, 04; Ph.D, George Washington, 11. Psychological research, Phila. Hosp. for Insane, 06-07; Kings Park State Hosp, N. Y., 07-10; Govt. Hosp. for Insane, Washington, D. C., 10-11; State Hosp, Warren, Pa, 11-12; psychologist, State Training Sch. for Feeble-minded, Clinton, S. C., 20- A.A; Psychol. Ass. Association in insanity; habit formation in dementia praecox; occupations for the insane; performance tests.
- Kent, Prof. Norton A(dams)**, Boston University, Boston, Mass. **Physics*. New York, N. Y., July 28, 73. A.B, Yale, 95; Ph.D, Hopkins, 01. Asst, Yerkes Observatory, 01-03; prof. physics, Wabash, 03-06; asst. prof, Boston, 06-10, prof, 10- A.A; Physical Soc; Astron. Soc; Am. Acad. Zeeman effect; electric spark in liquids and in air at high pressure; shift of spark lines due to changed conditions; vacuum tube discharge in magnetic field; magnetic separation of lithium doublets; line structure.
- Kent, Prof. O(iney) B(rown)**, Cornell University, Ithaca, N. Y. *Zoology*. Meriden, Conn, Nov. 16, 90. B.S, Cornell, 13, M.S, 14, Ph.D, 17. Instr. poultry husbandry, Cornell, 13-17, asst. prof, 17-20, prof, 20- Poultry husbandry; egg production.
- Kenyon, Prof. A(lfred) M(onroe)**, 315 University St, West Lafayette, Ind. *Mathematics*. Medina, Ohio, Dec. 10, 69. A.B, Hiram, 94; A.M, Harvard, 98. Teacher, high sch, Wellington, Ohio, 94-96; instr. math, Purdue, 98-01, assoc. prof, 01-03, prof, 03-, head of dept, 03- Instr. math, Case, 97; Mass. Naut. Training Sch, 98. Math. Soc; Math. Ass; Eng. Educ; Ass. Prof; Ind. Acad. Analysis and pedagogy of engineering mathematics.
- Kenyon, Otis Allen**, 105 W. 72d St, New York, N. Y. *Electrical engineering*. Baldwinsville, N. Y., Nov. 19, 79. M.E, Cornell. Editor, McGraw-Hill Book Co, 05-11; asst. to Dr. Edward Weston, 11; consulting engineer, 12-15; chief engineer, Arc Welding Machine Co, 15-18;

engineer, Ray D. Lillibridge, Inc, 18- Elec. Eng; Automotive Eng. Arc welding; production processes.

Kephart, Dr. A(dam) P(erry), North Carolina College, Greensboro, N. C. *Psychology*. Avalon, Mo, Feb. 18, 83. A.B, Leander Clark, 04, A.M, 12; Ph.D, Pennsylvania, 18. Instr, Drexel Inst, 14-15; asst. psychol, Pennsylvania, 16-18; *prof. secondary educ, N. C. Col. for Women*, 18- Education; Witmer form board.

Kepner, Prof. W(illiam) A(rlison), University of Virginia, University, Va. *Biology*. Mt. Alto, Pa, July 9, 75. A.B, Franklin and Marshall, 98, A.M, 00; Göttingen, 03; fellow, Princeton, 03-04; Ph.D, Virginia, 08. *Prof. invert. zool*, Millersville Nor. Sch, Pa, 01; teacher, Leyte Island, P. I, 01-03; *instr. biol, Virginia*, 04-08, adj. prof, 08-17, *prof*, 17- A.A; Soc. Zool. Histology; behavior of Protozoa and Rhabdocoelous.

Kern, Dr. Edward F(rank), Columbia University, New York, N. Y. *Chemistry, Metallurgy*. Knoxville, Tenn, Dec. 13, 72. B.S, Tennessee, 97; Pennsylvania, 99-00; Ph.D, Columbia, 01. Electrometallurgist, Can. Smelting Works, Trail, B.C, 01-02; research metallurgist and electrometallurgist, Belt's Lab, Troy, N. Y, 02-05; *instr. metal. and electrometal, Columbia*, 05-11, *prof*, 11- A.A; Min. and Metal. Eng; Chem. Soc; Electrochem. Soc. The quantitative separation and determination of uranium; the lead coulombmeter; the effect of addition agents in electrolytes; the electrodeposition of nickel and iron; the electrolytic refining of iron, tin and zinc; the treatment of complex lead-zinc ores; electrolysis of vanadium solutions, cyanid solutions and fused materials containing zinc; copper precipitation; volatilization of gold and silver from copper alloys; arsenic and antimony; anode residues; flotation tests in copper ores; manganiferous slags in electric furnaces; basic refractory materials for high temperature use; tin ores; metals from speiss.

Kern, Dr. Frank D(unn), Pennsylvania State College, State College, Pa. **Botany*. Reinbeck, Iowa, June 29, 83. B.S, Iowa, 04; M.S, Purdue, 07; fellow, Columbia, 10-11, Ph.D, 11. Asst. animal morphol. and physiol, Iowa, 02-04; special agent, bur. plant indust, U. S. Dept. Agr, 04-05; asst. and later assoc. botanist, Exp. Sta, Purdue, 05-13, *instr. crypt. bot*, 10-11; *prof. bot. and head of dept, Pa. State*, 13- Research scholar, N. Y. Bot. Garden, 06, 07, 08, 10; collaborator, bur. plant indust, U. S. Dept. Agr, 07- A.A; Phytopath. Soc. (v. pres, 14, counselor, 16); Bot. Soc; Ind. Acad; Torrey Bot. Club. Fungous diseases of crop plants; the genus *Gymnosporangium*; plant rusts.

Kerr, Dr. Abram T(ucker), Cornell University, Ithaca, N. Y. *Anatomy*. Buffalo, N. Y, Jan. 7, 73. B.S, Cornell, 95; M.D, Buffalo, 97. Asst. hist. and path, Buffalo, 94-97, acting *prof. anat*, 97-98, adj. *prof. and demonstrator*, 98-00; asst. *prof*, Cornell, 00-04, *prof*, 04- See'y, med. col, Cornell, 04-; trustee and v. pres, Ithaca City Hosp. A.A; Ass. Anat; Am. Med. Ass. Specific gravity of blood and hemoglobin; preservation of anatomical material by cold storage;

ureter in man; brachial plexus in man; variations in stomach, spleen and liver.

Kerr, C(harles) H(enry), Moorestown, N. J. *Chemistry*. Cleveland, Ohio, Sept. 23, 84. E.M, Ohio State, 09. Chemist, Riverton Lime Co, 05; Abrasive Materials Co, 06; Carborundum Co, 07-08; Am. Optical Co, 09-11; director, research lab, Pittsburgh Plate Glass Co, 11-17; research manager, Am. Optical Co, 17-20; v. pres, De Zeug Standard Co, Camden, N. J. 20-A.A; Chem. Soc; Optical Soc; Soc. Test. Mat; Ceramic Soc; Soc. Chem. Indust. Glass; refractories; optics.

Kerr, Prof. E(ugene) W(ycliffe), 182 C St, Vedada, Havana, Cuba. *Mechanical engineering*. McKinney, Tex, Feb. 16, 74. M.E, Tex. Col; Stevens; Wisconsin; Purdue. Asst. *prof. mech. eng*, Texas Col, 96-03; *instr. machine design*, Purdue, 03-05; *prof. mech. eng*, Louisiana, 05; *engineer in charge exp. eng. dept, Cuban Cane Sugar Corp*. In charge special investigation in sugar eng, La. Exp. Sta. Mech. Eng; Eng. Educ; New Orleans Acad. Bagasse furnaces; heating and evaporation in sugar factories.

Kershner, Prof. Jefferson E, 445 W. Chestnut St, Lancaster, Pa. *Mathematics, Physics*. Berks, Co, Pa, Aug. 16, 54. A.B, Franklin and Marshall, 77, A.M, 81; Ph.D, Yale, 85. *Prof. math. and physics, Franklin and Marshall*, 80- Consulting engineer, Edison Elec. Illum. Co, 91-02; Conestoga Traction Co, 02. A.A. (sec'y, A, 94); assoc. Physical Soc; Elec. Eng. Electricity.

Kester, Prof. F(rederick) E(dward), University of Kansas, Lawrence, Kans. **Physics*. Eaton, Ohio, Feb. 22, 73. M.E, Ohio State, 95, fellow, 95-96; A.M, Cornell, 99, Ph.D, 05; Göttingen, 03-04. Asst. *physics*, Ohio State, 96-98, *instr*, 99-01, asst. *prof*, 01-07, *assoc. prof*, 07-09; *prof. and head of dept, Kansas*, 09- A.A; Physical Soc. Phosphorescence; grouping of asteroids; Joule-Thomson effect in gases.

Ketchum, Prof. Milo S(mith), University of Pennsylvania, Philadelphia, Pa. *Civil engineering*. Kewanee, Ill, Jan. 26, 72. B.S, Illinois, 95, C.E, 00. Instr. civil eng, Illinois, 95-97; practising engineer, 97-99; asst. *prof. civil eng*, Illinois, 99-03; practising engineer, 03-04; *prof. civil eng*, Colorado, 04-19, dean, col. eng. 05-19; *prof. civil eng. and in charge dept, Pennsylvania*, 19- On leave of absence in eng. practise, 09-10; asst. director, U. S. Govt. explosive plants, 18-19. A.A; Civil Eng. (director, 18-21); Eng. Educ. (sec'y, 04-06, pres, 18); Soc. Test. Mat; R. R. Eng. Properties of engineering materials; walls, bins and grain elevators; steel mill buildings; highway bridges; pressure of grain in bins; tests of reinforced concrete and of timber.

Kettering, Charles Franklin, Ridgeleigh Terrace, Dayton, Ohio. *Electrical engineering*. Ashland Co, Ohio, Aug. 29, 76. A.B, Ohio State, 04. Pres, Dayton Eng. Laboratories Co; v. pres, Delco Light Co; Dayton-Wright Airplane Co; v. pres. and director, Gen. Motors Corp, pres, Gen. Motors Research Corp. Trustee Ohio State. Automotive Eng. (pres, 17); Mech. Eng; Elec.

- Eng. Electrical and mechanical phases of the automotive industry.
- Keuffel, Carl W.**, 300 Adams St, Hoboken, N. J. *Optics*. Hoboken, Feb. 27, 91. M.E., Stevens, 11. Optical Soc; Mech. Eng; Illum. Eng. Soc; Ceramic Soc; Soc. Glass Technol. Optical engineering; manufacture of optical glass.
- Kew, Dr. W(illiam) S(tephen) W(ebster)**, U. S. Geological Survey, Washington, D. C. *Geology*. San Diego, Calif, June 15, 90. B.S., California, 12, M.S., 14, Ph.D., 17. Asst. geologist, U. S. *Geol. Surv.*, 17, *assoc. geologist*, 18- A.A.; Paleont. Soc; Wash. Geol. Soc; Calif. Acad. Paleontology.
- Key, Dr. J(ohn) A(lbert)**, Massachusetts General Hospital, Boston, Mass. *Anatomy*. Jackson, Miss, April 21, 90. B.S., Ala. Polytech, 13; M.D., Hopkins, 18. Instr. anat, Creighton, 15-16; asst, Chicago, summers, 15, 16; lieut, M.C., 17-19; *res. house officer*, Children's Hosp, Boston, 19-20; *Mass. Gen. Hosp.*, 20- A.A.; Ass. Anat. Morphology of secretion; nerve cells; crustacean blood cells; mitochondria.
- Key, Mrs. Wilhelmine E(nteman)**, Battle Creek Sanitarium, Battle Creek, Mich. *Eugenics*. Hartland, Wis, Feb. 22, 72. A.B., Wisconsin, 94; fellow, Chicago, 98-02, Ph.D., 01. Asst. German and biol, high sch, Green Bay, Wis, 94-98; zool, Chicago, 99-02; head, dept. biol. and nature study, N. Mex. Nor. Univ, 03-04; presiding teacher, Belmont Col, 07-09; prof. biol, Lombard, 09-12; eugenical field worker, eugenics record office, Carnegie Institution, 12-14; investigator, Pub. Charities Ass. of Pa, 14; educ. director, State Training Sch, Polk, Pa, 14-17; archivist, eugenics record office, Carnegie Institution, 17-20; *in charge, biol. and eugenics, race betterment foundation*, 20- A.A.; Eugenics Research Ass. Variation in *Daphnia* and *Polistes*; feeble-minded citizens; human heredity.
- Keyes, Prof. Charles R(ollin)**, 944 Fifth Ave, Des Moines, Iowa. **Geology*. Des Moines, Dec. 24, 64. B.S., Iowa, 87, A.M., 90; fellow, Hopkins, 90-92, Ph.D., 92. Museum asst, Iowa, 85-87; paleontologist and artist with Wachsmuth and Springer, 87-89; asst, U. S. *Geol. Surv.*, 90-92; paleontologist, Bur. Geol. and Mines, Mo, 90-92; asst. state geologist, Iowa, 92-94; director, Bur. Geol. and Mines, Mo, 94-97; pres, N. Mex. Sch. of Mines, 02-06; *consulting mining engineer*, 88- Lecturer min. geol, N. Mex. Sch. of Mines, 07. A.A.; Geol. Soc; fel. Am. Geog. Soc; Min. Eng; Min. and Metal. Soc; Iowa Acad; St. Louis Acad. Genesis of ore deposits; geology of Mississippi valley and New Mexico; paleontology of Missouri; Maryland granites; American Carboniferous; geologic correlation; changes in geologic climate; desert geology; eolic erosion; geotectonics.
- Keyes, Dr. D(onald) B(abcock)**, 660 Riverside Drive, New York, N. Y. *Chemistry*. Westerly, R. I., Feb. 8, 91. B.S., N. H. Col, 13; A.M., Columbia, 14; Ph.D., California, 17. Asst. chem, Columbia, 14; teaching fellow, California, 14-17; *chem. engineer*, Bechman and Linden, 17-18; *U. S. Indust. Alcohol Co.*, 18- Chem. Soc; Electrochem. Soc; Chem. Eng; N. Y. Chemists Club. Applied physical chemistry.
- Keyes, Dr. Edward L(oughborough), Jr.**, 109 E. 34th St, New York, N. Y. *Medicine*. Elizabeth, N. J., May 15, 73. A.B., Georgetown, 92, Ph.D., 01; M.D., Columbia, 95. *Prof. urol.* Univ. and Bellevue Hosp. Med. Col, 10-11; *med. col, Cornell*, 11- Urologist, St. Vincent's Hosp; urologist, Bellevue Hosp. A.A.; Urol. Ass. (pres, 16); Ass. Genito-Urinary Surg. (pres, 12); Int. Urol. Soc. (v. pres, 20). Urology.
- Keyes, Dr. Frederick G(eorge)**, Massachusetts Institute of Technology, Cambridge, Mass. **Chemistry, Physics*. Kingston, Can, June 24, 85. B.S., R. I. Col, 06; M.S., Brown, 07, Ph.D., 09. Asst. chem, Brown, 06-07, instr, 08-09, G. A. R. research fellow, 09; research assoc. physical chem, Mass. Inst. Tech, 10-13; chief engineer, Cooper Hewitt Elec. Co, 13-16; assoc. prof. *physical chem. research*, Mass. Inst. Tech, 16-19, *director*, 20- Director, C.W.S. research and control lab, Puteaux, A.E.F. Physical Soc; Am. Acad. Gas metabolism of bacteria; equilibria measurements; development of kinetic theory; gas and liquid phase; isometries; thermodynamic properties of ammonia; establishment of the absolute temperature scale; low temperature in connection with kinetic theory development.
- Keyser, Prof. C(assius) J(ackson)**, Columbia University, New York, N. Y. **Mathematics*. Rawson, Ohio, May 15, 62. Ohio Nor. Univ, 79-83; B.S., Missouri, 92, LL.D., 14; Michigan, summer, 94; A.M., Columbia, 96, fellow, 96-97, Ph.D., 02. Supt. pub. schools, 85-89; prof. *math*, State Nor. Sch, New Palz, N. Y, 92-94; instr, Smith Acad, Washington (St. Louis), 94-95; instr, Barnard, and tutor, *Columbia*, 97-00, instr, 00-02, adj. prof, 02-04, *Adrain prof*, 04-, head, dept. math, 10-16. Instr. math, State Summer Sch, Kirksville, Mo, 92-93; prof. California, summers, 11, 15, exchange prof, 16; ed. pure math, 'Encyclop. Americana,' 04- A.A. (v. pres, 08); Math. Soc; Philos. Ass; Ass. Teachers Math. Middle States and Md; Mo. Valley Teachers' Ass. (pres, 89). Geometry; foundations of mathematics and logic; philosophy of mathematics; infinite groups of relations.
- Kezer, Prof. Alvin**, Colorado Agricultural College, Ft. Collins, Colo. *Agriculture*. Bower, Nebr, Nov. 7, 77. B.S., Nebraska, 04, A.M., 06. Asst, bur. plant indust, U. S. Dept. Agr, 04-06; *prof. soils*, Nebraska, 06-09; *agron*, *Colo. Agr. Col*, 09- A.A.; Soc. Prom. Agr. Sci; Soc. Agron; Chem. Soc; Soc. Agr. Eng. Agronomy; yellow berry in hard winter wheat; copper sulphate for pond scums; inoculation of Nebraska soils with alfalfa bacteria; Colorado soils and crops.
- Kidder, Prof. A(lbert) F(ranklin)**, Agricultural Experiment Station, Baton Rouge, La. *Agronomy*. Good Hope, Ill, April 2, 81. B.S., Illinois, 06. Asst, farm crops lab, Illinois, 04-06, soil physics, 06-07; asst. prof. agron, *Louisiana*, 07-10, prof, 10-19, *agronomist and asst. director, Exp. Sta.*, 19- Asst, Ill. Soil Surv, summers, 03, 04, 06. A.A.; Soc. Agron. Corn, cotton and oat breeding; soil fertility.
- Kidder, Dr. A(lfred) V(incent)**, Phillips Academy, Andover, Mass. **Archeology*. Marquette, Mich, Oct. 29, 85. A.B., Harvard, 08, A.M., 11, Ph.D., 13. Austin teaching fellow an-

- throp, Harvard, 09-13; *director, Andover exped. to Pecos*, 15-17, 19- Capt, Inf, A.E.F, 18-19. Chevalier Légion d'honneur. Anthropol. Ass. American archeology.
- Kiess, C(arl) C(larence)** 3516 Connecticut Ave, Washington, D. C. *Astronomy*. Fort Wayne, Ind, Oct. 18, 87. A.B, Indiana, 10; fellow, Lick Observatory, 10-13, Ph.D, California, 13. Instr. astron, Missouri, 13-15; asst. prof, Pomona, 15-16; asst. physicist, *Bur. Standards*, 17-19, *assoc. physicist*, 19- Donohue medal, Pacific Astron. Soc, 11. Astron. Soc. Astrophysics; spectroscopy; variable stars; red and infra-red spectra of the chemical elements.
- Kiesselbach, Prof. T(heodore) A(lexander)**, Agricultural Experiment Station, Lincoln, Nebr. *Agronomy*. A.B, Nebraska, 07, B.S, 08, A.M, 12, Ph.D, 19. Instr. *agron*, *Nebraska*, 09, exp. asst, 10-11, *prof*, 12- Collaborator, U. S. Dept. Agr; 'Bot. Abstracts.' Soc. Agron; Nebr. Acad; Nebr. Corn Improvers' Ass. (sec'y, 11-19). Forage crops; transpiration as a factor in crop production; elimination of experimental error in field crop tests; relation of the size of seed and sprout value to the yield of small grain crops.
- Kilby, Dr. Clinton M(aury)**, Randolph-Macon Woman's College, Lynchburg, Va. *Physics*. Suffolk, Va, Nov. 1, 74. A.M, Randolph-Macon, 96; Chicago, 03; Columbia, 04; Ph.D, Hopkins, 09. Instr. math, Randolph-Macon, 94-96; principal, pub. schools, 96-98; teacher physics and math, Woodberry Forest Sch, Va, 98-05; lecture asst. *physics*, Hopkins, 08-09; instr, Lehigh, 09-10; *prof*, *Randolph-Macon Woman's Col*, 10- A.A; *assoc. mem.* Physical Soc. Redetermination of wave-lengths of arc and spark lines of titanium, manganese and vanadium; effect of self-induction and capacity on wave-lengths.
- Kildee, Prof. H(enry) H(erburt)**, Iowa State College, Ames, Iowa. *Animal husbandry*. Osage, Iowa, March 1, 85. B.S.A, Iowa State, 08, fellow, 08-09, M.S.A, 17. Instr. animal husbandry, Iowa State, 09, experimentalist, 09-10, *assoc. prof. in charge*, dairy production, 10-15, *prof. animal husbandry and chief dairy husbandry*, 15-16; chief dairy husbandry, Minnesota, 16-18; *head, dept. animal husbandry, Iowa State*, and *chief, animal husbandry sect, Exp. Sta*, 18- A.A; Soc. Animal Production. Animal feeding; dairy production.
- Kilgore, Prof. B(enjamin) W(esley)**, Raleigh, N. C. *Chemistry*. Lafayette Co, Miss, March 27, 67. B.S, Miss. Agr. Col, 88, M.S, 91; Hopkins, 96. Asst. chem, Miss. Agr. Col, 88-89; asst. chemist, N. C. Exp. Sta, 89-97; *prof. chem*, Miss. Agr. Col, 97-99; state chemist, N. C, 99-19; *director, Exp. Sta*, 01-, *extension service*, 14- Mem. state board vocational educ. A.A; Chem. Soc. (chairman, N. C. sect, 01); Agr. Chem. (pres, 00). Methods of analysis and value of fertilizers, soils and feeds.
- Killam, Dr. S(amuel) Douglas**, University of Alberta, Edmonton, Can. *Applied mathematics*. Yarmouth, N. S, Can, May 9, 88. A.B, Mt. Allison, Can, 08, A.M, 10; Ph.D, Göttingen, 12. Instr. *applied math*, Rochester, 12-13; *assoc. prof*, *Alberta*, 13- Math. Soc; Math. Verein. Graphical methods in mathematics and physics.
- Kilmer, Fred(erick) B(arnett)**, 147 College Ave, New Brunswick, N. J. *Chemistry*. Chapinville, Conn, Dec. 11, 51. N. Y. Col. Pharmacy, 75; Columbia, 77; Rutgers, 85; Yale, 92; Phar.M, Phila. Col. Pharmacy, 20. *Director, laboratories, Johnson and Johnson*, 89- Chem. Soc; Pub. Health. Ass; N. J. Pharmaceut. Ass. (pres); N. J. Micros. Soc. (pres); N. J. Chemists Club; Soc. Química Agric, Buenos Aires; Ass. Econ. Biol. England; London Soc. Chem. Indust; Royal Soc. Arts; Inst. Arzenmittel-lehre, Braunschweig. Pharmaceutical chemistry; hygiene; belladonna; kola; ginger; catlous; carica papaya; intestinal tissue; alkaloids.
- Kilpatrick, Prof. Martin, Jr**, Vassar College, Poughkeepsie, N. Y. *Chemistry*. New York, N. Y, April 3, 95. A.B, Col. City of N. Y, 15, fellow, 15-18; A.M, Columbia, 17. Asst. chem, N. Y. Univ, 17-19; *asst. prof*, *Vassar*, 19- Chem. Soc. Inorganic chemistry.
- Kimball, Prof. Arthur L(alanne)**, Amherst, Mass. **Physics*. Succasunna, N. J, Oct. 16, 56. A.B, Princeton, 81; Ph.D, Hopkins, 84. Assoc. and later *assoc. prof. physics*, Hopkins, 84-91; *prof*, *Amherst*, 91- Mem. board of examiners, Phila. Elec. Expos, 84. A.A; Physical Soc. Determination of the unit of electrical resistance; physical properties of gases.
- Kimball, Prof. Dexter S(impson)**, Cornell University, Ithaca, N. Y. *Mechanical engineering*. St. John, N. B, Oct. 21, 65. A.B, Stanford, 96, M.E, 13. Apprentice, Pope and Talbot, Port Gamble, Wash, 81-87; machine shop, Union Iron Works, San Francisco, 87-93, drafting room, dept. eng, 96-98; designing engineer, Anaconda Min. Co, Mont, 98; asst. prof. machine design, Cornell, 98-01; works manager, Stanley Elec. Mfg. Co, 01-04; *prof. mech. arts*, *Cornell*, 04-05, machine design and construction, 05-15, *indust. eng*, 15-, acting pres, 18, *dean, col. eng*, 20- Mem. council indust. educ, N. Y. State Dept. Educ, 11. Mech. Eng; Eng. Educ; Indust. Eng. Elements of machine design; industrial education and organization; elements of cost finding.
- Kimball, Dr. H(erburt) H(arvey)**, U. S. Weather Bureau, Washington, D. C. *Meteorology*. Hopkinton, N. H, Feb. 13, 62. B.S, N. H. Col, 84; M.S, George Washington, 00, Ph.D, 10; fellow, Pittsburgh, 12-13. Asst. ed, 'Monthly Weather Rev', 01-03; librarian, *U. S. Weather Bur*, 04-08; *prof. meteorol. and in charge solar radiation investigations*, 08-20; *meteorologist*, 20- Astron. Soc; Meteorol. Soc; Wash. Acad; Wash. Philos. Soc. Atmospheric circulation; evaporation from water surfaces; meteorology of smoke; radiation from sun and sky; skylight polarization; nocturnal radiation.
- Kimball, Dr. J(ohn) Willard**, 591 Kearny Ave, Arlington, N. J. *Chemistry*. Manhattan, Kans, July 30, 89. B.S, Colby, 12; Ph.D, Hopkins, 16. Instr. chem, Colby, 12-13; asst. prof, Maine, 16-17; instr, Western Reserve, 17-18; *chemist, E. I. duPont de Nemours and Co*, 19- Lieut, C.W.S, 18-19. Chem. Soc. Limits of esterification.
- Kincaid, Prof. Trevor**, University of Washington, Seattle, Wash. *Entomology*. Peterboro, Ont, Dec. 21, 72. B.S, Washington (Seattle), 99, A.M, 01. *Prof. zool*, *Washington (Seattle)*, 01-

- Asst. Am. Fur Seal Commission, Alaska, 97; entomologist, Harriman Alaska exped, 99; special agent, U. S. Dept. Agr, 08; director, Puget Sound Marine Sta, 10-15. A.A.; Ass. Econ. Entom; Entom. Soc; Soc. Zool; Ecol. Soc; Pacific Entom. Soc; Cambridge Entom. Club. Fishes; taxonomy and morphology of insects; insects of Alaska; Psychodidae; Crabronidae; Tenthredinidae; life histories of Coleoptera; life histories and habits of insects; marine life of Puget Sound.
- Kindle, Dr. Edward M(artin)**, Geological Survey of Canada, Ottawa, Can. **Paleontology*. Franklin, Ind, March 10, 69. A.B, Indiana, 93; M.S, Cornell, 96; Ph.D, Yale, 99. Instr. geol, Indiana, 94-95; asst. state geologist, Ind, 98-01; paleontologist, U. S. Geol. Surv, 01-12; *chief, div. invert. paleont, Can. Geol. Surv, 12-* Volunteer asst, Ark. Geol. Surv, 89; paleontologist, Cornell exped. to Greenland, 96. A.A.; Geol. Soc; Paleont. Soc; Ecol. Soc; Royal Soc. Can. Devonian fossils and stratigraphy of Indiana; Niagara faunas of Indiana; Ouray limestone fauna of Colorado and New Mexico; Jefferson limestone fauna and stratigraphy of the northern Rocky Mountains; Onondaga fauna of the Alleghany Mountain region; Devonian faunas of the Mackenzie basin and northern Rocky Mountains; sedimentology.
- Kindred, Dr. (James) E(rnest)**, 2167 Grandview Ave, Cleveland, Ohio. *Zoology*. Boston, Mass, Oct. 20, 93. A.B, Tufts, 14; A.M, Illinois, 15, fellow, 17-18, Ph.D, 18. Asst. zool, Illinois, 15-17; instr. biol, dental sch, and demonstrator histol. and embryol, med. sch, *Western Reserve*, 18-20, *asst. prof. biol, 20-* Soc. Zool; Ohio Acad. The crania of the Teleostei.
- Kinealy, J(ohn) H(enry)**, 503 Granite Building, St. Louis, Mo. *Mechanical engineering*. Hannibal, Mo, March 18, 64. D.E, Washington, (St. Louis), 84. Eng. work, 84-86; instr. mech. eng, Washington (St. Louis), 86-87; assoc. prof, Tex. Col, 87-89; prof, N. C. Col, 89-92; Washington (St. Louis), 92-02; *mech. engineer and patent expert, 02-* A.A. (sec'y, D, 95); Mech. Eng; Heat and Vent. Eng. (past pres); Franklin Inst; St. Louis Acad; St. Louis Eng. Club (past pres); Royal Soc. Arts. Heating and ventilating; the transmission of heat; steam-engines and boilers; centrifugal fans; purification of air for ventilation of buildings.
- King, Dr. Arthur S(cott)**, Mount Wilson Observatory, Pasadena, Calif. **Experimental physics*. Jerseyville, Ill, Jan. 18, 76. B.S, California, 99, M.S, 01, Ph.D, 03, Whiting fellow (Bonn), 03-04; Berlin, 04-05. Asst. physics, California, 01-03; Carnegie research asst, 04-05; instr. physics, California, 05-08; *supt. physical lab, Mount Wilson Observatory, 08-* Lecturer physics, California, 18. A.A.; Physical Soc; Astron. Soc; fel. Royal Astron. Soc. Effect of changes of physical conditions on arc and spark spectra; electric furnace spectra and Zeeman effect in relation to astrophysical phenomena.
- King, Prof. Charles Edwin**, Vanderbilt University Medical School, Nashville, Tenn. *Physiology*. Thornville, Ohio, June 4, 86. Ph.B, Heidelberg (Ohio), 08; Ph.D, Chicago, 14. Instr. science, Wayland Acad, Wis, 08-10; asst. prof. physiol. North Dakota, 13-16, assoc. prof, 16-17, prof. and head of dept, 17-19; *prof. physiol. and pharmacol, Alabama, 19-20; Vanderbilt, 20-* A.A.; Physiol. Soc; Soc. Study Int. Secretions; Chem. Soc. Pharmacology; enzymes; urinary secretion; motor activities of the stomach.
- King, Dr. Cyrus A(mbrose)**, 387 E. Fifth St, Brooklyn, N. Y. *Botany*. Plum Tree, Ind, June 19, 67. A.B, Indiana, 93; A.B, Harvard, 97, A.M, 98, Ph.D, 02. Teacher nat. science, high sch, Decorah, Iowa, 93-96; asst. bot, Harvard, 96-00, Radcliffe, 99-00; instr, Indiana, 00-02; teacher biol, deWitt Clinton High Sch, N. Y. City, 02-07; *first asst. and head, dept. biol, Erasmus Hall High Sch, 07-* Asst. bot, summer sch, Harvard, 97-01; instr. in charge bot, biol. sta, Indiana, summer, 02. A.A.; Bot. Soc. Cytology of *Araiospora pulchra* Thaxter; explosive antherozoids in *Conocephalus*; cytology of Sapromyces and Rhizidium.
- King, Edward S(kinner)**, Harvard College Observatory, Cambridge, Mass. **Astronomy*. Liverpool, N. Y, May 31, 61. A.B, Hamilton, 87, A.M, 90. Asst, *Harvard Col. Observatory, 87-* 90, 93-13, *asst. prof. astron, 13-* Observer in charge, Harvard Astron. Sta, Mt. Wilson, Calif, 89. A.A.; Astron. Soc; Am. Acad; hon. mem. Nantucket Maria Mitchell Ass; Soc. astron. de France. Forms of images in stellar photography; transformation of prismatic to normal spectra; photographic photometry on a uniform scale determined principally from out-of-focus images; photographic photometry of stars and other sources of light.
- King, Prof. Everett Edgar**, Urbana, Ill. *Civil engineering*. Warren, Ind, 77. B.S, Rose, 01, M.S, 08, C.E, 09; A.B, Indiana, 10; fellow, Cornell, 10-11, M.C.E, 11. Railway engineer, 01-07; prof. civil eng, Okla. Col, 07-10; *prof. railway eng, Iowa State, 11-18; railway civil eng, Illinois, 18-* Civil Eng; R. R. Eng; Eng. Educ. Preservation of timber by antiseptic treatment; railway signalling.
- King, Dr. Helen Dean**, Wistar Institute, Philadelphia, Pa. **Zoology*. Owego, N. Y, Sept. 27, 69. A.B, Vassar, 92; fellow, Bryn Mawr, 97-98, Ph.D, 99, fellow, 06-08. Student asst, biol. lab, Bryn Mawr, 99-04; teacher physiol, Miss Baldwin's Sch, Bryn Mawr, 99-07; asst. anat, *Wistar Inst, 08-09, assoc, 09-12; asst. prof. embryol, 12-* Soc. Nat; Ass. Anat; Soc. Zool; Eugenics Research Ass. Regeneration of eye of *Rana palustris*; regeneration in *Tubularia crocea*; effects of heat on development of toad's egg; sex determination in amphibians; germ-cells in amphibians and mammals; parthenogenesis; sex determination in mammals; growth and reproduction of the white rat; modification of sex ratio; inbreeding.
- King, Prof. H(erbert) H(iram)**, 916 Humboldt St, Manhattan, Kans. *Chemistry*. Ewing, Ill, Feb. 28, 82. A.B, Ewing, 04, A.M, 06; M.S., Kansas State, 15; fellow, Chicago, 17-18, Ph.D, 18. Prof. chem, Manchester, 04-06; asst, *Kansas State, 06-08, instr, 08-09, asst. prof, 09-14, assoc. prof, 14-18, prof. and head of dept, 18-*, asst. chemist, *Eng. sta, 10-14, assoc. chemist, 14-16, chemist in charge, 18-*, chemist in charge,

- Agr. Exp. Sta.*, 18- Chem. Soc; Kansas Acad. Surface tension; adsorption; colloids; paint oils; pigments.
- King, Prof. Horace W(illiams)**, 1203 Oakland Ave, Ann Arbor, Mich. *Civil engineering*. Big Rapids, Mich, Feb. 10, 74. B.S.(C.E), Michigan, 95. Practising engineer, 95-12; *prof. hydraulic eng, Michigan*, 12- Civil Eng. Hydraulic engineering; irrigation and drainage.
- King, Dr. Irving**, University of Iowa, Iowa City, Iowa. *Psychology, Philosophy*. Richmond, Ind, July 17, 74. A.B, Earlham, 96; fellow, Chicago, 01-03, Ph.D, 04. Principal, Tonganoxie Acad, Kans, 96-98; Bloomingdale Acad, Ind, 98-00; instr. psychol. and hist. of educ, Pratt Inst, 03-06; asst. prof. educ, Michigan, 06-09; *prof, Iowa*, 09- Head, dept. pedag, La. State Nor. Sch, spring, 02; dept. psychol, State Nor. Sch, Oshkosh, Wis, 03; asst. philos, Chicago, summer, 02, lecturer educ, summer, 06; Kansas, summer, 09. A.A; Psychol. Ass. Psychology of child development; the psychological analysis of the religious consciousness; genetic psychology; social aspects of education.
- King, Dr. Jno. C. Banning**, Calif. *Medicine*. Pittsburgh, Pa, Feb. 9, 53. M.D, Nashville, 74. *Surgeon, South. Pacific Ry. Co.*, 85-; *Banning Hosp*, 00- Calif. State Board of Med. Examiners, 04-06. A.A; Am. Med. Ass; Col. Surg; Calif. Med. Soc. (pres); S. Calif. Med. Soc. (pres). Tuberculosis.
- King, J(oseph) L(yonel)**, Bureau of Plant Industry, Harrisburg, Pa. *Entomology*. Cleveland, Ohio, Jan. 10, 88. B.S, Ohio State, 14; M.S, Illinois, 16. Asst. entomologist, Ohio Exp. Sta, 12-17; *special agent in Japan, U. S. Dept. Agr.*, 21- A.A; Entom. Soc; Ass. Econ. Entom; Ohio Acad. Lesser peach borer; *Synanthedon pictipes*.
- King, Prof. Louis V(essot)**, McGill University, Montreal, Can. *Physics*. Toronto, Can, April 18, 86. B.A, McGill, 05, D.Sc, 15; B.A, Cambridge, 08, M.A, 14. Lecturer physics, McGill, 10-13, asst. prof, 13-15, assoc. prof, 15-20, *Macdonald prof*, 20- Cambridge math. tripos. Physical Soc; assoc. Elec. Eng; fel. Royal Soc. Can. Mathematical physics and electrophysics; solar and sky radiation; anemometry; fog-signal machinery; submarine acoustics.
- King, Dr. R(obert) W(aldo)**, 463 West St, New York, N. Y. *Physics*. Sioux Falls, S. Dak, May 13, 90. A.B, Cornell, 12, Ph.D, 15. Instr. physics, Cornell, 13-17; *engineer*, Western Elec. Co, 17-20; *Am. Tel. and Tel. Co.*, 20- Physical Soc. Heat conductivity; thin metal films; high vacua.
- King, Dr. W(alter) E(dward)**, Beebe Laboratories, Inc, St. Paul, Minn. *Bacteriology*. Kinsman, Ohio, Sept. 2, 77. A.B, Wabash, 00, hon. A.M, 08; A.M, Cornell, 05; M.D, Detroit Col. Med, 14. Asst. bacter, Cornell, 02-05; research bacteriologist, Parke, Davis and Co, Detroit, Mich, 05-08; bacteriologist, Kansas State, 08-10; bacteriologist and asst. director med. research, Parke, Davis and Co, 10-19; *lab. director, Beebe Lab, Inc.*, 19- A.A; Soc. Bact; Ass. Immunol; Pub. Health Ass; U. S. Live Stock Sanit. Ass. Bacterial flora of the intestine of the chicken; the oral administration of anti-toxins and toxins; diagnosis of glanders by agglutination; hog cholera; soil bacteriology; filterable viruses; viability of bacteria; estimation of number of bacteria in suspension.
- King, Dr. W(illard) V(an Orsdel)**, Box 770, New Orleans, La. *Entomology*. Virginia City, Mont, July 19, 88. B.S, Mont. Col, 11; Ph.D, Tulane, 15. *Entom. asst, bur. entom, U. S. Dept. Agr.*, 10- A.A; Ass. Econ. Entom; Micros. Soc; New Orleans Acad. Medical entomology; Rocky Mountain spotted fever; pellagra; malaria fever; mosquitoes.
- Kingery, Dr. H(ugh) M(cMillan)**, 1101 Aurora Ave, Boulder, Colo. *Anatomy*. Emporia, Kans, May 19, 87. A.B, Wabash, 08, A.M, 09; Ph.D, Cornell, 17. Instr. physics and chem, Idaho, 09-10; elementary science, Robert Col, Constanti-nople, 10-11; physics and chem, high sch, Emporia, Kans, 11-12; asst. and instr. histol. and embryol, Cornell, 12-18; air service, 18-19; *instr. anat, Colorado*, 19-20, *asst. prof*, 20- Histology; cytology; embryology.
- Kinghorn, Dr. Hugh M(cLennan)**, 14 Church St, Saranac Lake, N. Y. *Medicine*. Kingston, Ont, Nov. 9, 69. B.A, McGill, 90, M.D, C.M, 94. Res. physieian, Montreal Gen. Hosp, 94-96; *practising physician*, 96- Acting supt, Montreal Gen. Hosp, 96. Ass. Path. and Bact. Tuberculosis.
- Kingsbury, Albert**, Greenwich, Conn. *Mechanical engineering*. Near Morris, Ill, Dec. 23, 62. Buchtel, 80; Ohio State, 84-85; M.E, Cornell, 89. Supt. machine shops, H. B. Camp Co, Cuyahoga Falls, Ohio, 90-91; *prof. mech. eng, N. H. Col.*, 91-99; applied mech, Worcester, 99-03; *mech. engineer, Westinghouse Elec. and Mfg. Co.*, 03- Consulting engineer, Pittsburgh, 10. A.A; Mech. Eng; Eng. Educ. Friction and lubrication; mechanics; steam engineering; tests of lubricating oils.
- Kingsbury, Prof. B(enjamin) F(reeman)**, Cornell University, Ithaca, N. Y. **Histology, Embryology*. St. Charles, Mo, Nov. 18, 72. A.B, Buchtel, 93; Ph.D, Cornell, 96; M.D, Freiburg, 03. Instr. histol, Cornell, 96-99, asst. prof, 99-01, physiol, 03-08, *prof. histol. and embryol*, 08- Collaborator, 'Jour. Comp. Neur'; 'Am. Jour. Anat.' A.A; Soc. Zool; Ass. Anat. Comparative anatomy.
- Kingsbury, Prof. F(rancis) B(ullard)**, University of Minnesota, Minneapolis, Minn. *Biochemistry*. Holliston, Mass, Nov. 18, 86. A.B, Harvard, 09, A.M, 12, Ph.D, 14. Instr. physiol. chem. and physiol, Minnesota, 13-17, asst. prof. physiol. chem, 17-20, *assoc. prof*, 20- Lieut. and capt, Sanit. C, A.E.F, 18-19. Soc. Biol. Chem; Chem. Soc. Synthesis of hippuric acid in the animal organism; blood of new-born infants; relation of bile to digestion and absorption of fat.
- Kingsford, Dr. H(oward) N(elson)**, Hanover, N. H. *Pathology, Bacteriology*. Providence, R. I, Sept. 24, 71. Brown, 94; M.D, Dartmouth, 97, A.M, 08; Harvard Med. Sch, 98. Instr. *path. and bacter*, Dartmouth, 98-00, *prof*, 01-, *med. director*, 02- House officer, Hitchcock Hosp, Hanover, 97; path. dept, Boston City Hosp, 98; pathologist, Hitchcock Hosp, 02; Littleton, N. H, Hosp; Manchester, N. H, Hosp; state bacteriologist, N. H. Ass. Path. and Bact; Am.

- Med. Ass. Mosquitoes; etiology of cancer; infectious diseases; gall-stones; water pollution; copper sulphate and water supplies; college sanitation; rabies in New Hampshire.
- Kingsley, Prof. J(ohn) S(terling)**, University of Illinois, Urbana, Ill. **Zoology, Comparative anatomy*. Cincinnati, N. Y., April 7, 54. A.B., Williams, 75; Sc.D., Princeton, 85; Freiburg, 91-92. *Prof. zool.*, Indiana, 87-89; Nebraska, 89-91; Tufts, 92-13; *Illinois*, 13- Ed., 'Am. Naturalist,' 86-96, biol. board, 08-; ed., 'Jour. of Morphol.,' 10-20. Delegate, Int. Zool. Cong., Graz, 10. A.A.; Soc. Nat.; Soc. Zool.; Ass. Anat.; Wash. Acad.; Boston Soc. Nat. Hist.; Phila. Acad.; London Zool. Soc. Embryology; morphology of vertebrates.
- Kingston, Prof. H(arold) R(eynolds)**, University of Manitoba, Winnipeg, Can. *Mathematics*. M.A., Queen's (Can), 08; Ph.D., Chicago, 14. Teacher, pub. schools, Ont., 03-09; asst. dept. math., Shortridge High Sch., Indianapolis, Ind., 08-12; lecturer, dept. math. and astron., *Manitoba*, 13-18, asst. prof., 18- Math. Soc.; Math. Ass.; Royal Astron. Soc. Can. (sec'y, Winnipeg branch, 15-17, pres, 17-19). Metric differential geometry.
- Kinman, C(harles) F(ranklin)**, 2100 Marshall Way, Sacramento, Calif. *Agriculture*. Illinois, Dec. 11, 80. B.S., Kansas State, 04. Asst. horticulturist, Ala. Polytech, and Exp. Sta., 04-06; Estacion Cent. Agron. de Cuba, 07-09; horticulturist, P. R. Exp. Sta., 09-18; *pomologist, office hort. and pomol., U. S. Dept. Agr.*, 18- Fruit culture; leguminous cover crops and root crops for Porto Rico; vegetables in Porto Rico; coconut seed selection.
- Kinnaman, Dr. A(ndrew) J(aneway)**, Bowling Green, Ky. *Psychology, Pedagogy*. Logansport, Ind., Feb. 27, 63. Cent. Nor. Col., 83-85; sch. of pedag., N. Y. Univ., 94; A.B., Indiana, 00, A.M., 01; fellow, Clark, 00-02, Ph.D., 02. Teacher, Cent. Nor. Col., 85-93, instr. pedag. and math., 94-99; v. principal, State Nor. Sch., East Stroudsburg, Pa., 02-03; pres, Cent. Nor. Col., 03-06; *dean, W. Ky. State Nor.*, 06- Institute lecturer, Ind., Ky., Del. and Pa. Development of skill in physical control; genesis of voluntary control; comparison of judgments of lifted weights; mental life of two *Macacus rhesus* monkeys in captivity.
- Kinney, Abbot**, Venice, Calif. *Forestry*. Brookside, N. J., Nov. 16, 50. Heidelberg, 66; Paris, 68. With Prof. O. C. Marsh, U. S. Paleont. Surv., 73; Sanit. Commission, Egypt, 77; chairman, Calif. Board of Forestry, 85-88. Chairman, Yosemite Valley Commission, 98; head, forestry sch., South. California, 00; founder, aquarium and marine biol. sta., South. California; adviser of council; ed., 'Los Angeles Sat. Post.' Forestry Ass. (past v. pres); Nat. Irrig. Ass.; S. Calif. Acad. (past pres); Calif. Forestry Soc. (pres). Forestry and forest flora of the Pacific coast; *Eucalyptus*; human reproduction; uses of germs; medical properties of native California plants.
- Kinney, Dr. J(acob) M(illison)**, Hyde Park High School, Chicago, Ill. *Mathematics*. Spencer, Ind., Dec. 21, 77. A.B., Indiana, 04; A.M., Nebraska, 07; fellow, Illinois, 08-10; Ph.D., Chicago, 17. Teacher, pub. schools, Spencer, Ind., 96-98; principal, high schools, Ind., 99-06; teaching fellow, Nebraska, 06-08; *instr. math.*, Lewis Inst., 10-12; *Hyde Park High Sch.*, 12- Math. Ass. Projective differential geometry.
- Kinnicutt, Dr. Roger**, 56 Cedar St., Worcester, Mass. *Pathology*. Worcester, Feb. 12, 80. A.B., Harvard, 02, M.D., 06. Asst. path. lab. Mass. Gen. Hosp., Boston, 09-11; *director, lab., Mem. Hosp., Worcester*, 11- Ass. Path. and Bact.; Am. Med. Ass. Bacteriology.
- Kinsella, Prof. Ralph A.**, St. Louis University School of Medicine, St. Louis, Mo. *Medicine*. St. Louis, Feb. 13, 86. A.B., St. Louis, 07, A.M., 10, M.D., 11. Fellow med. research, Columbia, 14-17; instr. med., 15-17; *prof. exp. med., St. Louis*, 19- Major, M.R.C., 17-19. Soc. Exp. Biol.; Harvey Soc. Infectious diseases; *Streptococcus*; acute rheumatic fever; *Gonococcus* infections.
- Kinsley, Prof. Carl**, Cosmos Club, Washington, D. C. **Physics*. Lansing, Mich., Nov. 25, 70. A.B., Oberlin, 93, A.M., 96; M.E., Cornell, 94; fellow, Chicago, 01-02; Cambridge, 04. Instr. physics, Washington (St. Louis), 94-99; elec. expert, War Dept., 99-01; instr. physics, Chicago, 02-03, asst. prof., 03-09, assoc. prof., 09-19. Major, Sig. C., chief of sect. ten, M.I.D., gen. staff, U.S.A., 17-19; *radio research and development*, 19- A.A.; Physical Soc.; assoc. mem. Elec. Eng.; Eng. Educ.; Radio Eng. Frequency of alternating currents; series-dynamo electric machines; coherers for wireless telegraphy; residual charges of condensers; short spark discharges; methods of designing electrical machines; dielectric losses; discharge through gases; radio direction measurements; telegraphy.
- Kiplinger, Prof. C(laude) C(layton)**, Mt. Union College, Alliance, Ohio. *Chemistry, Physics*. West Salem, Ohio, Jan. 6, 84. A.B., Western Reserve, 10; Iowa State, 13-16. Teacher physics and chem, high sch., Lincoln, Ill., 10-13; instr. chem, Iowa State, 13-16; asst. prof., Mississippi, 16-17; org. chem, Kentucky, 17-18; *acting head, dept. chem., Mt. Union*, 18- A.A.; Chem. Soc.; Ky. Acad. Ebulliscope determination of molecular weights; apparatus designing; absorption spectra and chemical constitution.
- Kirby, Dr. George H(ughes)**, Psychiatric Institute, Ward's Island, N. Y. *Psychiatry*. Goldsboro, N. C., Feb. 9, 75. B.S., North Carolina, 96; M.D., L. I. Col. Hosp., 99. Assoc. clin. psychiatrist, N. Y. Psychiat. Inst., 02-08; instr. psychopath, med. col., Cornell, 06-12; director clin. psychiat., Manhattan State Hosp., 08-17; *prof. mental diseases*, Univ. and Bellevue Hosp., Med. Col., 14-17; *psychiat., med. col., Cornell*, 17-; *director, N. Y. State Psychiat. Inst.*, 17- Major, M.C., 18-19; surgeon (reserve) and consultant, psychiat., U. S. Pub. Health Service, 20- Mem. Int. Committee for Scientific Study of Alcohol Problems; Nat. Committee Mental Hygiene; ed., 'N. Y. State Hospitals Quart.' Medico-Psychol. Ass.; Neur. Ass.; N. Y. Acad. Med.; N. Y. Psychiat. Soc.; N. Y. Neurol. Soc. Alcohol psychoses; race psychopathology; manic-depressive insanity; catatonic syndromes.

- Kirby, Robert S (tearns)**, Ithaca, N. Y. *Plant pathology*. Battle Creek, Mich, March 18, 92. B.S., N. Mex. Col, 16; fellow, Iowa State, 16-18, M.S., 17. Asst. pathologist, office cereal investigations, bur. plant indust, U. S. Dept. Agr, 18-19; *instr. extens. plant path*, Cornell, 20- A.A.; Bot. Soc.; Phytopath. Soc.; Iowa Acad. Cereal rusts; fruit bud development.
- Kirby, Prof. Thomas J (oseph)**, University of Iowa, Iowa City, Iowa. *Education*. Clayton, Ind, Dec. 16, 77. A.B., Indiana, 06; A.M., Columbia, 10, Ph.D, 13. Teacher, pub. schools, 97-99; principal, high sch, 99-06; supt. schools, Scottsburg, Ind, 06-09; supervisor, Children's Aid Soc. Schools, New York, 10-13; *prof. elementary educ*, Pittsburgh, 13-15; *secondary educ*, 15-20; Iowa, 20- Psychol. Ass. Practise in the case of school children; measurement of achievement in school work.
- Kircher, Dr. Edward A (ugust Theodore)**, National City Co, New York, N. Y. *Mathematics*. Chicago, Ill, March 21, 90. A.B., Illinois, 11, A.M., 12, Ph.D, 14. Instr. math, Mass. Inst. Tech, 14-15; Harvard, 15-17; *investment banking*, Nat. City Co, 19- Capt. C.A.C., A.E.F., 17-19. Math. Soc. Residue classes of Kronecker modular systems; finite algebras.
- Kirk, Dr. Charles T (ownsend)**, 327 S. Wheeling St, Tulsa, Okla. *Geology*. Francisco, Ind, June 22, 76. B.S., Oklahoma, 04, A.M., 05; fellow, Wisconsin, 08-10, Ph.D, 10. Supt. schools, Norman, Okla, 03; instr. science, high sch, Oklahoma City, Okla, 05-06; geol, Mont. Sch. Mines, 06-08; statistician, U. S. Geol. Surv, 07-08, junior geologist, 10-12; asst. prof. geol, Hunter, 10-13; prof, New Mexico, and state geologist, N. Mex, 13-17; *consulting geologist*, 18- Mem. jury awards, San Diego Expos, 15. A.A.; Geol. Soc; Min. Eng; N. Mex. Geog. Soc. (sec'y, 16-17); N. Y. Acad. (sec'y, geol. sect, 13). Drainage and sedimentation; stratigraphy; mineralization at Butte, Mont; western coal deposits; tungsten of Boulder Co, Colo; loci and migration of oil in anticlines.
- Kirk, Edwin**, U. S. Geological Survey, Washington, D. C. *Paleontology*. Richland, S. Dak, Dec. 6, 84. A.B., Columbia, 07, Ph.D, 11. Asst. paleont, Columbia, 07-09; junior geologist, U. S. Geol. Surv, 09-17, paleontologist, 17-19, *geologist*, 21- Oil expert, Bolivia-Argentina Exploration Co, 19-20. A.A.; Geol. Soc; Palcont. Soc; Wash. Acad; Wash. Geol. Soc; Wash. Biol. Soc.
- Kirk, Dr. Edwin G (arvey)**, University of Chicago, Chicago, Ill. *Surgical pathology*. Lima, Ohio, Oct. 25, 80. B.S., Chicago, 02, fellow, 03-05, Ph.D, 07, M.D, 09. Asst. zool. and embryol, Chicago, 02-03, anat, 05-07, assoc, 07-08, instr, 08; intern, Presb. Hosp, Chicago, 10-12; asst. pathologist and pathologist, Michael Reese Hosp, Chicago, 12-16; Sloane Hosp, N. Y. City, 16-17; prof. path. and head of dept, Loyola, 17-18; head, dept. path. and surg. path, Chicago Post-Grad. Med. Sch, 18- Histogenesis of gastric glands; tetanus immunity; gastric glands; carcinoma; hypophysis; regeneration of peripheral nerves.
- Kirk, Dr. W (illia) m**, 162 First St, Carney's Point, N. J. *Chemistry*. Greenfield, Iowa, Oct. 23, 90. A.B., Tarkio, 12; A.M., Nebraska, 14; Ph.D,
- Cornell, 16. *Chemist*, E. I. duPont de Nemours and Co, 16- Intermediates for dyestuffs.
- Kirkham, Prof. William B (arri)**, Yale University, New Haven, Conn. *Zoology*. Springfield, Mass, Feb. 11, 82. A.B., Yale, 04, A.M., 06, Ph.D, 07; Harvard, 04-05. Asst. biol, Sheffield Sci. Sch, Yale, 05-07, instr, 07-16, asst. prof, 16- A.A.; Soc. Zool; Anthropol. Ass; Ass. Anat; Archeol. Inst; N. Y. Zool. Soc. Vertebrate embryology and anatomy.
- Kirkland, A (rchie) H**, Concord Depot, Va. *Entomology*. Huntington, Mass, June 4, 73. B.S., Mass. Col, 94, M.S., 96. Asst. entomologist, Mass. Gipsy Moth Committee, 94-00; v. pres. and gen. manager, Bowker Insecticide Co, 00-05; supt, Mass. Gipsy Moth Work, 05-08. Ass. Econ. Entom; Boston Sci. Soc. Economic entomology; shade tree insects; spraying apparatus; insecticides.
- Kirkpatrick, E (dwin) A (sbury)**, State Normal School, Fitchburg, Mass. *Psychology*, *Child study*. Peoria, Iowa, Sept. 29, 62. B.S., Iowa State, 87, Ph.M., 89; scholar and fellow, Clark, 89-91. Asst. math. and rhetoric, Iowa State, 88-89; instr. psychol, philos. and hist. of educ, State Nor. Sch, Winona, Minn, 92-98; head, dept. psychol. and child study, State Nor. Sch, Fitchburg, Mass, 98- Instr, Columbia, Chicago, Virginia, West Virginia, Cornell and Vermont, summers; lecturer, Smith. A.A.; Psychol. Ass. Education; memory; learning; motor and mental development of children; vocabularies.
- Kirkpatrick, Prof. Ellis L**, Colorado Agricultural College, Ft. Collins, Colo. *Horticulture*. South English, Iowa, Aug. 21, 84. B.S., Iowa State, 14; M.S., Kansas, 20. Exten. asst. hort, Iowa State, 14-15; instr. veg. gardening, Cornell, 15-17, asst. prof, 17-18; *assoc. prof. hort*, Colo. Agr. Col, 18- Soc. Hort. Sci; Vegetable Growers' Ass; Sociol. Soc. Dehydration of fruits and vegetables; adaptation of crops to high altitudes.
- Kirkwood, Prof. J (oseph) E (dward)**, University of Montana, Missoula, Mont. *Botany*. Cedar Rapids, Iowa, Jan. 24, 72. A.B., Pacific, 98; fellow, Princeton, 99, A.M., 02; Ph.D, Columbia, 03. Asst. biol, Teachers Col, Columbia, 00-01; instr. bot, Syracuse, 01-03, assoc. prof, 03-07, prof, 07; asst. botanist, Continental-Mexican Rubber Co, 07-08; asst. prof. bot. and forestry, Montana, 09-10, *prof*, 10-13, *bot*, 13- Asst. bot, summer sch, Columbia, 00. A.A.; Bot. Soc; Ecol. Soc; Ass. Prof; Torrey Bot. Club. Embryology; chemical physiology; cytology; biology of the Guayule rubber plant; botany of the Rocky Mountains; trees and shrubs of the northern Rocky Mountains.
- Kisliuk, Max, Jr**, U. S. Department of Agriculture, Washington, D. C. *Entomology*. London, England, Nov. 10, 89. B.S., Md. Col, 15; M.S., Ohio State, 18. Field asst, bur. entom, U. S. Dept. Agr, 15; asst. zool. and entom, 16-17; field agent, bur. plant indust, 16, field asst, bur. entom, 18, *scientific asst*, 18- Asst. nursery inspector, Md, summer, 14. A.A.; Entom. Soc; Ass. Econ. Entom; Ecol. Soc; Ohio Acad; Wash. Entom. Soc. Medical entomology; muscid flies; insects affecting the castor oil plant.

- Kissell, Miss M(ary) L(ois)**, 106 Morningside Drive, New York, N. Y. *Anthropology*. Davenport, Iowa, March 11, 74. B.S., Columbia, 11, A.M., 13. Instr. anthrop., Chicago, 04-05; asst., Columbia, 05-06; textile expert, Am. Museum Nat. Hist., 06-11; assoc. prof. textile economics, California, 12-14. Am. Museum Nat. Hist. exped. to Papago and Pima Indians, 10-11; Salish Indians, 16. A.A.; fel. Inst. Social Sci. Aboriginal textiles and basketry; a new type of spinning.
- Kitson, Prof. Harry Dexter**, Bloomington, Ind. *Psychology*. Mishawaka, Ind., Aug. 11, 86. A.B., Hiram, 09; A.M., Minnesota, 13; fellow, Chicago, 13-14, Ph.D., 15. Assoc. *psychol.*, Chicago, 14-15, instr., 15-19; assoc. prof., *Indiana*, 19-20, *prof.*, 20- Lieut. C.A.C., A.E.F. Psychol. Ass. Vocational and educational psychology.
- K(jerschow)-Agersborg, H(elmer) P(areli) (Albertsen von Wold)**, University of Wyoming, Laramie, Wyo. *Zoology*. Rödöy, Nordre Helgeland, Norway, Oct. 26, 81. B.S., M.S., Washington (Seattle), 16; Christiania, 16-17; Columbia, 18-19; A.M., 20. Asst. zool., Washington (Seattle), 13-16; tutor biol., Col. City of N. Y., 17-18; demonstrator hist. and embryol., L. I. Col. Hosp., 17-20; *asst. prof. zool., Wyoming*, 20- Asst. and curator, Friday Harbor, Wash., summers, 13-14; asst. zool., exten. div., Columbia, 18-19; exped. to Norway, summers, 17, 20. A.A.; Ecol. Soc.; Pacific Fisheries Soc.; Royal Soc. Trondhjem. Anatomy and sex of nudibranchiate mollusks; physiology and anatomy of the twenty-rayed starfish; evolution of littorine Gasteropoda.
- Kjerstad, Dr. C(onrad) L(und)**, State Normal School, Valley City, N. Dak. *Psychology*. Charles Mix Co., S. Dak., July 11, 83. A.B., South Dakota, 11; fellow, Chicago, 15-16, A.M., 16, Ph.D., 17. Teacher, pub. schools, S. Dak., 05-07; *prof. educ. and psychol.*, Augustana, 11-15; *psychol.*, State Nor. Sch., Winona, Minn., 16-17; *asst. psychol.*, State Nor. Sch., Valley City, N. Dak., 17-19, *prof. educ. and head of dept.*, 19- Lieut., Sanit. C., 18-19. Psychol. Ass. Learning curves.
- Kleckner, Prof. M(artin) E(zra)**, Heidelberg University, Tiffin, Ohio. *Geology, Chemistry*. Davis, Ill., May 6, 61. A.B., Heidelberg (Ohio), 83, A.M., 86; Woods Hole, 91. Instr. science, Col. North. Ill., 84-86; *asst., Heidelberg (Ohio)*, 86-90, *prof. chem. and geol.*, 90- Lecturer chem., Homeop. Hosp., Col., Cleveland, Ohio, 93. A.A.; Ohio Acad.; Ohio Teachers Math. and Sci.; Ohio Ass. Col. Teachers Sci. and Math. Industrial chemistry; glacial phenomena of northern Ohio; minerals and fossils occurring in the Devonian and Silurian rocks of northern Ohio.
- Kleeman, Prof. Richard Daniel**, Schenectady, N. Y. *Physics*. S. Australia, 75. Cambridge, 05-13, B.A., 07; D.Sc., Adelaide, 08. *Assoc. prof. physics*, Union, 14-; *physicist and physical chemist*, Gen. Elec. Co., 19- Physical Soc. Chemistry; porcelain; thermodynamics of chemical reactions; gaseous ionization.
- Klein, A(braham) Albert**, Norton Co., Worcester, Mass. *Ceramics*. Syracuse, N. Y., May 6, 89. B.S., Michigan. With Semet Solvay Co., 06-07; *asst. miner*, Michigan, 08-11; *asst. physi-*
- cist*, Bur. Standards, 11-16, *with Norton Co*, 16- Ceramic Soc. (chairman, New Eng. sect, 18, committee on microstructure); Optical Soc. Portland cement; porcelain; silica brick; lead silicates; glazes; abrasives; refractories.
- Klein, Prof. David**, 310 W. Monument St., Baltimore, Md. *Chemistry*. Chicago, Ill., Oct. 22, 84. A.B., Illinois, 06, A.M., 07; fellow, Wisconsin, 07-08, Ph.D., 10. Instr. chem., Illinois, 06-07; *asst.*, Wisconsin, 08-09, *instr.*, 09-11, *asst. prof.*, 11-14; *state analyst*, Ill., 14-18; *assoc. prof. chem., sch. hygiene and pub. health, Hopkins*, 19- Capt., Sanit. C., 18-19, major, 19. Chem. Soc. Physical chemistry; biological and food chemistry.
- Klein, Dr. M(illard) A(ischuler)**, Spreckels Sugar Co., Spreckels, Calif. *Chemistry*. Corydon, Iowa, Aug. 25, 86. B.S., Nebraska, 09; Ph.D., Cornell, 15. Asst. soil tech., Cornell, 11-15; *instr. soil chem.*, California, 15-16; *soil technologist, Spreckels Sugar Co*, 16- A.A. Soil chemistry and bacteriology.
- Kleiner, Prof. Israel S(imon)**, 547 Fourth St., Brooklyn, N. Y. *Physiological chemistry*. New Haven, Conn., April 8, 85. Ph.B., Yale, 06, Ph.D., 09. Asst. *physiol. chem.*, Yale, 07-09; demonstrator and *instr. chem., med. dept.*, Tulane, 09-10; *asst.*, Rockefeller Inst., 10-14, *assoc.*, 14-19; *prof. physiol. chem. and head of dept.*, N. Y. Homeop. Med. Col., 19- Consulting chemist, Flower Hosp., 19- A.A.; *Physiol. Soc.*; *Soc. Biol. Chem.*; *Soc. Pharmacol.*; *Soc. Exp. Biol.* Experimental diabetes; intermediary metabolism of carbohydrates.
- Kligler, Dr. I(srael) J(acob)**, 824 E. 165th St., New York, N. Y. *Bacteriology*. Galicia, April 24, 89. B.S., Col. City of N. Y., 11; A.M., Columbia, 14, Ph.D., 15; fellow Northwestern, 16. Scientific asst., Am. Museum Nat. Hist., 11-15; *Rockefeller Inst.*, 16- A.A.; *Soc. Nat.*; *Soc. Exp. Biol.*; *Soc. Bact.*; *Pub. Health Ass.* Bacterial classification and nutrition; dental caries; vitamins and bacteria; soil pollution and intestinal diseases; dysentery bacilli and toxin.
- Klinck, Pres. L(eonard) S(ilvanus)**, University of British Columbia, Vancouver, B. C., Can. *Agriculture*. Victoria Square, Ont., Jan. 20, 77. B.S.A., Ont. Agr. Col., 03; M.S.A., Iowa State, 05, Sc.D. Asst. *prof. field crops*, Iowa State, 04-05; *prof. cereal husbandry*, Macdonald, 06-14; *dean, col. agr., British Columbia*, 14-19; *pres.*, 19- *Soc. Agron.*; *Can. Seed Growers' Ass.*; *Can. Soc. Tech. Agr.* Cereal husbandry; breeding of oats, wheat and corn and alfalfa.
- Kline, Dr. Benjamin S**, Hartmann Place, Crestwood, N. Y. *Pathology*. Philadelphia, Pa., May 4, 86. A.B., Swarthmore, 07; M.D., Hopkins, 11. Asst. *path.*, Hopkins, 12-14; fellow *pharmacol.*, Rockefeller Inst., 14-15; *instr. path., Columbia*, 15-17, *assoc.*, 19- *Pathologist*, Montefiore Home and Hosp., 15- *Soc. Exp. Biol.*; *Int. Ass. Med. Mus.* Experimental pathology; lobar pneumonia.
- Kline, Dr. J(ohn) R(obert)**, University of Pennsylvania, Philadelphia, Pa. *Mathematics*. Quakertown, Pa., Dec. 7, 91. A.B., Muhlenberg, 12; A.M., Pennsylvania, 14, Harrison fellow, Ph.D., 16. Instr. *math.*, Pennsylvania, 16-18; Yale, 18-

- 19; assoc, Illinois, 19-20; *asst. prof., Pennsylvania*, 20- Math. Soc; Math. Ass; Circolo Mat. di Palermo. Analysis situs; foundations of geometry; real variable theory.
- Kline, Dr. Linus W(ard)**, Saratoga Springs, New York, N. Y. *Psychology, Pedagogy*. Benton, Pa, Oct. 16, 66. B.S, Harvard, 96; Ph.D, Clark, 98. Teacher psychol. and pedag, State Nor. Sch, Mankato, Minn, 99-00; State Nor. Sch, Farmville, Va, 00-02; teacher psychol. and pedag. and supervisor, training sch, State Nor. Sch, Duluth, Minn, 02-19; *prof. psychol. and educ, Skidmore Sch. of Arts*, 20- Lecturer, summer sch. of methods, Virginia, 02; fellow by courtesy, Hopkins, 19-20. A.A; Psychol. Ass. Migratory impulse vs. love of home; psychology of property; methods in animal psychology; association in animals; juvenile ethics; psychology of the sermon; origin, function and nature of humor; the writing process; acquisition of skill; inhibition in higher thought processes; measuring scale for drawing.
- Klopsteg, Dr. Paul E(mest)**, Leeds and Northrup Co, 4901 Stenton Ave, Philadelphia, Pa. *Physics*. Henderson, Minn, May 30, 89. B.S, Minnesota, 11, A.M, 13, Ph.D, 16. Asst. physics, Minnesota, 11-13, instr, 13-17; *elec. engineer, Leeds and Northrup Co*, 18- Elec. engineer, ordnance dept, 17-18. A.A; Physical Soc; Elec. Eng. Moving coil galvanometers; measurement of short time intervals.
- Klotz, J(ohn) R. M(ac) P(herson)**, Newport Chemical Works, 120 Broadway, New York, N. Y. *Chemistry*. Newark, N. J, Jan. 2, 87. B.S, Pennsylvania, 09. Chemist, Barrett Mfg. Co, 10-15; *manager, Newport Chemical Wks, Inc*, 15- A.A; Chem. Soc; Soc. Chem. Indust; Chem. Eng; Soc. Test. Mat; N. Y. Chemists Club (trustee, 15-, see'y, 16-); Chem. Gesell; Chem. Verein. Aromatic hydrocarbons and their derivatives.
- Klotz, Dr. Oskar**, University of Pittsburgh, Pittsburgh, Pa. **Pathology, Bacteriology*. Preston, Ont, Jan. 21, 78. M.B, Toronto, 02; Governor's fellow, McGill, 03-04, M.D, 06; Bonn, 04-05. House physician, Ottawa Gen. Hosp, 02; supt, Ottawa Civic Hosp, 03; demonstrator bacter, McGill, 05-08, lecturer path, 08-09; *prof. path. and bacter, Pittsburgh*, 10- Fellow Rockefeller Inst, 05; asst. pathologist, Royal Victoria Hosp, Montreal; pathologist, Maternity and Alexandra Hospitals, Montreal; director, Magee Path. Lab. 10-; consulting pathologist, U. S. Bur. Mines, 17-19. Am. Physicians; Soc. Exp. Path; Soc. Exp. Biol; Ass. Path. and Bact. (past pres); Soc. Bact; Soc. Biol. Chem; Ass. Med. Mus; Can. Med. Ass; Ont. Col. Physicians and Surg; Montreal Medico-Chirurg. Soc. Arteriosclerosis and diseases of arteries; calcareous degeneration; osteogenesis imperfect; variability of B. coli; fatty kidney; medial diseases of arteries; diseases of the liver; bacterial causes of nephritis; pneumonia and influenza; syphilis of arteries; aneurysm.
- Klotz, Dr. Otto (Julius)**, 437 Albert St, Ottawa, Can. *Astronomy*. Preston, Ont, March 31, 52. Toronto, 69, LL.D, 04; C.E, Michigan, 72, hon. ScD, 13; LL.D, Pittsburgh, 16. Explorer and topog. surveyor for Dominion Govt, 72-85; Dominion astronomer, 85-17; *director, Dominion Observatory*, 17- Mem. board of examiners, Dominion Land and Topog. Surveyors, 87- A.A; Astron. Soc; Am. Geog. Soc; Wash. Acad; fel. Royal Soc. Can; Royal Astron. Soc. Can; Royal Astron. Soc; London Authors Club; hon. mem. New Zealand Inst; Soc. astron. de France; Astron. Gesell; Soc. Astron. de Mex. Trans-Pacific longitudes, connecting Canada, Australia and New Zealand, completing first astronomic girdle of the world; practical astronomy; terrestrial magnetism; gravity; seismology.
- Knappen, R(ussell) S(tafford)**, University of Kansas, Lawrence, Kans. *Geology*. Three Rivers, Mich, July 17, 92. B.S, Ohio Wesleyan, 13; A.M, Wisconsin, 15. Asst. geol, Columbia, 15-17; instr. *econ. geol*, Chicago, 19-20; *asst. prof., Kansas*, 20- Aid, U. S. Geol. Surv, 14-15; geologist, A.E.F, 18; Ill. Geol. Surv, 19- Min. Eng. Economic geology.
- Knaus, Warren, McPherson**, Kans. *Entomology*. Liber, Ind, Feb. 24, 58. B.S, Kans. State, 82, M.S, 85. A.A; Kans. Acad; cor. mem. Wash. Entom. Soc. Coleoptera of Kansas and North America.
- Kneass, Strickland L(andis)**, 418 S. 15th St, Philadelphia, Pa. *Mechanical engineering, Thermodynamics*. Philadelphia, Jan. 7, 61. C.E, Rensselaer, 80. Mech. engineer, exp. dept, *Wm. Sellers and Co, Phila*, 83-88, foreman, 88-95, *manager, injector dept*, 95- Mem. board of judges, Elec. Exhib, Phila, 86; chairman of sub-committee, board of jury and awards, Export Exhib, 99. John Scott medal and premium, Franklin Inst. Mech. Eng; Am. R. R. Ass; Franklin Inst. Discharge of elastic fluids; flow of steam; the injector; bronzes.
- Kneeland, Frederick R(evell)**, Massachusetts Institute of Technology, Cambridge, Mass. *Chemistry*. New York, N. Y, Oct. 4, 77. B.S, Columbia, 99. Instr. anal. chem, *Mass. Inst. Tech*, 03-08, *org. chem*, 09-20, *asst. prof*, 20- A.A; Chem. Soc.
- Knerr, Dr. E(llsworth) B(rownell)**, Kansas City, Mo. *Chemistry*. Rochester, Minn, Dec. 3, 61. A.B, Wittenberg, 84, A.M, 86, Sc.D, 87; M.D, Univ. Med. Col, Kansas City, 07. Asst. prof. science, Wittenberg, 85, 86; prof. nat. sciences, Parsons, 86-89; Midland Col, Atchison, Kans, 89-04; asst. chem. lab, Univ. Med. Col, and asst. city chemist, Kansas City, 04-06; practising physician, 07-13; *radiologist, Research Hosp, Kansas City*, 13- Asst. chemist, Kansas Univ. Geol. Surv. Chem. Soc; Kans. Acad. (see'y, 94-98, pres, 99). Radiology; mineral analyses; Kansas water analyses; clinical chemistry and microscopy.
- Knight, Prof. A(rchibald) P(atterson)**, Alice St, Kingston, Ont, Can. *Physiology*. Renfrew, Ont. M.A, Queen's (Can), 75; M.D, Toronto, 85. *Prof. physiol. and animal biol, Queen's (Can)*, 92- Fel. Royal Soc. Can. Life history of the American lobster.
- Knight, Prof. Charles M(ellen)**, 583 Weber Ave, Akron, Ohio. *Physics, Chemistry*. Dummerston, Vt, Feb. 1, 48. A.B, Tufts, 73, A.M, 78; hon. Sc.D, Buchtel, 97. Asst. Goddard Sem, Barre,

- Vt, 73-74; asst. physics, Tufts, 74-75; prof. nat. science, *Buchtel*, 75-83, physical science, 83-07, *chem*, 07-13, *emer. prof.*, 13- Acting pres, *Buchtel*, 96-97. A.A.; Chem. Soc. Lithium in waters of Summit County, Ohio.
- Knight, Cyril W(orkman)**, Department of Mines, Toronto, Can. *Geology*. Kingston, Ont, Nov. 28, 79. B.S., 04. *Asst. provincial geologist*, Ont, 06- *Geol. Soc*; *Min. and Metal. Eng*; Can. Min. Inst. Pre-Cambrian stratigraphy; ore deposits in Ontario.
- Knight, Prof. H(arry) H(azelton)**, University Farm, St. Paul, Minn. *Entomology*. Koshkonong, Mo, May 13, 89. B.S., Cornell, 14, Ph.D., 20. Investigator entom, Cornell, 16-17; *asst. prof. entom. and curator collections*, Minnesota, 19- *Entomologist*, Genesee Co, N. Y. Fruit Grower's Ass, 13-16; mem. Cornell biol. expd, 17; lieut, Air Service, 17-19. *Entom. Soc*; *Ass. Econ. Entom.* Economic and systematic entomology; Miridae; army worm; melanism in *Perillus bioculatus*.
- Knight, Prof. Henry G(ranger)**, Agricultural and Mechanical College, Stillwater, Okla. *Chemistry*. Bennington, Kans, July 21, 78. A.B., Washington (Seattle), 02, A.M., 04; fellow, Chicago, 03; Ph.D., Illinois, 17. *Asst. chem*, Washington (Seattle), 00-01, *instr*, 01-02; *asst*, Chicago, 02-03; *asst. prof*, Washington (Seattle), 03-04; *prof*, Wyoming, and state chemist, Wyo, 04-10, *director*, Exp. Sta, 10-18, *dean, col. agr*, Okla. Col, and *director Exp. Sta*, 18- *Chairman*, Wyo. State Council Defense, 17-18. *Chem. Soc*; *Ass. Agr. Col*; *Ass. Agr. Exp. Sta*; *Soc. Prom. Agr. Sci.* Qualitative analysis; potable waters; effect of alkali upon plants and seeds; poisonous plants; soil nitrogen; Wyoming forage; drainage; effect of alkali on cement; food adulteration; digestion; wool; soil acidity.
- Knight, Prof. L(ee) I(rving)**, University Farm, St. Paul, Minn. *Botany*. Prairie Home, Ill, Sept. 30, 80. A.B., Illinois, 02; B.S., Chicago, 09; Ph.D., 13. *Supt. schools*, Washington, Ill, 05-07; *asst. bot*, Illinois, 08-09; *assoc. prof. bot. and forestry*, Clemson, 09-10; *asst. plant physiologist*, Chicago, 10-13, *instr*, 13-15, *asst. prof*, 15-19; *prof*, Minnesota, and *plant physiologist*, Exp. Sta, 19- *Plant physiologist*, W. Va. Exp. Sta, 13-19. A.A.; *Bot. Soc.* Effects of illuminating gas and ethylene on the carnation; effects of various vapors on seedlings of the sweet pea; factors in the formation of the peg in Cucurbitaceae; toxicity of smoke; gas experimentation; plant metabolism.
- Knight, Prof. Nicholas**, Mt. Vernon, Iowa. *Chemistry*. Mexico, N. Y, April 2, 61. A.B., Syracuse, 82, A.M., 85, Ph.D., 88; Strasbourg, 92-94; Hopkins, 94-95, 98-99. *Prof. nat. science*, Cazenova Sem, 82-92; *chem*, Randolph-Macon, 95-98; *Cornell (Iowa)*, 99- *Commission on Pure Foods*, Iowa, 00-08; *city chemist*, Mt. Vernon; *chemist*, water commission, Oneida, N. Y.; *assoc. ed*, 'Sch. Science and Math', 12- *Chem. Soc.* (pres, Iowa sect, 08-09); *Iowa Acad.* (v. pres, 19, pres, 20); *Chem. Gesell.* Rocks; water; dissociation of complex salts in aqueous solutions.
- Knight, Prof. S(amuel) H(owell)**, University of Wyoming, Laramie, Wyo. *Geology*. Laramie,
- July 31, 92. A.B., Wyoming, 13; Columbia, 14-17. *Asst. prof. geol*, Wyoming, 17-18, *prof*, 19- *Lieut*, intelligence div, 18. A.A.; *Paleont. Soc*; *fel. Am. Geog. Soc*; *N. Y. Acad. Stratigraphy and paleontology of Paleozoic and Mesozoic formations of the Rocky Mountain region*.
- Knipp, Prof. Cha(rle)s T(obias)**, 1003 W. Nevada St, Urbana, Ill. **Physics*. Napoleon, Ohio, Aug. 13, 69. A.B., Indiana, 94, A.M., 96; fellow, Cornell, 98-00, Ph.D., 00; Cambridge, 10-11. *Instr. physics*, Indiana, 93-00, *asst. prof*, 00-03; *Illinois*, 03-15, *assoc. prof*, 15-17, *prof*, 17- *Instr. physics*, summer sch, Missouri, 02; Indiana, 05. A.A.; *Physical Soc*; *Elec. Eng*; *Ill. Acad*; *Ind. Acad.* Surface tension of water above 100° C; temperature and potential pressure relations in the mercury arc; rays of positive electricity from the Wehnelt cathode; positive rays; high vacuum mercury vapor vacuum pumps; a possible standard of sound; the effect of light on a helix of cathode rays from a Wehnelt cathode; a new singing tube.
- Knoll, Lloyd M(onroe)**, 6120 Carpenter St, West Philadelphia, Pa. *Physics*. Moselem, Pa, May 12, 77. A.B., Ursinus, 01; A.M., 04; Pennsylvania. *Prof. physics*, *Cent. High Sch*, Phila, 10- A.A.; *Physical Soc*; *Radio Eng.* Isochronous tuning forks; radio direction finders.
- Knopf, Dr. Adolph**, U. S. Geological Survey, Washington, D. C. **Geology*. San Francisco, Calif, Dec. 2, 82. B.S., California, 04, M.S., 05, Ph.D., 09. *Aid*, *U. S. Geol. Surv*, 06-07, *asst. geologist*, 08-12, *geologist*, 12-; *assoc. prof. geol*, Yale, 20- A.A.; *Geol. Soc*; *Wash. Geol. Soc*; *Wash. Acad.* (ed. 'Jour', 17). *Economic geology*; *petrology*; *geology and ore deposits of Nevada*.
- Knopf, Dr. Eleonora F(rances) Bliss**, 105 E. Rock Road, New Haven, Conn. *Geology*. Rosemont, Pa, July 15, 83. A.B., A.M., Bryn Mawr, 04, Ph.D., 12. *Demonstrator*, *geol. lab*, Bryn Mawr, 05-06, *asst. curator*, *geol. museum*, 04-05, 08-09; *geol. aid*, *U. S. Geol. Surv*, 12-17, *asst. geologist*, 17-18, *assoc. geologist*, 18- *Asst*, Md. Geol. Surv, 17- *Geol. Soc*; *Wash. Acad*; *Wash. Geol. Soc.* *Petrology*; *stratigraphy*; *economic geology*.
- Knopf, Dr. S(igard) Adolphus**, 16 W. 95th St, New York, N. Y. *Medicine*. Halle, Germany, Nov. 27, 57. South. California, 85-87; M.D., N. Y. Univ, 88; B.S., and A.B., Sorbonne, 90; Berlin and Vienna, 91; M.D., Paris, 95; Falkenstein, 95-96. *Prof. phthisiotherapy*, N. Y. Post-Grad. Med. Sch, 08-20. *Senior physician*, Riverside Hosp. Sanatorium for Consumptives, 03-; *consulting physician to sanatoria*, Gabriels, Seranton; *tuber. specialist*, U. S. Pub. Health Hosp. No. 61, S. I., N. Y.; *lecturer*, N. Y. State Health Dept. and Dept. Educ., N. Y. City. *Laurate of Inst. of France and Acad. de Méd. de Paris*, 95; *gold medal*, La. Purchase Expos, 04. *Int. Cong. Tuber*, Berlin, 99; *official delegate* *British Tuber. Cong*, 01; *Paris*, 05; *Washington*, 08; *Int. Prison Cong*, Budapest, 05. A.A.; *Am. Acad. Med*; *N. Y. Acad. Med*; *Phila. Col. Physicians*; *Soc. d'Hygiène de Paris*; *British Cong. Tuber.* (v. pres); *Int. Antituber. Ass.* (v. pres, social sect). *Tuberculosis—etiology, diagnosis, prophylaxis, treatment, social aspects and the*

housing problem; tuberculosis in children and in prison; home hygiene and therapeutics.

Knower, Dr. H(enry) McE(lderry), Medical Department, University of Cincinnati, Cincinnati, Ohio. **Anatomy*. Baltimore, Md, Aug. 5, 68. A.B. Hopkins, 90, Adam T. Bruce fellow, 95-96, Ph.D. 96, fellow by courtesy, 97-99. Asst. biol. Hopkins, 91-93; instr. Williams, 96-97; *anat*, Hopkins, 99-08, assoc. 08-09; lecturer, Toronto, 09-10; *prof*, Cincinnati, 10- Asst. zool. Woods Hole, 97, librarian, 09-20; co-editor and sec'y, 'Jour. Anat.' A.A.; Soc. Nat. (sec'y, 08, 09); Ass. Anat. (exec. committee, 08-15); Soc. Zool. Embryology of termites; morphology of sexual tract and brain in termites; lymphatic and vascular systems of frog embryos by experiment and injection; muscle bands of the human heart.

Knowlton, Prof. A(nsel) A(lphonso), Reed College, Portland, Oregon. *Physics*. New Portland, Maine, Oct. 12, 76. A.B. Bates, 98; A.M. Northwestern, 03; Ph.D. Chicago, 10. Instr. *physics*, Carleton, 99-02; assoc. prof. Armour, 03-09; Utah, 09-15; *prof*, Reed, 15-, chairman, administration committee, 20-21. A.A.; Physical Soc.; Meteorol. Soc. Utah Acad. Micro-structure of magnetic alloys.

Knowlton, Dr. F(rank) H(all), U. S. National Museum, Washington, D. C. **Paleontology*. Brandon, Vt, Sept. 2, 60. B.S. Middlebury, 84, M.S. 87; Ph.D. George Washington, 96. Aid, U. S. Nat. Museum, 84-87, asst. curator, 87-94; asst. paleontologist, U. S. Geol. Surv., 94-00, paleontologist, 00-07, *geologist*, 07- Prof. bot. George Washington, 87-96; ed, 'The Plant World,' 97-04. Paleont. Soc. (pres, 18); Bot. Soc.; Geol. Soc.; mem. Ornith. Union; Wash. Acad. (v. pres, 05, 06, 18); Wash. Biol. Soc. (pres, 05, 06); Wash. Geol. Soc. (pres, 18); Wash. Bot. Soc. Cretaceous and Tertiary plants of North America; fossil flora of the John Day Basin, Oregon; flora of the Montana formation; birds of the world; flora of Yellowstone National Park; flora of the Laramie formation.

Knowlton, Prof. Frank P(attengill), 1618 E. Gene-see St, Syracuse, N. Y. *Physiology*. Holland Patent, N. Y, June 17, 75. A.B. Hamilton, 96; A.M. Michigan, 97; M.D. Syracuse, 00. Instr. *physiol.* and *embryol.* *col. med.*, Syracuse, 97-00, lecturer *physiol.* 00-06, assoc. prof. 06-08, *prof*, 08- Instr. *physiol.* Woods Hole, 09- A.A.; *Physiol. Soc.*; London *Physiol. Soc.*; etc. Effect of temperature on growth; a tumor of the medulla in a cat; action of urea on the isolated heart; action of various salts on the selachian heart; physiology of the heart and circulation; physiology of the kidney; glycosuria.

Knowlton, Dr. Millard, State Board of Health, Raleigh, N. C. *Medicine*. Colfax Co, Nebr, Feb. 18, 75. M.D. Indiana, 05; C.P.H. Harvard Tech. Sch. of Pub. Health, 18. Teacher, rural schools, Indiana, 96-01; private practise med, Terre Haute, 05-10; educ. work, N. J. State Dept. of Health, 11-15, chief, bur. educ. and publicity, 15-17; capt, M.C. 18-19; chief, *bur. venereal diseases, board of health*, Kans, 18-19; *director*, N. C. 19-; *regional consultant*, U. S. Pub. Health Service, 19- Field asst, U. S. Fish Commission, Lake Maxinkuckee,

summer, 00; gold medal, Int. Expos. Hygiene, Lima, Peru, 13. A.A.; Am. Med. Ass; Pub. Health Ass; Ass. Tuber; Ass. Infant Mortality. Educational work in public health.

Knox, Dr. John K(nox), Whitehall Petroleum Corporation, 47 Parliament St, Westminster S. W. 1, England; and 1115 Missouri Ave, Houston, Tex. *Geology*. Fergus, Ont, Aug. 14, 86. B.A. Toronto, 14; Ph.D. Chicago, 17. Field geologist, Can. Geol. Surv, 12-16; geologist, Roxana Petrol. Co, 17-18; asst. state geologist, Kans, 18-19; geologist, *Whitehall Petrol. Corp*, 20- Petrography.

Knudson, Prof. Arthur, Albany Medical College, Albany, N. Y. *Biological chemistry*. Milwaukee, Wis, Aug. 13, 89. A.B. Missouri, 12; Ph.D. Columbia, 15. Asst. biol. chem, Columbia, 12-14; adj. prof. *physiol. chem*, Albany Med. Col, 14-15, *assoc. prof. biol. chem*, 15- A.A.; Chem. Soc.; Soc. Biol. Chem; Soc. Exp. Biol. Lipins.

Knudson, Prof. L(ewis), Cornell University, Ithaca, N. Y. *Plant physiology*. Milwaukee, Wis, Oct. 15, 84. B.S.Agr. Missouri, 08; Ph.D. Cornell, 11. Asst. *plant physiol*, Cornell, 08, instr, 08-11, asst. prof, 11-16, *prof*, 16- Woods Hole, summers, 10, 11; lecturer, plant physiol, Madrid and Barcelona, 20, 21. A.A.; Bot. Soc.; Soc. Espan. Hist. Nat. Tannic acid fermentation; growth; enzyme production; organic nutrition of green plants.

Kober, Dr. Geo(rge) M(artin), 1819 Q St, N. W, Washington, D. C. *Hygiene*. Alsfeld, Germany, March 28, 50. M.D. Georgetown, 73, LL.D. 06. Acting asst. surgeon, U.S.A. 74-87; *prof. hygiene, sch. of med*, Georgetown, 90-, *dean*, 01- Mem. consulting staff, Providence, Children's, Wash. Asylum and Univ. Hospitals; Wash. Sanit. Housing Co. (sec'y, 97-15, pres, 15-); mem. and sec'y, President's Homes Commission, 07. Gold medal, Paris Expos, 00. Int. Tuber. Cong. (chairman, sect. indust. hygiene, 06); Int. Cong. Hygiene and Demog, 12; Pan-Am. Sci. Cong, 14. A.A.; Am. Physicians (sec'y, 07-16, hon. mem, 16); Am. Med. Ass; hon. mem. Ass. Mil. Surg; Ass. Am. Med. Colleges (pres, 04); Anthropol. Ass; D. C. Med. and Surg. Soc. (pres, 87); D. C. Med. Ass. (pres, 97); D. C. Med. Soc. (pres, 02); Wash. Acad. (v. pres, 18); Wash. Anthropol. Soc. (v. pres, pres, 05, 18, 19); Ass. Tuber. (pres, 15). Transmission of typhoid fever by flies; milk in relation to public health; personal and industrial hygiene; habitations; diseases of occupation.

Kober, Philip Adolph, Hastings-on-Hudson, N. Y. *Manufacturing chemistry*. Pittsburgh, Pa, Sept. 28, 84. Lehigh, 02-03; B.S. Harvard, 06; Rockefeller Inst, 07-08. Chemist, U. S. Leather Co, 06; Roberts Chem. Co, 07; expert analyst, Remsen Referee Board, 08-09, expert anal. chemist, 09-10; chemist, Harriman Research Lab, Roosevelt Hosp, 10-15; *physiol. chemist*, dept. health, N. Y, 16-19; chemist, E. R. Squibb and Sons, 19-20; *pres*, Kober Chem. Co, 20- A.A.; Chem. Soc; *Physiol. Soc.*; Soc. Biol. Chem; N. Y. Chemists Club. Ammonia distillation; phenolthalates; copper complexes of amino acids; polypeptides and proteases; nephelometry.

- Koch, Dr. Edward William**, University of Buffalo Medical School, Buffalo, N. Y. *Pharmacology*. Lawrenceburg, Ind, Jan. 8, 82. A.B, Indiana, 08, A.M, 09; M.D, Rush Med. Col, 11. Asst. physiol. and pharmacol, Indiana, 07-08, teaching fellow, 08-09, instr, 13-15; pharmacologist, Eli Lilly and Co, 15-18; *prof. pharmacol, Buffalo, 18-* Pharmaceut. Ass; Ind. Acad. Physiology; experimental therapeutics; ipecac alkaloids.
- Koch, E(rnest) H(erman), Jr**, 208 N. Maple Ave, East Orange, N. J. *Mathematics*. Philadelphia, Pa, Sept. 7, 75. B.S, Pennsylvania, 97. Math. master, MacKenzie Sch, 01-04; *instr. math*, Pratt Inst, 04-13; *High Sch. of Commerce, N. Y. City, 13-* A.A; Math. Soc; Eng. Educ; Nat. Ass. Corp. Schools; Ass. Teachers Math. Middle States and Md. Engineering mathematics; generalization of human knowledge through mathematical conceptions.
- Koch, Prof. F(red) C(onrad)**, University of Chicago, Chicago, Ill. *Physiological chemistry*. Chicago, May 16, 76. B.S, Illinois, 99; fellow, Chicago, 09-12, Ph.D, 12. Instr. chem, Illinois, 00-02; research chemist, Armour and Co, 02-09; asst. *physiol. chem, Chicago, 09-12*, instr, 12-13, asst. prof, 13-19, *assoc. prof. and acting chairman, dept, 19-* A.A; Chem. Soc; Soc. Biol. Chem; Chicago Inst. Med. Secretins; thyroid active principle; phospholipins; enzymes.
- Koch, Dr. George P(eter)**, Glenolden, Pa. *Agriculture*. Elma, Wash, April 26, 90. B.S, Wash. State, 13; M.S, Minnesota, 14; fellow, Rutgers, 14-17, Ph.D, 17. *Agr. chemist and bacteriologist, H. K. Mulford Co, 17-* A.A; Chem. Soc; Soc. Bact. Agricultural chemistry; pharmaceutical chemistry; biochemistry; bacteriology.
- Koch, Prof. Julius A(rnold)**, 28 Arlington Ave, Pittsburgh, Pa. *Pharmaceutical chemistry*. Bremen, Germany, Aug. 15, 64. Ph.G, Pittsburgh, 84, Pharm.D, 95; Munich, 96; Heidelberg, 97; Ph.D, Seio, 05; Sc.D, Washington and Jefferson, 07. *Prof. pharmacy, Pittsburgh, 91-99, chem. and dean, col. pharmacy, 99-*, prof. chem, med. sch, 00-12. A.A; Pharmaceut. Ass. (ed, 'Year Book,' v. pres, 04, mem. council, 08-); Am. Conf. Pharmaceut. Faculties (chairman, exec. committee, 07-); Pa. Pharmaceut. Ass. (pres, 07); British Pharmaceut. Conf; Chem. Gesell. Synthesis of aromatic aldehydes.
- Koch, Dr. William Frederick**, 1711 Sheridan Ave, Detroit, Mich. *Physiology*. Detroit, 85. A.B, Michigan, 09, A.M, 10, Ph.D, 17; M.D, Detroit Col. Med, 18. Instr. *physiol*, Michigan, 09-14; *prof, Detroit Col. Med, 14-* Chem. Soc. The parathyroid glands; eclampsia; cancer.
- Koenig, Prof. A(lfred) E(dward)**, State School of Mines, Butte, Mont. *Chemistry*. Howard Lake, Minn, May 30, 82. B.A, Macalester, 04; A.M, Wisconsin, 10, Ph.D, 12. Teacher, high sch, Cokato, Minn, 04-07; Astoria, Oregon, 07-08; asst. and instr. *chem*, Wisconsin, 08-16, asst. prof, 16-20; *assoc. prof, Mont. Sch. of Mines, 20-* Chem. Soc. (sec'y, Wis. sect, 14, 16, chairman, 19). Osmosis; colloids.
- Koessler, Prof. Karl K(onrad)**, 104 S. Michigan Boulevard, Chicago, Ill. *Biochemistry*. Vienna, Austria, Nov. 6, 78. M.D, Vienna, 03; Ph.D, Chicago, 19. *Asst. prof. med, Rush Med. Col,* *exp. med, Chicago, mem. Sprague Mem. Inst. A.A; Soc. Biol. Chem; Ass. Path. and Bact; Soc. Clin. Invest; Chem. Soc; Am. Med. Ass. Pathological physiology; immunology; putrefactive amins.*
- Kofoid, Prof. Charles A(twood)**, University of California, Berkeley, Calif. *Zoology*. Granville, Ill, Oct. 11, 65. A.B, Oberlin, 90, Sc.D, 15; A.M, Harvard, 92, Ph.D, 94; Smithsonian table, Naples Zool. Sta, 09; Sc.D, Wales, 20. Instr. vert. morph, Michigan, 94-95; supt. biol. exp. sta, Illinois, 95-00, asst. prof. zool, 97-00; histol. and embryol, *California, 00-04*, assoc. prof, 04-10, *prof. zool, 10-* With Mich. Fish Commission, 94; assoc. ed, 'Am. Naturalist,' 97-09; supt, Ill. Nat. Hist. Surv, 98-00; zool. ed, 'Jour. Applied Micros,' 00-; ed, 'Univ. Calif. Pub. Zool,' 08-; 'Int. Rev. Hydrol,' 10-; 'Zool. Acta,' 20-; 'Jour. Morph,' 20-; 'Am. Jour. Hygiene,' 20-; with Agassiz exped. in Southern Pacific, 04-05; asst. director, San Diego Marine Biol. Sta, 07-10; Scripps Inst, California, 10- Diploma, Paris Expos, 00; gold medal, La. Purchase Expos, 04; Panama-Pacific Expos, 15. A.A; Soc. Nat; Soc. Zool; Ass. Anat; Soc. Exp. Biol; Ecol. Soc; Pub. Health Ass; Soc. Trop. Med; Micros. Soc; Am. Acad; West. Soc. Nat; Calif. Acad; Soc. de Path. exot. Plankton; morphology and taxonomy of Protozoa; embryology of Mollusca; plankton of Illinois River; protozoology; parasitology; marine zoology.
- Kohler, Prof. Elmer P(eter)**, Boylston Hall, Cambridge, Mass. *Chemistry*. Egypt, Pa, 65. A.B, Muhlenberg, 86, A.M, 89, LL.D, 19; fellow, Hopkins, 91-92, Ph.D, 92. Instr. *chem*, Bryn Mawr, 92-94, assoc, 94-97, assoc. prof, 97-00, prof, 00-12, *prof, Harvard, 12-14, Lawrence prof, 14-* Nat. Acad; Am. Acad; Chem. Gesell. Organic sulphur compounds; aluminium compounds; reactions under the influence of light; unsaturated sulphones; organic magnesium compounds; rate of addition to unsaturated compounds; cyclopropane derivatives.
- Kohman, Dr. Edw(ard) F(rederick)**, 1739 H St, Washington, D. C. *Chemistry*. Dillon, Kans, Jan, 85. A.B, Kansas, 12; Ph.D, Yale, 15. Assoc. dairy chem, Illinois, 15-17; org. and physiol. chemist, bur. chem, U. S. Dept. Agr, 17-18; *research chemist, Nat. Canners Ass, 19-* Lieut, Sanit. C, 18-19. Chem. Soc. Food and dairy chemistry; poultry nutrition and metabolism; effect of carbon dioxid on metabolism.
- Kohman, Dr. H(enry) A(dolph)**, Mellon Institute, Pittsburgh, Pa. *Chemistry, Bacteriology*. Dillon, Kans, Jan, 30, 81. A.B, Kansas, 08, fellow, 08-11, Ph.D, 11. *Fellow, Mellon Inst, 13-* Lecturer org. chem, Pittsburgh, 13- Chem. Soc. Salt rising bread; yeast nutrients; fermentation; flour.
- Kohs, Dr. S(amuel) C(almin)**, 748 Irving St, Portland, Oregon. *Psychology*. New York, N. Y, June 2, 90. B.S, Col. City of N. Y, 12; fellow, Training Sch, Vineland, N. J, 12-13; Clark, 13-14, A.M, 14; Chicago, 16; fellow, Stanford, 16-18, Ph.D, 18. Director, clinic, children's inst, Clark, 13-14; psychopathic lab, Chicago House of Correction, 14-16; asst. prof. psychol, Reed, 18-19; *psychologist, court of domestic re-*

- lations, Portland, 19-* Lecturer, N. Y. Univ, 17; Training Sch, Vineland, N. J, 13-14; Stanford, 16-18; St. Mary's Acad, Portland. A.A.; Psychol. Ass; Ass. Clin. Psychol. Clinical and educational psychology; statistics; mental deficiency; intelligence and performance tests.
- Kokatnur, Dr. V(aman) B(amchandra)**, Niagara Alkali Co, Niagara Falls, N. Y. *Chemistry*. Athani, India, Dec, 86. B.Sc. Bombay, 12; M.S. Minnesota, 14, fellow, 14-15, Ph.D, 16. Asst, Minnesota, 15-17; with Castner Electrolytic Alkali Co, 17-18; *chief, research dept, Niagara Alkali Co, 18-* Chem. Soc; Electrochem. Soc. Action of trioxymethylene and carbohydrates on hydrocarbons; commercial chlorin; influence of catalysts on chlorination of hydrocarbons.
- Koller, Dr. Joseph P(eter)**, 903 W. 11th St, Wilmington, Del. *Chemistry*. Johnstown, N. Y., Nov. 24, 90. B.Chem, Cornell, 12, Ph.D, 18. Asst. instr. chem, Cornell, 14-17; *research chemist, E. I. duPont de Nemours and Co, 17-* Selenic acid; copper selenate.
- Kolmer, Dr. J(ohn) A(lbert)**, Cynwyd, Pa. *Pathology*. Lonaconing, Md, April 24, 86. M.D, Pennsylvania, 08, D.P.H, 14; hon. M.S, Villanova, 15. Pathologist, Phila. Hosp. Contagious Diseases, 10-18; *prof. path. and bacter, Pennsylvania, 19-* A.A.; Soc. Exp. Biol; Ass. Immunol. (v. pres); Ass. Path. and Bact; Soc. Bact; fel. Phila. Col. Physicians. Immunity; bacteriology.
- Kolster, Frederick A**, Bureau of Standards, Washington, D. C. *Radio engineering*. Geneva, Switzerland, Jan. 13, 83. Harvard, 08. *Radio engineer*, Stone Telephone and Telegraph Co, 02-09; De Forest Radio Telephone and Telegraph Co, 09-10; F. Lowenstein, 11; *Bur. Standards, 12-* Fel. Radio Eng; Elec. Eng. Capacity effects in inductances; decimeter; radio compass.
- Kommers, Prof. Jesse Benjamin**, University of Illinois, Urbana, Ill. *Mechanical engineering*. Sheboygan, Wis, March 11, 84. B.S. Wisconsin, 06. Instr. applied meech, Wisconsin, 07-13, asst. prof, 13-20; *research assoc. prof. eng. materials, Illinois, 20-* Soc. Test. Mat. Mechanics; strength of materials; fatigue of metals.
- Kopeloff, Dr. Nicholas**, Psychiatric Institute, Ward's Island, New York, N. Y. *Bacteriology*. New York, N. Y, June 6, 90. B.S. Columbia, 12; B.S.A. Cornell, 14; fellow, Rutgers, 14-17, M.S, 16, Ph.D, 17. Field asst, U. S. Dept. Agr, 17; bacteriologist, La. Sugar Exp. Sta, 17-20. Soc. Bact; Chem. Soc. New Orleans Acad. Soil biology and chemistry; sugar microbiology.
- Koplik, Dr. Henry**, 30 E. 62d St, New York, N. Y. *Diseases of children*. New York, Oct. 28, 58. A.B. Col. City of N. Y, 78; M.D. Columbia, 81. House physician, Bellevue Hosp, 81-83; asst. and instr. histol, Columbia, 83-85; *attending physician, Good Samaritan Dispensary, N. Y, 86-00; Mt. Sinai Hosp, 00-* Am. Physicians; Pediat. Soc. (pres); N. Y. Acad. Med. Diseases of infancy and childhood.
- Kornhauser, Prof. S(idney) I(saac)**, Denison University, Granville, Ohio. *Zoology*. Cleveland, Ohio, Nov. 3, 87. A.B. Pittsburgh, 08; A.M. Harvard, 10, Ph.D, 12, Hooper fellow, at Halle, 12-13, Sheldon fellow, at Würzburg, 13-14; Bermuda, summer, 10; Smithsonian table, Naples Zool. Sta, 13. Instr. biol, George Washington, 08-09; Austin teaching fellow, Harvard, 09-12; asst. prof. zool, Northwestern, 14-17, assoc. prof, 17-20; *prof, Denison, 19-* Second lieut, Sanit. C, 18-19. A.A.; Soc. Nat; Soc. Zool. Chromosomes; cytology of copepods; sexual characteristics; pathogenic protozoa of intestinal tract.
- Korstian, C(larence) F(erdinand)**, U. S. Forest Service, Ogden, Utah. *Forestry*. Saline Co, Nebr, June 26, 89. B.S. Nebraska, 11, M.F, 13. Asst. dendrol. and silviculture, Nebraska, 09-10; asst. pathologist, Pa. Chestnut Blight Commission, 12; forest asst, U. S. Forest Service, 12-13, *forest examiner, 13-* A.A.; Bot. Soc; Meteorol. Soc; Soc. Foresters (sec'y, intermountain sect, 16-); Ecol. Soc; Utah Acad. (pres, 20). Forest pathology and ecology; management of forests; forestry literature; chlorosis of conifers.
- Koser, Dr. Stewart A(rment)**, U. S. Department of Agriculture, Washington, D. C. *Bacteriology*. Harrisburg, Pa, March 30, 94. Ph.B, Yale, 15, A.M, 17, Ph.D, 18. Asst. bacter. and hygiene, Yale, 16-18; *bacteriologist, bur. chem, U. S. Dept. Agr, 19-* Bacteriologist, M. C. U. S. A, 18-19. Soc. Bact; Pub. Health Ass. Poultry diseases; bacterial nutrition; hemolysin of streptococci; food bacteriology.
- Kostir, W(encil) J(erome)**, Ohio State University, Columbus, Ohio. *Zoology*. Cleveland, Ohio, Sept. 28, 86. A.B. Ohio State, 12, A.M, 13; Columbia, 19-20. *Instr. zool. and entom, Ohio State, 13-* Instr. invert. zool, Woods Hole, summers, 17, 18. A.A; Micros. Soc; Ohio Acad. (treas., 19). Protozoa; Orthoptera of Ohio; cranial ganglia of Plethodon.
- Kotinsky, Jacob**, 519 Canal St, New Orleans, La. *Entomology*. Poltava, Russia, July 22, 73. B.S. Rutgers, 98. Asst. div. entom, U. S. Dept. Agr, 99-04; asst. entomologist, Hawaiian Board of Agr, 04-08, supt. entom, 08-10. Lecturer econ. entom, Col. of Hawaii, Honolulu High and Nor. Schools, 08, 09. A.A; Ass. Econ. Entom; Entom. Soc; Wash. Biol. Soc; Wash. Entom. Soc; Hawaiian Entom. Soc. (sec'y-treas, 05-08). Economic entomology; Coccidae; Aleyrodidae; Adelginae; Coccidae of Hawaii; utilization of predators in economic entomology; manner and prevention of import of pests inimical to agriculture; shade tree pests.
- Kouwenhoven, Prof. William B(ennett)**, Johns Hopkins University, Baltimore, Md. *Electrical engineering*. Brooklyn. N. Y. Jan. 13, 86. E.E. Brooklyn Polytech, 06, M.E, 07; D.Ing, Karlsruhe, 13. Instr. elec. eng, Brooklyn Polytech, 06-10; Washington (St. Louis), 13-14; Hopkins, 14-17, *assoc. prof, 17-* Elec. Eng; Soc. Test. Mat. Magnetic analysis of steel; electrical measurements; batteries.
- Kovárik, Prof. Alois F(rancis)**, Yale University, New Haven, Conn. **Physics*. Spillville, Iowa, March 8, 80. A.B. Minnesota, 04, A.M, 07, Ph.D, 09; research fellow, Victoria (Manchester), 10-11. Sc.D. 16. Instr. physics, Decorah Inst. Decorah, Iowa, 96-00; asst, Minnesota, 02-04,

- instr, 04-12, asst. prof, 12-15, assoc. prof, 15-16; *asst. prof, Sheffield Sci. Sch, Yale, 16*-Mem. Radioactivity Cong, Brussels, 10. A.A. (mem. council, 19); Physical Soc; Meteorol. Soc. Mobility of ions in gases; absorption and reflection of beta particles; periods of radioactive substances; recoil atoms; statistical method for alpha and beta particles; Decorah ice cave.
- Kowalke, Prof. O(tto) L(ouis)**, University of Wisconsin, Madison, Wis. *Chemical engineering*. Maitowoc, Wis, Jan. 18, 78. B.S., Wisconsin, 06, Ch.E, 09. Instr. *chem. eng, Wisconsin, 08-11*, asst. prof, 11-14, assoc. prof, 14-17, *prof, 17*- Min. and Metal. Eng; Chem. Soc; Electrochem. Soc; Am. Gas Ass; Eng. Educ. Pyrometry; refractories; alloys; calorimetry of gas.
- Kraemer, Prof. Henry**, Mt. Clemens, Mich. *Botany, Pharmacognosy, Bacteriology*. Philadelphia, Pa, July 22, 68. Ph.G, Phila. Col. Pharmacy, 89; Ph.B, Columbia, 95; Ph.D, Marburg, 96. Instr. *pharmacog, N. Y. Col. Pharmacy, 90-92*; *prof. bot, Northwestern, 95-97*; *bot. and pharmacog, and director, micros. laboratories, Phila. Col. Pharmacy, 97-17*; *prof. pharmacog, Michigan, 17-20*, dean, *col. pharmacy, 19-20*. Ed, 'Am. Jour. Pharmacy,' 98-; mem. revision committee, U. S. Pharmacopœia, 00-; hon. mem. Int. Cong. Pharmacy, and British Pharmacœut. Conf, 10- Ebert and Maisch prizes, Am. Pharmacœut. Ass, 99, 09. A.A; Soc. Nat; Bot. Soc; Pharmacœut. Ass; Acad. Polit. and Social Sci; Philos. Soc; Torrey Bot. Club; hon. mem. N. J. Pharmacœut. Ass; Minn. Pharmacœut. Ass; Neb. Pharmacœut. Ass; Phila. Acad; Int. Ass. Bot; cor. mem. Soc. de Pharm. de Paris. Structure of starch grain; continuity of protoplasm; morphology of the genus *Viola*; microscopical study of drugs and foods; unorganized cell contents of plants; nature and structure of the cell wall; influence of the feeding of chemicals on the color and structure of plants.
- Krafka, Prof. Joseph, Jr**, University of Georgia, Athens, Ga. *Zoology*. Ottumwa, Iowa, Aug. 14, 90. A.B, Lake Forest, 14, A.M, 15; Ph.D, Illinois, 19. Research asst, sta. for exp. evolution, Carnegie Institution, 15-16; Illinois, 16-19; assoc. prof. *zool, Georgia, 19-20, prof, 20*-Trichopterous larvae; heredity in *Drosophila*.
- Kramer, Prof. B(enjamin)**, Johns Hopkins Hospital, Baltimore, Md. *Pediatrics*. Russia, Aug. 15, 87. M.D, Bellevue, 09; M.S, Iowa, 17. Instr. *physiol, Iowa, 13-15*, asst. prof, 15-17; *instr. pediat, Hopkins, 17-20, assoc, 20*- A.A; Am. Med. Ass; Physiol. Soc; Soc. Biol. Chem. Lipoids and narcosis; stimuli and hyperglycaemia metabolism in pancreatic diabetes.
- Krance, Prof. John A(loysius), S.J.**, Creighton University, Omaha, Nebr. *Chemistry*. Berea, Ohio, Feb. 1, 80. St. Mary's (Kans), 95-01; A.M, St. Louis, 19. Prof. *chem, St. John's (Ohio), 08-13*; *head of dept, Creighton, 17*-
- Krathwohl, Prof. W(illiam) C(harles)**, Armour Institute of Technology, Chicago, Ill. *Mathematics*. Buffalo, N. Y, Oct. 10, 82. A.B, Harvard, 07; A.M, Columbia, 10; Ph.D, Chicago, 13. Instr. *math, Columbia, 07-11*; Washington (St. Louis), 11-12; prof, Ripon, 13-14; asst. prof, Armour, 14-18; *assoc. prof, 19*- Math. Soc. Modular invariants.
- Kratz, Prof. Alonzo P(lumsted)**, 315 S. State St, Champaign, Ill. *Mechanical engineering*. Champaign, 85. B.S, Illinois, 07, M.S, 09. *Research asst. prof. mech. eng, Illinois, 09*- Mech. Eng. Combustion; explosive mixtures of air and gas; warm-air furnaces.
- Kraus, Prof. Charles A(ugust)**, Clark University, Worcester, Mass. **Chemistry*. B.S, Kansas, 98; fellow, Hopkins, 99-00; Ph.D, Mass. Inst. Tech, 08. Research assoc. physical chem, Mass. Inst. Tech, 08-12, asst. prof. physical chem. research, 12-14; *prof. chem. and director, chem. lab, Clark, 14*- Am. Acad; Wash. Acad. Solutions; organic radicals; vapor electric apparatus; seals; glasses.
- Kraus, Prof. E(dward) H(enry)**, University of Michigan, Ann Arbor, Mich. *Mineralogy*. Syracuse, N. Y, Dec. 1, 75. B.S, Syracuse, 96, M.S, 97, Sc.D, 20; Ph.D, Munich, 01. Instr. German and miner, Syracuse, 96-99, miner, 01-02, assoc. prof, 02; head, dept. science, high sch, Syracuse, 02-04; asst. prof. miner, *Michigan, 04-06*, junior prof, 06-07, miner. and petrog, 07-08, *prof, 08-19, crystallog. and miner, 19*-, *director, miner. lab, 08*-, acting dean, *summer session, 11-15, dean, 15*-, acting dean, *col. pharm, 20-21*. Prof. chem. and geol, Syracuse, summer, 03, 04. A.A; Geol. Soc; Chem. Soc; Optical Soc; Miner. Soc. (pres, 20); Min. Eng; Mich. Acad. (v. pres, 07, pres, 19). Descriptive mineralogy; chemical and physical crystallography; optical constants of crystals at varying temperatures.
- Kraus, Prof. E(zra) J(acob)**, University of Wisconsin, Madison, Wis. *Botany*. Lansing, Mich, March 19, 85. B.S, Mich. Agr. Col, 07; Ph.D, Chicago, 17. Scientific asst, U. S. Dept. Agr, 07-09; prof. hort. research, Oregon Col, 09-18, dean, art and science departments, 18-19; *prof. applied bot, Wisconsin, 19*- Bot. Soc; Soc. Hort. Sci; Soc. Prom. Agr. Sci; Wash. Entom. Soc. Applied botany; plant morphology and physiology.
- Krause, Prof. Allen K(ramer)**, Johns Hopkins Hospital, Baltimore, Md. *Medicine*. Lebanon, Pa, Feb. 13, 81. A.B, Brown, 01, A.M, 02; M.D, Hopkins, 07. Asst. and instr. path, Hopkins, 07-09; asst. director, Saranac Lab, 09-16; *assoc. prof. med, Hopkins, 16*- Director, Dows tuber. research fund, Hopkins, 16-, assoc. physician and later physician in charge, Phipps Tuber. Dispensary, Hopkins Hosp, 16-; lecturer, Trudeau Sch. of Tuber, 16-; managing ed, 'Am. Rev. Tuber,' 17-; assoc. ed, 'Int. Med. Surg. Rev,' 20- Ass. Path. and Bact; Ass. Anat; Ass. Tuber. (director, 17-); Am. Physicians; Soc. Clin. Invest; Ass. Study Int. Secretions; Med. Educ. Ass. Infection, pathology and immunity of tuberculosis.
- Krauskopf, Prof. Francis C(raig)**, University of Wisconsin, Madison, Wis. *Chemistry*. Richmond, Ind, Nov. 13, 77. A.B, Indiana, 04; A.M, Wisconsin, 07, Ph.D, 09. Asst. chem, Indiana, 03-04; Cornell, 04-06; instr, *Wisconsin, 06-11*, asst. prof, 11-19, *assoc. prof, 19*- Chem. Soc. Analytical and inorganic chemistry; sep-

- aration of lithium; vapor pressure; absorption of carbon monoxid.
- Krauss, Frederick G(orge)**, Hawaii Agricultural Experiment Station, Haiku, Hawaii. *Agronomy*. San Francisco, Calif, May 6, 70. Stanford, 91-94; California, 98-01. Supt. seed growing, Sunset Seed and Plant Co, Menlo Park, Calif, 94-98; in charge field work, propagating houses and conservatories, Calif. Exp. Sta, 98-01; agriculturist and instr. agr, Kamehameha Schools, Honolulu, Hawaii, 01-06; expert in agr, Hawaii Exp. Sta, 06-10, prof. agron, Col. of Hawaii, 10-15, *supt. exten. Hawaii Exp. Sta*, 15- Proprietor, New Era Homestead Farms, 12- A.A.; Soc. Agron; Farm Econ. Ass. Rice, cotton and forage crops; rice investigations in China and Japan.
- Kraybill, Prof. Henry R(eist)**, Durham, N. H. *Chemistry*. Mt. Joy, Pa, May 1, 91. B.S., Pa. State, 13, fellow, 13-14; M.S., Chicago, 15, Ph.D, 17. Asst. chem, exp. sta, Pa. State, 13-15, instr. agr. chem, 15-17; teaching fellow, Chicago, 16-17; asst. physiologist, bur. plant indust, U. S. Dept. Agr, 17-19; *prof. agr. chem, N. H. Col. and chemist, Exp. Sta*, 19- Chem. Soc; Soc. Hort. Sci; Bot. Soc. Chemistry, culture and breeding of tobacco; chemistry of apples, peaches and tomatoes.
- Krecker, Prof. F(rederick) H(artzler)**, Ohio State University, Columbus, Ohio. *Zoology*. Tokyo, Japan, Dec. 21, 81. A.B, Princeton, 04, Class of '77 fellow, 08-09, Ph.D, 09; A.M, Cornell, 06; Freiburg, Munich and Chicago, 06-08. Prof. biol, Marietta, 09-14; *asst. prof. zool, Ohio State*, 14-, *acting director, lake lab*, 16- Ed, 'Ohio Jour. Science,' 18- A.A.; Soc. Zool; Ecol. Soc; Ohio Acad. Regeneration; ecology.
- Kreider, Prof. D(avid) Albert**, 298 Lawrence St, New Haven, Conn. *Physics, Chemistry*. Annville, Pa, March 23, 71. A.B, Lebanon Valley, 92; Ph.D, Yale, 95; Göttingen, 01. Lab. asst. chem, Yale, 93-95, asst, 95-96, instr. *physics*, 96-02, asst. prof, 02-20, *assoc. prof*, 20- Physical Soc; Ass. Prof; Conn. Acad. Relation between structural and magneto-optic rotation; analysis of potassium and sodium; detection and quantitative determination of perchlorates; preparation of perchloric acid; iodine titration voltameter.
- Kreisinger, Henry**, Combustion Engineering Corp, New York, N. Y. *Engineering*. Radnice, Bohemia, Feb. 17, 76. B.S, Illinois, 04, M.E, 06. Engineer, U. S. Bur. Mines, 04-10, in charge, fuel efficiency lab, 13-20; *research engineer, Combustion Eng. Corp*, 20- Fuel engineer, Clinchfield Fuel Co, 10-13. Chanute medal, West. Soc. Eng. A.A; Mech. Eng; West. Soc. Eng. Fuel combustion; heat transmission; furnace design.
- Kremers, Prof. Edward**, University of Wisconsin, Madison, Wis. **Plant chemistry*. Milwaukee, Wis, Feb. 23, 65. Phila. Col. Pharmacy, 84-85; Ph.G, Wisconsin, 86, B.S, 88; Ph.D, Göttingen, 90. Instr. pharmacy, *Wisconsin*, 90-92, *prof. pharmacut. chem*, 92-, *director, course in pharmacy*, 99-, *Pharm. Exp. Sta*, 12- Ed, 'Pharmacut. Rev,' 96-09; 'Pharmacut. Archives'; Ebert prize, Am. Pharmacut. Ass, 88, 00. A.A; Chem. Soc; Pharmacut. Ass. (chairman, sci. sect, 98, historian, 04-12); Am. Conf. Pharmaceut. Faculties (pres, 02); Wis. Acad. Chemistry of volatile oils and their constituents; sesquiterpenes and derivatives; quinhydrone as plant pigments; bibliography of the chemical constituents of volatile oils; classification and occurrence of the constituents of volatile oils according to modern principles; the Monardas, a phyto-chemical study; classification of carbon compounds.
- Kremers, Dr. H(arry) C(leveland)**, Lake Bluff, Ill. *Chemistry*. Springfield, S. Dak, Jan. 28, 89. A.B, Hope, 13; M.S, Illinois, 15, Ph.D, 17. Asst. chem, Illinois, 13-17, instr, 17-18; production chemist, Fansteel Products Co, 18-20; *assoc. chem, Illinois*, 20- Chem. Soc. Inorganic chemistry; rare elements.
- Kress, Dr. Otto**, Forest Products Laboratory, Madison, Wis. *Chemistry*. B.S, Columbia, 06, A.M, 07, Ph.D, 09. Instr. chem, Columbia, 06-09; with various pulp and paper mills, 09-13; tech. expert, Badische Co, 13-16; *in charge research, sect. pulp and paper, forest products lab, U. S. Forest Service*, 16- Chem. Soc; Soc. Chem. Indust; Ass. Pulp and Paper Indust. Pulp; paper; cellulose.
- Kressmann, F(rederick) W(illiam)**, Continental Turpentine and Rosin Corp, Laurel, Miss. *Chemistry*. Chicago, Ill, Feb. 6, 88. B.S, Illinois, 09, M.S, 10. Asst. chem. eng, Illinois, 09-10; asst. chemist forest products, forest products lab, U. S. Forest Service, 10-12, chemist, 12-16; *v. pres. and manager, Cont. Turp. and Rosin Corp*. Lecturer forest products, Wisconsin, 14. A.A; Chem. Soc; Ill. Acad. Bituminous coals; dyes and tannins of woods and barks; acid catalytic hydrolysis of wood waste.
- Kretz, Dr. Walter C(oluzzi)**, 805 Edgewood Ave, Trenton, N. J. *Astronomy, Engineering*. Tölzt, Bavaria, Aug. 20, 78. A.B, Columbia, 96, fellow, 98-99, A.M, 97, Ph.D, 99, M.E, 01. Lecturer astron, Columbia, 01; *engineer*, Bacter. Sewage Purification Co, N. Y, 02; *John A. Roebling's Sons Co*, 02- Asst. geod, summer sch, Columbia, 96-02. A.A. Photographic determination of position of stars.
- Kribs, Dr. Herbert Guy**, 5857 Cobbs Creek Parkway, Philadelphia, Pa. *Zoology*. Trempealeau, Wis, Jan. 23, 70. A.B, Oberlin, 98; B.D, Union, 04; Ph.D, Pennsylvania, 08. Asst. zool, Pennsylvania, 08-09, instr, 09-10, lecturer animal behavior, 10-18; *prof. biol, Hahnemann Sch. of Science*, 20- A.A; Soc. Nat; Soc. Zool; Entom. Soc; Micros. Soc.
- Kriebble, Prof. Vernon K(rieble)**, Trinity College, Hartford, Conn. *Chemistry*. Worcester, Pa, March 4, 85. Ph.B, Brown, 07; M.S, McGill, 09, Ph.D, 13; Hopkins; Pennsylvania; Jefferson Med. Col. Demonstrator *chem*, McGill, 07-12, lecturer, 12-14, asst. prof, 14-20; *Scoville prof, Trinity (Conn)*, 20- Gov. general's silver medal, McGill, 12. A.A; Chem. Soc. Amygdalins; enzymes, with special reference to emulsins and oxynitrilases.
- Kroeber, Dr. A(lfred) L**, University of California, Berkeley, Calif. **Anthropology*. Hoboken, N. J, June 11, 76. A.B, Columbia, 96, A.M, 97, Ph.D, 01. Asst. rhetoric, Columbia, 97-99;

- curator *anthrop.*, Calif. Acad. Sciences, 00, 03-06; instr. *California*, 01-06, asst. prof, 06-12, assoc. prof, 12-19, *prof*, 19-, *curator*, 03-Guest, Am. Museum Nat. Hist, 16-17. A.A. (v. pres, 07); *Anthrop. Ass.* (pres, 17); *fei. Ethnol. Soc.*; *Folk-lore Soc.* (pres, 06); *Archeol. Inst.* (sec'y, San Francisco sect, 05-08). *Ethnology*; *American languages*; *ethnology of California*; *North American Indians*; *relations of anthropology and the biological sciences*.
- Krohn, Dr. W(illia)m O(tterhein)**, Heyworth Building, Chicago, Ill. *Psychology, Medicine*. Galion, Ohio, March 23, 68. A.B., Western, 87; Ph.D., Yale, 89; senior fellow, Clark, 92; M.D., Northwestern, 05. Prof. psychol, Western Reserve, 89-91; Illinois, 92-97; psychologist, State Insane Hosp, Kankakee, Ill, 97-00. Ed, 'Child Study Monthly'; 'The Psychiatrist.' A.A.; Ill. Child Study Soc. (ed, 'Trans'); Berlin Psychol. Gesell. Child-study; psychiatry; physiology and hygiene; laboratory studies of mental peculiarities of the insane; reaction-time; sense disturbances; mental temperament in children as sequella of ordinary children's diseases.
- Kropff, Dr. Alfred H(emmer)**, Kew Gardens, New York, N. Y. *Chemistry*. New York, Jan. 2, 87. B.S., Columbia, 07, A.M., 08, Ph.D., 09. Research asst. to Prof. M. T. Bogert, 09-10; *pres*, *Hoffman and Kropff Chem. Co.* 10- Organic chemistry; chemistry of petroleum oils.
- Krout, Dr. W(ebster) S(herburn)**, Agricultural Experiment Station, Amherst, Mass. *Botany*. North Berne, Ohio. B.S., Ohio, A.M.; Ph.D., Rutgers. Asst. bot, New Jersey, and plant path, Exp. Sta, 15-17; *field pathologist*, Mass. *Exp. Sta.*, 17- *Phytopath. Soc.* Plant pathology and bacteriology.
- Kruesi, August H**, General Electric Co, Schenectady, N. Y. *Electrical engineering*. Newark, N. J., March 28, 76. B.E., Union, 98, M.E.E., 06. Design. engineer, British Thomson-Houston Co, 98-00; *Gen. Elec. Co.*, 00-, *engineer in charge construction eng.*, 08- Assoc. Elec. Eng; assoc. Mech. Eng; East. N. Y. Soc. Eng. Construction engineering.
- Krumbhaar, Prof. E(dward) B(ell)**, University of Pennsylvania, Philadelphia, Pa. *Medicine*. Philadelphia, Aug. 1, 82. A.B., Harvard, 04; M.D., Pennsylvania, 08, fellow, 13-14, Ph.D., 16. Res. pathologist, Pa. Hosp, 08-09; instr. *med.*, *Pennsylvania*, 12-15, assoc, 15-16, asst. prof, 16-20, *assoc. prof*, *grad. sch.*, 20- Director, lab, Phila. Gen. Hosp, 20- A.A.; Am. Physicians; *Physiol. Soc.*; *Ass. Path. and Bact.*; *Soc. Exp. Biol.*; *Soc. Exp. Path.*; *Soc. Clin. Invest.*; *Am. Med. Ass.*; *Phila. Col. Physicians*; *Phila. Path. Soc.*; *Phila. Physiol. Soc.* Cardiac pathology; electrocardiography; physiology and pathology of spleen and bone marrow.
- Krumwiede, Charles**, Bronxville, N. Y. **Bacteriology*. New York, N. Y., 79. A.B., Columbia, 02, M.D., 05. *Asst. director*, *bur. laboratories*, *Dept. Health*, N. Y. City; *assoc. prof. bacter. and hygiene*, *Univ. and Bellevue Hosp. Med. Col.* Ass. Path. and Bact; *Soc. Bact.* (v. pres, 19, pres, 20); *Soc. Immunol.*; *Ass. Tuber.*; *Pub. Health Ass.* Tuberculosis; typhoid and paratyphoid infections; pneumonia; acute respiratory diseases.
- Kruse, Prof. T(heophile) K(arl) T(heodore)**, University of Pittsburgh, Pittsburgh, Pa. *Physiology*. Sappington, Mo, March 3, 88. A.B., Missouri, 12, A.M., 13, Ph.D., 18. Asst. *physiol. and pharmacol.*, 12-14, instr, 14-16; *Pittsburgh*, 16-19, asst. prof, 19-20, *assoc. prof.*, 20- A.A.; *Physiol. Soc.* Pharmacology; muscle physiology and pharmacology; pharmacology of *Acacia*.
- Kudo, Dr. R(okusaburo)**, University of Illinois, Urbana, Ill. *Zoology*. Japan, July 25, 86. D.A.Sc., Tokyo. Instr. Tokyo Agr. Col, 10-11, protozoologist, Exp. Sta, 11-15; research asst, Rockefeller Inst, 16-18; *instr. zool.*, *Illinois*, 18- A.A.; *Soc. Zool.*; *Micros. Soc.* Parasitic Protozoa; Cnidosporidia.
- Kugelmass, Prof. I(saac) Newton**, Howard College, Birmingham, Ala. *Chemistry*. New York, N. Y., June 28, 96. B.S., Col. City of N. Y., 16, fellow, 17; A.M., Columbia, 17. Instr. chem, Columbia, 18; head, dept. chem. and physics, secondary inst, Pub. Sch, 63, N. Y. City, 18; *prof. chem.*, *Howard Col.*, 18- Lecturer, Board of Educ, N. Y. City; consultant, scientific laboratories, Associated Laundries. A.A.; Chem. Soc; N. Y. Acad; Ala. Tech. Ass. Colloids; laundering chemistry.
- Kuhlmann, Dr. Fred**, Minnesota School for Feeble-Minded, Faribault, Minn. *Psychology*. Davenport, Iowa, March 20, 76. A.B., Nebraska, 99, fellow, 99-01, A.M., 01; fellow, Clark, 01-03, Ph.D., 03, hon. fellow, 03-05. Asst. psychol, Clark, 01-05; Wisconsin, 05-06; lecturer, Clark, 06-07; instr, Illinois, 07-10; *director research*, *Minnesota Sch. for Feeble-Minded*, 10- A.A.; Psychol. Ass; Ass. Study Feeble-Minded. Experimental studies in mental deficiency; mental imagery and memory; development of instincts and habits in young birds; mental tests; psychological, social and educational aspects of mentally deficient.
- Kuhn, Prof. H(arry) W(aldo)**, Ohio State University, Columbus, Ohio. *Mathematics*. Etna, Ohio, May 26, 74. B.S., Ohio State, 97, fellow, 97-98; Erastus Brooks fellow, Cornell, 99-00, Ph.D., 01. Asst. *math.*, Cornell, 00-01; asst. prof, *Ohio State*, 01-07, assoc. prof, 07, *prof.*, 08- Math. Soc. Imprimitive substitution groups.
- Kümmel, Dr. Henry B(arnard)**, 917 Edgewood Ave, Trenton, N. J. **Geology*. Milwaukee, Wis, May 25, 67. A.B., Beloit, 89; A.M., Harvard, 92; fellow, Chicago, 92-95, Ph.D., 95. Instr, acad, Beloit, 89-91; asst. geol, Harvard, 91-92; asst. prof. physiog, Lewis Inst, Chicago, 96-99; asst. state geologist, N. J., 99-02, *state geologist*, 02- A.A.; Geol. Soc; Ass. State Geologists (pres, 08-). Glacial and stratigraphical geology; Paleozoic rocks of New Jersey; stratigraphy of clays of New Jersey; areal and economic geology of New Jersey.
- Kunerth, Prof. W(illia)m**, 427 Welch Ave, Ames, Iowa. *Physics*. LaCrosse Co, Wis, Aug. 19, 73. A.B., Wisconsin, 04, A.M., 10; Chicago. Instr, high schools, Wis, 04-07; *physics*, *Iowa State*, 07-16, *assoc. prof.*, 16- A.A.; Optical Soc; Illum. Eng. Soc; Iowa Acad. Illumination; kerosenes; lighting systems; reflecting power of metals.
- Kunkel, Prof. B(everly) W(augh)**, Lafayette College, Easton, Pa. *Zoology*. Harrisburg, Pa,

- Oct. 27, 81. Ph.B, Yale, 01, Ph.D, 05; Freiburg, 11-12. Asst. biol. Sheffield Sci. Sch, Yale, 01-05, instr. 05-11; *prof. zool.* Beloit, 12-15; *biol.* Lafayette, 15- A.A.; Soc. Zool; *Ass. Anat.*; *Ass. Prof.* Vertebrate embryology; taxonomy of amphipods; Crustacea.
- Kunkel, Dr. L(ouis) O(tto)**, Experiment Station, Sugar Planters Association, Honolulu, Hawaii. *Botany.* Mexico, Mo, May 7, 84. B.S, Missouri, 09, A.B, 10, A.M, 11; Ph.D, Columbia, 14. Pathologist, bur. plant indust, U. S. Dept. Agr, 14-20; *assoc. pathologist*, *Hawaiian Sugar Planters Ass.*, 20- Bot. Soc; Phytopath. Soc. Plant pathology.
- Kuntz, Prof. Albert**, St. Louis University School of Medicine, St. Louis, Mo. *Anatomy, Zoology.* Batesville, Ind, March 19, 79. A.B, Morning-side, 04; fellow, Iowa, 09-10, Ph.D, 10, senior fellow, 10-11; M.D, St. Louis, 18. Prof. nat. science, Charles City, 05-08; instr. biol, Iowa, 11-13; asst. prof, *St. Louis*, 13-16, *assoc. prof. anat. and biol.*, 16-19, *prof.*, 19- Investigator, Bur. Fisheries, summers, 13-16. A.A; *Ass. Anat.*; Soc. Zool; fel. Iowa Acad. Development of the sympathetic nervous system and of the adrenals; innervation of the digestive tube and the gonads; embryology of fishes; adaptive color changes; superfetation.
- Kunz, Dr. George F(rederick)**, 401 Fifth Ave, New York, N. Y. *Mineralogy, Geology.* New York, Sept. 29, 56. Pub. schools; Cooper Union, 72; hon. A.M, Columbia, 98; Ph.D, Marburg, 03; Sc.D, Knox, 07. Asst, chem. lab, Cooper Union, 75-76; *gem expert and v. pres.*, *Tiffany and Co.*, 79-; special agent in charge of precious stones, U. S. Geol. Surv, 83-09. Hon. special agent of mines, Omaha Expos, 87; Paris, 89; Kimberley, 91; Columbian, 93; Nashville, 98; Pan-Am, 01; La. Purchase, 04; Lewis and Clark, 05; special agent, U. S. Fish Commission, 92-98; research curator precious stones, Am. Museum Nat. Hist; chairman, hist. exhibits, Hudson-Fulton Celebration, 09. Officier de l'Instruction Pub, 00; Chevalier Légion d'honneur; Knight of St. Olaf, Norway; Officer Order of the Rising Sun, Japan. A.A; Geol. Soc; Chem. Soc; Min. Eng; Am. Scenic and Hist. Preserv. Soc. (pres); fel. N. Y. Acad. (v. pres, 10, pres, 13); N. Y. Miner. Club (founder and pres). Gems and precious stones of North America; meteorites; folk-lore of precious stones; radium; American pearls; industrial uses of precious stones.
- Kunz, Prof. Jacob**, University of Illinois, Urbana, Ill. **Physics.* Brittnau Aargau, Switzerland, Nov. 3, 74. Ph.D, Zürich, 02. Asst. and lecturer, Polytech, Zürich, 00-07; instr. physics, Michigan, 08-09, asst. prof, 09-15; *assoc. prof. math. physics*, Illinois, 15- Univ. Ill. solar eclipse exped, 18. Physical Soc; Astron. Soc; Soc. de Physique. Magnetism; photo-electricity; theory of light; corona; Röntgen spectra.
- Kunze, Prof. Edward J(oseph)**, State College, Pa. *Industrial engineering.* Newark, N. J, March 24, 75. B.S, Cooper Union, 99; M.E, Cornell, 01, 04; N. Y. Univ, 08-09; Wisconsin, 09-10. Toolmaker, machinist and draftsman, 89-07; tutor mech. eng, Columbia, 07-08; instr. physics, Pratt Inst, 08-09; steam and gas eng, Wisconsin, 09-10; asst. prof. mech. eng, Mich. State Col, 10-14; prof, Okla. Col, 14-17; capt, constr. div, U. S. A, 17-19; *prof. indust. eng. and head of dept.*, Pa. State, 19- A.A; Mech. Eng; Eng. Educ; Indust. Eng. (v. pres. in charge research and director); Ass. Prof. Engineering education; heat engines; heat generators; smoke abatement; boiler furnaces; heat treatment of steel; ventilation.
- Kurtz, H(enry) F(rederick)**, 899 Meigs St, Rochester, N. Y. *Optics.* Rochester, March 30, 88. B.S, Rochester, 13. *In scientific bur.*, *Bausch and Lomb Optical Co.* Optical Soc. (sec'y, Rochester sect, 17-19).
- Kurtzweil, Carl**, University of Tennessee, Knoxville, Tenn. *Plant pathology.* Des Moines, Iowa, July 12, 91. B.S, Iowa State, 17; M.S, Minnesota, 19. Asst, office cereal investigations, bur. plant indust, U. S. Dept. Agr, 18, *asst. pathologist*, 18- A.A; Phytopath. Soc. Cereal breeding for disease resistance.
- Küstermann, Dr. W(alter) W(olleben)**, 707 S. Race St, Urbana, Ill. *Mathematics, Electrical engineering.* Green Bay, Wis, July 10, 88. A.B, Wisconsin, 08, E.E, 09; Ph.D, Munich, 13. Instr, Pa. State, 13-14; Michigan, 14-18; elec. engineer, Allis-Chalmers Mfg. Co, 18-19; *assoc.*, Illinois, 19- Math. Soc; Math. Ass. Double Fourier's series; functions of several variables; electrical machines.
- Kutchin, Mrs. H(arriet) L(ehmann)**, The Maplewood, Green Lake, Wis. *Zoology.* Neosho, Wis, April 10, 79. A.B, Ripon, 02; A.M, Northwestern, 03, fellow, 03-04; Bermuda Biol. Sta, 04; Alice Freeman Palmer fellow, Wellesley, 04-05; Radcliffe, 04-05; American Women's table, Naples Zool. Sta, 05; Chicago, 05-06. Asst. zool, Ripon, 01-02, Northwestern, 02-03; instr. biol, Montana, 07-08. A.A; Soc. Zool; Ass. Anat; Wis. Acad. Crustacea; mammalian embryology; the peripheral nervous system of Amphioxus.
- Kyes, Prof. Preston**, University of Chicago, Chicago, Ill. **Experimental medicine.* North Jay, Maine, Jan. 24, 75. A.B, Bowdoin, 96, A.M, 00; Harvard, 98-99; M.D, Hopkins, 00. *Assoc. anat.*, Chicago, 00-02, instr, 02-03, asst. prof, 04-06, exp. path, 06-12, *prev. med.*, 12-16, *assoc. prof.*, 16-17, *prof.*, 17- Fellow, Rockefeller Inst, 02-03, 04-05; *assoc.* Memorial Inst. for Infectious Diseases, Chicago, 04-09; Royal Inst. Exp. Therap, Frankfurt-on-the-Main, 00-02, 04-06. Ass. Anat; Ass. Path. and Bact. The structure of toxins and antitoxins; structure of human spleen; the structure of venoms; venom hemolysis; fixed tissue phagocytes; serum therapy in pneumonia; experimental pneumonia.
- Kyle, Dean E(dwin) J(ackson)**, College Station, Tex. *Horticulture.* Kyle, Tex, July 22, 76. B.S.A, Texas Col, 99; B.S.A, Cornell, 01, M.S.A, 02. Asst. prof. hort, Tex. Col, 02-05; *prof.*, 11-, *dean, sch. agr.*, 11- Soc. Hort. Sci; Nut Growers Ass. Pomology; vegetable gardening.

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Laake, Ernest William, Box 208, Dallas, Tex. *Entomology.* New Ulm, Tex, Sept. 22, 87. B.S, Texas Col, 13. *Scientific asst.*, bur. entom, U. S.

- Dept. Agr.*, 13- Gold medal, Tex. Col. 13. A.A.; Entom. Soc.; assoc. Ass. Econ. Entom. Insects affecting man and domestic animals.
- Lacey, Prof. William Noble**, California Institute of Technology, Pasadena, Calif. *Chemistry*. California, 90. A.B, Stanford, 11, Ch.E, 12; M.S, California, 13, Ph.D, 15. Asst. chem, Stanford, 11-12; California, 12-15; research chemist, Giant Powder Co, 15; research assoc. chem, Mass. Inst. Tech, 16; instr, *Calif. Inst. Tech.*, 16-17, *assoc. prof. chem. eng.*, 19- Chem. Soc. Industrial and engineering chemistry.
- Lachman, Dr. Arthur**, 143 14th Ave, San Francisco, Calif. **Chemistry*. San Francisco, Calif, Dec. 4, 73. B.S, California, 93; Ph.D, Munich, 95. Instr. chem, Michigan, 96-97; prof, Oregon, 97-02, dean, colleges of eng, 00-02; tech. chemist, 02-19; Great Western Electro-Chem. Co, 18-19; *consulting chem. engineer*, 19- Prof. chem, summer sch, California, 02. A.A.; Chem. Soc.; Soc. Chem. Indust; Chem. Eng. Valence of nitrogen in oxygen compounds; azoxybenzene nitramid; technical and industrial applications of organic and physical chemistry.
- Lacy, Dr. B(urritt) S(amuel)**, 915 Edgewood Drive, Charleston, W. Va. *Chemistry*. Dubuque, Iowa, March 4, 82. A.B, Harvard, 03, A.M, 04, fellow, 05-06, Ph.D, 06, Parker fellow, 06-07. Asst. chem, Harvard, 04-06; instr, Illinois, 08-09; *industrial research*, 10- A.A. Electrochemistry; chemistry of flames; Thomson effect in electrolytes; separation of gases; chlorination of hydrocarbons; alcohols.
- Lacy, Prof. Walter N(ind)**, Foochow, China. *Geography*. Pleasant Prairie, Wis. Dec. 12, 84. B.S, Ohio Wesleyan, 06; A.B, Harvard, 07, A.M, 08. *Prof. geog. and physics*, *Anglo-Chinese Col. High Sch.*, 08-15, 16- Asst. geol, Ohio Wesleyan, 16; contributing ed, 'Jour. of Geog.', 17- Climatology.
- Ladd, Dr. C(arl) E(dwinn)**, Cornell University, Ithaca, N. Y. *Agriculture*. McLean, N. Y, Feb. 25, 88. B.S.A, Cornell, 12, Ph.D, 15. Director, N. Y. State Sch. Agr, Delhi, 15-17; specialist in agr, N. Y. State Dept. Educ, 17-19; director, N. Y. State Sch. Agr, Alfred, 19-20; *prof. farm management*, Cornell, 20- Farm Econ. Ass. Farm management; rural education.
- Ladd, Pres. E(dwinn) F(remont)**, Agricultural College, Fargo, N. Dak. *Chemistry*. Stark, Maine, Dec. 13, 59. B.S, Maine, 84. Asst. chemist, N. Y. State Exp. Sta, 84-87, chief chemist, 87-90; prof. chem, N. Dak. Col, and chemist, Exp. Sta, 90-16, *pres.*, 16-; food commissioner and state chemist, N. Dak, 00-16; *U. S. senator*, 21- Ed, 'N. Dak. Farmer and Sanitary Home', 98-16. N. Dak. administrator, Food Ad, 17-19. A.A.; Chem. Soc.; Agr. Chem; Soc. Prom. Agr. Sci. Foods; agricultural chemistry; soils; bleached flour; adulterations; wheat; paints.
- Ladd, Dr. Geo(rge) E(dgar)**, U. S. Department of Agriculture, Washington, D. C. *Geology*. Haverhill, Mass, July 23, 64. A.B, Harvard, 87, A.M, 88, Ph.D, 93; Munich, 93, 94. Asst, U. S. Geol. Surv, 87-89; chief asst, Mo. Geol. Surv, 89-90; asst. geol, Harvard, 90-92; asst. geologist and chemist, Ga. Geol. Surv, 95-96; prof. geol. and mining, and director, sch. of mines and metal, Missouri, 96-08; pres, Okla. Sch. of Mines and Metal, 08-13; N. Mex. Col, 13-17; *econ. geologist, bur. pub. roads, U. S. Dept. Agr.*, 17- Asst. geologist, Tex. Geol. Surv, 89; U. S. Geol. Surv, 91-92; supt, Mass. mineral and building stone exhibit, Columbian Expos, 93; Mo. mining and metal. exhibit, La. Purchase Expos, 04; instr, summer sch, Harvard, five summers. Geol. Soc; Min. Eng; Eng. Educ; Min. and Metal. Soc.
- Ladd, Prof. George Trumbull**, 204 Prospect St, New Haven, Conn. **Psychology, Philosophy*. Painesville, Ohio, Jan. 19, 42. A.B, Western Reserve, 64, D.D, 79, LL.D, 95; B.D, Andover Theol. Sem, 69; hon. A.M, Yale, 81; LL.D, Princeton, 96. Pastor, Edinburg, Ohio, 69-71; Milwaukee, Wis, 71-79; *prof. philos.*, Bowdoin, 79-81; Yale, 81-06, *moral philos. and metaphysics*, 06- Lecturer, Andover Theol. Sem, 79-82; Harvard Divinity Sch, 81-82; Yale Theol. Sem, 81-83; Doshisha, Japan, 92; conductor grad. sem. in ethics, Harvard, 95-96; lecturer, Chicago, 96; Tokyo and Imp. Educ. Soc, Japan, and Bombay and Madras, India, 99-00; special lecturer, Imp. and other universities, Japan, Imp. Educ. Associations of Tokyo, Kyoto and Sendai, and before Govt. Schools of Commerce, Tokyo, Kobe and Nagasaki, 06-07; unofficial adviser to Prince Ito, Korea, 07; lecturer educ, col. of women, Western Reserve, 08-09; delegate, World Cong. Psychol, 00. Second degree, Japanese Order of the Rising Sun; gold medalist, Imp. Educ. Soc. Japan. A.A.; Soc. Nat; Psychol. Ass; Philos. Ass; Oriental Soc; Conn. Acad; Japan Imp. Educ. Soc. Psychology; philosophy; philosophy of religion.
- Ladue, Prof. Pomeroy**, Penobscot Building, Detroit, Mich. *Mathematics*. Detroit, Mich, Oct. 23, 68. B.S, Michigan, 90. Instr. math, Michigan, 92-93; prof, N. Y. Univ, 93-05; treas, Mich. United Railways Co, 05-10; *public accountant*, 10- Sec'y, faculties of grad. sch. and sch. applied sci, N. Y. Univ. Math. Soc. (librarian, 95-01).
- LaFétra, Dr. Linnaeus E(dford)**, 113 E. 61st St, New York, N. Y. *Medicine*. Washington, D. C, Oct. 12, 68. A.B, Wesleyan, 91; M.D, Columbia, 94. *Assoc. diseases of children, Columbia*, 02-; chief, children's clinic, Vanderbilt Clinic, 02-; asst. attending physician, Babies' Hosp, 03- Lecturer pediatrics, N. Y. Polyclinic, 97-00, prof; visiting physician, children's div, Bellevue Hosp, 11-20; asst. attending pediatricist, Roosevelt Hosp, 03-06; ed, 'Archives of Pediat.' Harsen prize, Columbia, 94. Pediat. Soc; Am. Med. Ass; Am. Geog. Soc; N. Y. Acad. Bronchial asthma in children; infantile scurvy; anterior poliomyelitis; nutrition of feeble infants.
- La Forge, Dr. F(rederick) B(urrr)**, Bureau of Chemistry, Washington, D. C. *Organic chemistry*. Bridgeport, Conn, March 12, 82. B.S, Princeton, 05, A.M; Berlin, 05-09, Ph.D, 08. Asst, Rockefeller Inst, 10-12, assoc, 12-15; *with bur. chem, U. S. Dept. Agr.*, 15- Chem. Soc; Soc. Biol. Chem. Nucleic acid; chondroitin; sulphuric acid; pentosuria; sugars; corn cob utilization.

- LaForge, Dr. Laurence**, U. S. Geological Survey, Washington, D. C. *Geology, Geophysics*. New York, N. Y., Sept. 17, 71. Alfred, 87-92; A.B., Harvard, 99, A.M., 00, Austin fellow, 02-03, Ph.D., 03. Instr. astron., Alfred, 96-97; asst. geologist, U. S. Geol. Surv., 01-05; aid geol., U. S. Nat. Museum, 05-08; consulting geologist, 08-14; *geologist, U. S. Geol. Surv.*, 14- Meteorologist, Alfred, 95-97; ed. specialist geol., 'Standard Diet,' 11-12. Wash. Geol. Soc. Effect of topography on climate; crystallography of leadhillite; geology of Ellijay quadrangle and Cartersville district, Georgia; northeastern Massachusetts and southeastern New Hampshire; physiography of the Piedmont plateau and the Blue Ridge; stream erosion; periodicity of climate; stratigraphy and glacial geology of southwestern New York; geology of the Boston region.
- Lahee, Dr. Frederic H(enry)**, The Sun Co., Dallas, Tex. *Geology*. Hingham, Mass., July 27, 84. A.B., Harvard, 07, A.M., 08, Ph.D., 11. Asst. geol., Harvard, 06-09, instr., 09-12; Mass. Inst. Tech., 12-14, asst. prof. dynamical and field geol., 14-18; assoc. geologist, *Sun Oil Co.*, 18-20, *chief geologist*, 20- Instr. geol., Wellesley, 08-18; geologic aid, U. S. Geol. Surv., 12, field investigator, 13. A.A.; Geol. Soc.; Min. and Metal. Eng.; Ass. Petrol. Geol.; Southwest. Geol. Soc. Structural geology; petrology; metamorphism and metamorphic rocks; mineral growth during metamorphism; glacial geology; field geology.
- Laird, Prof. Elizabeth R(ebecca)**, South Hadley, Mass. *Physics*. Owen Sound, Ont., Dec. 6, 74. B.A., Toronto, 96; fellow, Bryn Mawr (Berlin), 98-99, Ph.D., 01; Cambridge, 09; Würzburg, 13-14; Chicago, 19. Instr. math, Ont. Ladies' Col., 96-97; *physics, Mt. Holyoke*, 01-03, *prof.*, 04- Substitute demonstrator physics, Bryn Mawr, 00; Sarah Berliner research fellow, 13-14. A.A.; Physical Soc. Solids vibrating in liquids; magnetic lag; spectrum analysis; soft X-rays.
- Laist, Frederick**, 218 W. Seventh St., Anaconda, Mont. *Metallurgy*. Cincinnati, Ohio, Oct. 30, 78. B.S., California, 01. Chief chemist, supt., blast furnace dept., asst. supt. and gen. supt., Anaconda Reduction Works; metal. manager, *Anaconda and Great Falls Reduction Works*, *Anaconda Copper Mining Co.*, 14-16, *gen. manager*, 16- Min. and Metal. Eng. (v. pres., 20; chairman, Mont. sect., 19); Chem. Soc. Metallurgy of copper and zinc.
- Lake, Dr. Dyer B(arker)**, 644 W. 204th St., New York, N. Y. *Chemistry*. South Shaftsbury, Vt., Oct. 19, 84. B.S., Syracuse, 09, M.S., 10; Columbia, 12-15; Ph.D., Cornell, 16. Prof. chem. and head of dept., Alfred, 10-12; asst. dept. soils, N. Y. State Col. Agr., Cornell, 13; instr., agr. dept., Columbia, 13-15; asst. chem., Cornell, 15-16; instr. physical chem. and head of dept., Lehigh, 16-18; asst. prof. animal husbandry, N. Y. State Col. Agr., Cornell, 18; chemist, Chile Exploration Co., 18-20; *chief chemist, Am. Chem. and Mfg. Corp.*, 20- Inorganic, physical and industrial chemistry; electrochemistry; dyeing and cleaning.
- Lake, Edward R(alph)**, U. S. Department of Agriculture, Washington, D. C. *Botany*. Peterboro, England, 60. B.S., Mich. Agr. Col., 85, M.S., 88. Instr. bot., Mich. Agr. Col., 86-88; Oregon Col., 88-91; Wash. State, 91-94; in newspaper work and politics, 94-97; instr. bot., Oregon Col., 97-10; *pomologist, U. S. Dept. Agr.*, 10- Govt. expert, Paris Exposit., 00; mem., House of Representatives, Oregon, 97-99. Pomol. Soc. (see'y, 12-20); Soc. Hort. Sci.; Oregon Acad. Pomology.
- Lamar, Prof. Richard V(anderhorst)**, University of Georgia, Augusta, Ga. *Pathology, Bacteriology*. Milledgeville, Ga., April 8, 83. M.D., 02. Scholar-assoc. path., Rockefeller Inst., 07-13; *prof. path. and bacter.*, Georgia, 13- A.A.; Ass. Path. and Bact.; Soc. Exp. Biol.; Harvey Soc. Pneumococcal infections; bacteriolysis; hemolysis; Gram negative Streptococci.
- Lamb, Alvin R(omaine)**, Iowa State College, Ames, Iowa. *Chemistry*. Bangor, Wis., April 23, 90. Beloit, 09-11; B.S., Wisconsin, 13, M.S., 15. Asst. agr. chem., Wisconsin, 12-14; *research chemist, Iowa Exp. Sta.*, 14-, *chief in nutrition*, 19- Second lieut., food and nutrition div., Sanit. C., 18-19. A.A.; Chem. Soc.; Soc. Animal Production; fel. Iowa Acad. Fermentation; animal nutrition.
- Lamb, Prof. Arthur B(ecket)**, Harvard University, Cambridge, Mass. **Chemistry*. Attleboro, Mass., Feb. 25, 80. A.B., A.M., Tufts, 00, 00-01; A.M., Harvard, 03, Ph.D., 04, traveling fellow (Leipzig, Heidelberg), 04-05; Ph.D., Tufts, 04, Sc.D., 20. Instr. chem., Tufts, 01-02; electrochem., Harvard, 05-06; prof. chem. and director, Havemeyer Chem. Lab., N. Y. Univ., 06-12; *prof. chem. and director of lab, Harvard*, 12- Chief defense chem. research, C.W.S., 17-19, lieut. col., 18-19; mem. U. S. Fixed Nitrogen Commission and director, Nitrogen Research Lab., 19-20; ed., 'Jour. Am. Chem. Soc.', 17- Chem. Soc.; Electrochem. Soc.; Wash. Acad.; Am. Acad.; Chem. Gesell. The development of eye muscles in *Squalus acanthias*; dehydration of periodic acid; the specific heat of aqueous solutions; isomerism in coumaric acid derivatives; mechanics of mitosis; change from green to violet in chromic chlorid solution; partial vapor pressures of binary mixtures; the potential of iron; equilibria among cobaltamines; density of aqueous salt solutions; Thomson effect in electrolytes; rhodium and iridium amines; removal of carbon monoxid from air; active charcoal; heat of adsorption.
- Lamb, Prof. Arthur L(incoln)**, Roland Park, Md. *Biology*. Baltimore, Md., Sept. 2, 65. A.B., Hopkins, 88, 90-92, 94-95. Instr. science, Friends Elementary and High Sch., Baltimore, 87-90, 92-94, 97-98; director, science dept., Tome Inst., Port Deposit, Md., 96-97; *science master, The Gilman Country Sch. for Boys*, 98- Soc. Nat. Development of poison teeth of *Ankistrodon contortrix*.
- Lamb, Dr. Daniel S(mith)**, The Home, Seventh and K Streets, N. W., Washington, D. C. *Medicine, Anthropology*. Philadelphia, Pa., May 20, 43. A.B., Cent. High Sch., Phila., 59, A.M., 64; M.D., Georgetown, 67; LL.D., Howard, 13. Acting asst. surgeon, U.S.A., 68-92; *prof. mat. med.*,

- Howard*, 73-77, anat, 77-; pathologist, Army Med. Museum, 92-20. Ed, 'Wash. Med. Annals.' A.A; fel. U. S. Col. Vet. Surg; D. C. Med. Soc. (pres); Wash. Acad. (v. pres); Wash. Anthropol. Soc. (v. pres, 07, pres). Anatomy and pathology.
- Lamb, Prof. G(eorge) F(ranklin)**, 234 Hartshorn St, Alliance, Ohio. *Geology*. Near Lancaster, Ohio, Aug. 20, 72. Ph.B, Ohio (Athens), 02; A.M, Ohio State, 09. Asst. biol. and geol, Ohio (Athens), 00-02; principal, high sch, 02-04; prof. biol. and geol, Mount Union, 05-16, geol, 16-19. A.A; Ohio Acad. The pre-glacial Cuyahoga drainage system; limestones of northeastern Ohio below the lower Kittanning coal; the Mississippian-Pennsylvanian unconformity in northern Ohio.
- Lambert, Dr. Adrian V(an) S(inderen)**, 168 E. 71st St, New York, N. Y. *Surgery*. New York, June 30, 72. A.B, Yale, 93; M.D, Columbia, 96. Asst. demonstrator anat, Columbia, 00-04, instr. surg, 04-12, assoc. prof, 12- Attending surgeon, Lincoln Hosp, 06-08; asst. attending surgeon, Bellevue Hosp, 05-09; Roosevelt Hosp, 08-12; assoc. attending surgeon, Presb. Hosp, 12-17, director surg. service, 17- Ass. Anat.
- Lambert, Dr. Alexander**, 43 E. 72d St, New York, N. Y. *Medicine*. New York, N. Y., Dec. 15, 61. A.B, Yale, 84, Ph.B, 85; M.D, Columbia, 88, alumni fellow, 91-92. Intern, *Bellevue Hosp.* 88-89, attending physician, 94-; prof. med, Women's Med. Col, N. Y., 98-99; clin. med, Cornell, 98- Consulting physician, various hospitals; bacteriologist, N. Y. Health Dept, 95-02. A.A; Am. Med. Ass. (chairman, judicial council, 10-17, pres, 19-20); Am. Acad. Med; Gastro-Enterol. Soc; N. Y. Path. Soc; N. Y. Med. Soc. (treas, 06-15, pres, 17-18). Sugars in liver; metabolism with uranium salts; sun stroke; tetanus; alcoholism and narcotism.
- Lambert, C(harles) A(lfred)**, Hercules Powder Co, Wilmington, Del. *Chemistry*. Philadelphia, Pa, May 31, 84. B.S, Pa. State, 10. *Chemist*, O. D, U.S.A., 02-07; Bur. Mines, 10-11; Ord. Bur, U.S.N., 11-13; Carnegie Steel Co, 13-15; *Hercules Powder Co*, 15- Chem. Soc; N. Y. Chemists Club. Manufacture of ether; fractional distillation.
- Lambert, Dr. Charles I(rwin)**, P. O. Box 175, White Plains, N. Y. *Psychiatry*. B.S, Iowa, 01, M.S, M.D, 03. Instr. path, Iowa, 04; asst. neuropath, N. Y. State Psychiat. Inst, 04-10; pathologist, Manhattan State Hosp, 10-13; first asst. physician, *Bloomington Hosp*, 13- Lecturer mental hygiene, Columbia and Teachers Col. Psychopath. Ass; Medico-Psychol. Ass; N. Y. Psychiat. Soc. (sec'y). Neuropathology; clinical psychiatry.
- Lambert, Dr. F(red) D(ayton)**, Tufts College, Mass. *Biology*. Muscatine, Iowa, Oct. 28, 71. Ph.B, Tufts, 94, A.M, Ph.D, 97. Asst. biol, Tufts, 96-97, instr, 97-98; sub-master, Edward Little High Sch, Auburn, Maine, 98-99; instr. nat. hist, Tufts, 99-04, asst. prof. biol, 04-13, prof. bot, 13- A.A; Bot. Soc; New Eng. Bot. Club (v. pres, 08, pres, 15-17); Am. Acad; Boston Soc. Nat. Hist; Boston Nat. Club. Morphology and life histories of green Algae.
- Lambert, Prof. P(reston) A(lbert)**, 323 Center St, Bethlehem, Pa. *Mathematics*. Hellertown, Pa, Oct. 30, 62. A.B, Lehigh, 83, A.M, 92; Göttingen and Berlin, 92-93. Teacher, high sch, Washington, D. C, 83-84; instr. math, Lehigh, 85-96, asst. prof, 96-06, prof, 06- A.A; Math. Soc; Eng. Educ; Philos. Soc. Solution of algebraic equations in series; building up solutions of differential equations.
- Lambert, Dr. Samuel W(aldron)**, 130 E. 35th St, New York, N. Y. *Medicine*. New York, June 18, 59. A.B, Yale, 80, Ph.B, 82, hon. A.M, 05; M.D, Columbia, 85. Attending physician, Nursery and Child's Hosp, N. Y., 90-96; Lying-in Hosp, N. Y., 90-05; N. Y. Hosp, 96-10; *St. Luke's Hosp*, 06-; prof. applied therapist, Columbia, 03-14, clin. med, 14-19, dean, Col. Physicians and Surgeons, 04-19, emer. dean, 19- A.A; Am. Physicians; Clin. Soc; Am. Med. Ass; N. Y. Acad. Med.
- Lambert, W(alter) D(avis)**, U. S. Coast and Geodetic Survey, Washington, D. C. *Geodesy*. West New Brighton, N. Y., Jan. 12, 79. A.B, Harvard, 00, A.M, 01; Harrison fellow, Pennsylvania, 07-08. Instr. math, Maine, 02-04; with U. S. Coast and Geod. Surv, 04-07; instr. math, Pennsylvania, 08-11; with U. S. Coast and Geod. Surv, 11- Lieut, corps engineers, 17-19. A.A; Math. Soc; Math. Ass; Wash. Acad; Wash. Philos. Soc. Geophysics; figure and rigidity of the earth.
- Lambeth, Dr. W(illiam) A(lexander)**, University, Va. *Biology*. Thomasville, N. C, Oct. 27, 67. M.D, Virginia, 91, Ph.D, 02. Instr. physical educ, Virginia, 91-99, prof. hygiene, 99- Physical Educ. Ass. Athletics; physical training; food; exercise; food and tuberculosis; the play impulse and public health.
- Lamkey, Dr. E(rnest) M(ichael) R(udolph)**, Delaware Agricultural Experiment Station, Newark, Del. *Plant physiology*. Riverton, Ill, Jan. 1, 90. A.B, Illinois, 13, A.M, 14, fellow, 15-16, Ph.D, 16. Asst. bot, Illinois, 13-15; plant pathologist, St. Louis Smelting and Ref. Co, 16; instr. floricultural path, Ill. Exp. Sta, 16-17; plant physiologist, Del. Exp. Sta, 17- A.A; Bot. Soc; Phytopath. Soc; Entom. Soc. Fungi; carnation yellows; transpiration; enzymes; permeability of plant tissues.
- Lamond, J(ohn) K(enyon)**, Brookline, Pa. *Mathematics*. Hillsdale, R. I, Aug. 1, 87. B.S, R. I. Col, 07; A.M, Yale, 08, Ph.D, 10. Instr. math, Wesleyan, 10-16; alumni prof, Pa. Col, 16-18; director mil. relief, Pa.-Del. div, Am. Red Cross, 13-; with eng. dept, Bell Telephone Co. of Pa, 20- Math. Soc. Theory of integration.
- Lampland, C(arl) O(tto)**, Lowell Observatory, Flagstaff, Ariz. *Astronomy*. Hayfield, Minn, Dec. 29, 73. A.B, Indiana, 02, A.M, 05. Astronomer, Lowell Observatory, 03- Medal, Royal Photog. Soc, 07. Mem. Lowell Observatory exped, 18. A.A; Astron. Soc; Physical Soc; Seismol. Soc; Math. Ass; Am. Acad; Pacific Astron. Soc; hon. mem. Soc. Astron. de Mex; Soc. Astron. de France; Astron. Gesell. Photography of surface detail of planets; photographic observations of nebulae, star fields, novae, star clusters, comets and satellites.

Lamson, Prof. G(eorge) H(erbert), Jr., Storrs, Conn. *Zoology*. Malden, Mass., April 8, 82. Conn. Col. 02; B.S., Mass. Col. 03; M.S., Yale, 05. Prof. biol., Tarkio, 05-06; *prof. zool.*, Conn. Col. 06- Zoologist, Storrs Exp. Sta. A.A.; Ass. Econ. Entom. Economic zoology; bacterial infection of the hen's egg; preservation of eggs; the effect of carbon dioxide on the development of the chick embryo; life history and control of animal lice; stomach worm in sheep.

Lamson, Dr. P(aul) D(udley), Johns Hopkins Medical School, Baltimore, Md. *Pharmacology*. Charlestown, Mass., 84. A.B., Harvard, 05, M.D., 09. House officer, Mass. Gen. Hosp., 09-10; asst. pharmacol., Würzburg, 12-13; asst. resident physician, Peter Bent Brigham Hosp., 13-14; asst. exp. therapist, *Hopkins*, 14-15, assoc. *pharmacol.*, 16-20, *assoc. prof.*, 20- A.A.; Soc. Pharmacol. Acute polycythemia.

Lamson-Scribner, Prof. F(rank), U. S. Department of Agriculture, Washington, D.C. **Agriculture, Botany*. Cambridgeport, Mass., April 19, 51. B.S., Maine, 73, LL.D., 20. Teacher, Maine pub. schools; officer, Girard, Phila., 76-84; asst. botanist, U. S. Dept. Agr., 84-85, chief, sect. veg. path., 85-87; prof. bot. and hort., Tennessee, 87-94; chief, div. of agrost., U. S. Dept. Agr., 94-01; chief, Insular Bur. Agr., P. I., 01-04; *special agent and agrostologist*, U. S. Dept. Agr., 04-, *expert on exhibits*, 13- Director, Exp. Sta., Tennessee, 89-94; in charge exhibits, bur. plant indust., U. S. Dept. Agr., La. Purchase Expos., 04, Lewis and Clark Expos., 05, Jamestown Expos., 07, Alaska-Yukon Expos., 09, Buenos Aires, 10, Turin, 11; mem. U. S. Govt. Exhibit Board, Panama-Pacific Expos., 15. Chevalier Mérite agricole. Phila. Acad.; Buffalo Acad.; New Eng. Bot. Club. Fungous diseases of plants; Gramineae; Philippine agriculture; weeds and plants of Maine; grasses of Tennessee.

Lancaster, Dr. Walter B(rackett), 520 Commonwealth Ave., Boston, Mass. *Ophthalmology*. Newton, Mass., May 11, 63. A.B., Harvard, 84, M.D., 89. *Assoc. ophthalm.*, *Harvard Med. Sch.*, 12- Major, M.C., in charge ophthalm., Med. Research Lab., A. S., 18-19; mem. and pres. Am. Board Ophthalm. Examiners, 15- Am. Med. Ass. (delegate, 19); Acad. Ophthalm. and Otolaryngol. (councilor, 15, 16); Ophthalm. Soc. (councilor, 18); Optical Soc. (councilor, 17, assoc. ed., 'Jour.' 17-); New Eng. Ophthalm. Soc. (pres); Illum. Eng. Soc. (mem. committee on research, 13, on progress, 15-). Physiological optics.

Land, Dr. W(illiam) J(esse) G(oat), University of Chicago, Chicago, Ill. *Botany*. Alton, Ind., Dec. 2, 65. B.S., Chicago, 02, fellow, 02-04, Ph.D., 04. Principal, Rome Acad., Ind., 91-94; supt. schools, Ashley, Ill., 95-01; asst. morph., *Chicago*, 04-06, instr. bot., 06-11, asst. prof. and later *assoc. prof.*, 11- Bot. exploration in Am. tropics, 06, 08. A.A.; Bot. Soc. Angiosperms; gymnosperms; morphology of Hepaticae, especially tropical species.

Landacro, Prof. F(rancis) L(eroy), Ohio State University, Columbus, Ohio. *Anatomy*. Hilliard, Ohio, Feb. 13, 67. A.B., Ohio State, 95; Ph.D., Chicago, 14. Asst. zool. and entom., *Ohio State*, 95-00, asst. prof., 00-02, assoc. prof., 02-08, *prof.*, 08-14, *anat.*, 14- A.A.; Ass. Anat.; Soc.

Zool.; Ohio Acad. (v. pres, 16). Embryology; neurology; origin of cerebral ganglia and of cartilage in head.

Landes, Prof. Henry, University Station, Seattle, Wash. *Geology*. Carroll, Ind., Dec. 22, 67. A.B., Indiana, 92; A.B., A.M., Harvard, 93; fellow, Chicago, 03-04. *Prof. geol. Washington (Seattle)*, 95-, *dean, col. science*, 13-, acting pres., 14-15; *state geologist, Wash.*, 01- Asst., U. S. Geol. Surv., 92, 93; asst. to state geologist, N. J., 93-94. A.A.; Geol. Soc.; Min. and Metal. Eng. The coal fields and clay deposits of Washington.

Landis, Dr. H(enry) R(obert) M(urray), University of Pennsylvania, Philadelphia, Pa. *Medicine*. Niles, Ohio, Feb. 3, 72. A.B., Amherst, 94; M.D., Jefferson Med. Col., 97. *Director, med. and sociol. departments, Phipps Inst.*, 10-; *asst. prof. med., Pennsylvania*, 12- Chief of clinic, Pa. State Dept. Health, 19- Am. Physicians; Ass. Tuber; Climat. Ass.; Phila. Col. Physicians. Diseases of the chest.

Landis, Prof. Walter S(avage), American Cyanamid Co., 511 Fifth Ave., New York, N. Y. *Metalurgy*. Pottstown, Pa., July 5, 81. Met.E., Lehigh, 02, M.S., 06; Heidelberg, 05-06; Aachen, 09. Asst. metal, Lehigh, 02-04, instr., 04-07, asst. prof., 07-10, assoc. prof., 10-12; *chief technologist, Am. Cyanamid Co.*, 12- Chem. Soc.; Electrochem. Soc. (chairman, N. Y. sect., 19, pres., 20). Physical metallurgy; aluminum; nickel; water electrolysis; history of coal mining and of manganese and chromium mining; furnace efficiencies; coal economics.

Landis, Prof. W(illiam) W(eidman), Dickinson College, Carlisle, Pa. *Mathematics*. Cotesville, Pa., Feb. 15, 69. Ph.B., Dickinson, 91, A.M., 94; Hopkins, 91-94, Sc.D., 06. Student asst. math., Hopkins, 92-94; *prof.*, Thiel, 95; *math. and astron.*, *Dickinson*, 95- Hon. major, Italian Army; Cavalier of the Crown of Italy; with Y. M. C. A. in Italy, 18-19. A.A.; Math. Soc.; Circolo Mat. di Palermo; Soc. Belge d'Astron. Method of defining the conics.

Landreth, Prof. Olin H(enry), 156 Fifth Ave., New York, N. Y. *Civil engineering*. Addison, N. Y., July 21, 52. C.E. Union, 76, A.B., 77, A.M., 80, hon. Sc.D., 05. Asst. astronomer, Dudley Observatory, Albany, N. Y., 77-79; prof. eng., Vanderbilt, 79-94, dean, eng. dept., 86-94; prof. *eng. Union*, 94-19, *emer. prof.*, 19-; chief and later *consulting engineer, Eastern Potash Corp.*, 19- Consulting engineer, N. Y. State Board of Health, 96-06; mem. advisory council, Eng. Cong., Columbian Expos., 93; N. Y. State Water Storage Commission, 02-; N. Y. Bay Pollution Commission, 03; Metropolitan Sewerage of N. Y. City, 06-08; consulting engineer to various municipalities and corporations; mech. engineer, U. S. Ordnance Dept., 18-19. A.A. (sec'y, D., 02, v. pres., 07); Civil Eng. (director, 93-95); Mech. Eng. (v. pres., 93); Eng. Educ. (v. pres., 08); Pub. Health Ass.; Eng. Ass. of the South (sec'y, 89-92); Eastern N. Y. Soc. Eng. (v. pres., 04, pres., 05); Atlantic Deeper Waterways Ass.; N. Y. State Waterways Ass. (director); Schenectady Tech. Ass. (v. pres., 95, pres., 96-98). Technical training; hydraulic and sanitary engineering; administration for engi-

neers; sanitary disposal of refuse matter; stream pollution prevention and sewage disposal.

Landrum, Prof. Robert D(allas), Harshaw Fuller and Goodwin Co, Cleveland, Ohio. *Chemistry*. Terre Haute, Ind, Feb. 8, 82. B.S, Rose, 04. M.S, 09, Ch.E, 14. Chemist, Columbian Enameling and Stamping Co, Terre Haute, Ind, 04-07; asst. prof. chem, Kansas, 07-10; chem. engineer, Lisk Mfg. Co, 10-13; factory manager, Michigan Enamel Works, 13; *chem. engineer*, Gen. Stamp Co, 14; *Harshaw Fuller and Goodwin Co*, 14-Expert iron enamel, Bur. Standards, 15. A.A.; Ceramic Soc. (trustee, 18-); Chem. Soc. (chairman, enamel div, war service committee, 17-18, sec'y, Cleveland sect, 19-); Chem. Eng; Lond. Soc. Chem. Indust; Soc. chim. indust. Composition of various enamels; methods of analysis for enamels and glass and their raw materials; enamel ware resistance to acids; enamels for sheet steel; cobalt oxid in ground coat enamels for sheet steel.

Landry, Prof. A(ubrey) E(dward), Catholic University of America, Washington, D. C. *Mathematics*. Memramcook, N. B, Nov. 24, 80. A.B, Harvard, 00; fellow, Hopkins, 06-07, Ph.D, 07. *Instr. math, Catholic*, 07-09, assoc. prof, 09-12, *prof*, 12- *Math. Soc.* Projective geometry.

Lane, Dr. Alfred C(hurch), Tufts College, Mass. **Geology*. Boston, Mass, Jan. 29, 63. A.B, Harvard, 83, Ph.D, 88; Heidelberg, 85-97; hon. Sc.D, Tufts, 13. *Instr. math*, Harvard, 83-85; with U. S. Geol. Surv, 88-89; petrographer, Mich. Geol. Surv, 89-92; asst. state geologist, Mich, 92-99, state geologist, 99-09; *Pearson prof. geol. and miner*, Tufts, 09- Teacher geol, Mich. Col. Mines, 89-92; lecturer, Field Museum Nat. Hist, Michigan and Wisconsin; head, dept. mining, A.E.F. Univ, Beaune. A.A. (v. pres, 06); Geol. Soc; Min. Eng. (chairman, Boston sect, 18, mem. committee on mining geol); *Am. Acad.* (councilor, 16-19); Mich. Eng. Soc. (pres, 08); Mich. Acad. (pres, 05); Boston Soc. Nat. Hist; Boston Geol. Soc. (pres, 20); Lake Superior Min. Inst; cor. mem. Can. Inst. Petrographical geology; theory of heat in its geological applications; grain of igneous rocks; economic geology; mine waters and connate waters.

Lane, Prof. Ernest P(reston), University of Wisconsin, Madison, Wis. *Mathematics*. Russellville, Tenn, Nov. 28, 86. A.B, Tennessee, 09; A.M, Virginia, 13; Ph.D, Chicago, 18. *Instr. math*, Rice Inst, 18-19; *asst. prof*, Wisconsin, 19- *Math. Soc*; *Math. Ass.* Projective differential geometry.

Lane, Prof. H(enry) H(iggins), East Enid, Okla. *Zoology*. Bainbridge, Ind, Feb. 17, 78. Ph.B, De Pauw, 99; A.M, Indiana, 03, Cornell, 03-04; Chicago, 04-05; Ph.D, Princeton, 15. Prof. biol, Hiram, 05-06; instr. zool. and embryol, Oklahoma, 06-08, prof, 08-20; *head, dept. biol*, *Philips*, 20- Dean of undergraduates, Oklahoma, summers; instr. embryol, Indiana, summers, 06, 08; Chicago, summers, 05, 11; mem. Okla. Research Council. A.A; Soc. Nat; Soc. Zool; Micros. Soc. Mammal. (sec'y, council and rec. sec'y); Ass. Prof; Okla. Acad. (pres, 10, treas, 16); Wash. Biol. Soc. Experimental embryology of mammals; correlation between

structure and function in the ontogenetic development of the special senses.

Lane, Prof. W(ilmot) B(urkemar), University of Toronto, Toronto, Can. *Psychology, Philosophy*. Perth, Ont, Dec. 13, 72. B.A, Toronto, 93, M.A, 94, col. pedag, 94; Victoria, 95; Toronto, 95-97; fellow, Wisconsin, 97-99, Ph.D, 99; Cornell, 99-00. Asst. psychol, Wisconsin, 97-99; *prof. psychol. and philos*, Mt. Union, 00-02; philos. and pedag, Randolph-Macon, 02-13; *ethics*, *Toronto*, 13- Asst. exp. psychol, summer sch, Cornell, 00; examiner philos, etc, Toronto, 96-97. Philos. Ass; S. Soc. Philos. and Psychol. Color contrast; mental fatigue; elemental consciousness.

Laney, Dr. Francis B(aker), 351 Fifth Ave, Salt Lake City, Utah. *Geology*. Greene Co, Mo, April 9, 75. B.S, Drury, 02; A.M, Wisconsin, 05; Ph.D, Yale, 08. Asst. state geologist, N. C, 03-05; instr. geol. and miner, California, 05-06; asst. state geologist, N. C, 07-08; asst. curator geol, U. S. Nat. Museum, 09-10; asst. geologist, *U. S. Geol. Surv*, 10-13, *geologist*, 13- Mineralogical relationship in metaliferous ores.

Lanford, Dr. John A(lexander), Touro Infirmary, New Orleans, La. *Pathology*. Gainesville, Ala, June 19, 81. Ph.G, Ala. Polytech, 00; M.D, Alabama, 05. Asst. physician, Ala. Insane Hospitals, 05-11; *instr. surg. path*, *Tulane*, 11-14, *asst. prof*, 14- Major, M.C, 17-19. Ass. Path. and Bact; Am. Med. Ass. Bacteriology; surgical pathology; serology.

Lang, Herbert, American Museum of Natural History, New York, N. Y. *Zoology*. Oehringen, Germany, March 24, 79. Grad, Royal Lyceum, Oehringen, 94; Zürich; Paris; Columbia. With Fed. Museum, Zürich, 96-00; *Maison Fasse*, Paris, 00-03; *Am. Museum Nat. Hist*, 03-15, asst, *dept. mammal*, 15-19, *asst. curator*, 19- *Am. Museum Nat. Hist*. representative, Tjader exped. to E. Africa, 06-07; in charge exped. to Belgian Congo, 09-15. Soc. Mammal. (chairman, subcommittee on exotic mammals); assoc. Ornith. Union; Am. Geog. Soc; N. Y. Acad; N. Y. Zool. Soc. Vertebrate zoology; mammalogy; life histories; African ecology.

Lang, Col. W(illiam) R(obert), University of Toronto, Toronto, Can. *Chemistry*. Lanarkshire, Scotland. B.S, Glasgow, 90, Sc.D, 99. Asst. chem, Glasgow, 90-96, lecturer, 96-00; *prof. and director, dept. chem*, Toronto, 00-, *director, mil. studies*. Chem. Soc; Soc. Chem. Indust. (first chairman, Can. sect); Can. Inst; fel. Inst. Chem. Gt. Britain and Ireland; fel. London Chem. Soc; Glasgow Royal Philos. Soc; Soc. Franco-Ecossais. Low temperature phenomena; ammoniacal compounds; esters of arsenic and antimony; inorganic chemistry; chemical industries of Canada.

Langdon, Dr. F(rank) W(arren), 4003 Rose Hill Ave, Cincinnati, Ohio. *Medicine, Neurology*. Cincinnati, Dec. 16, 52. M.D, Miami Med. Col, 81; London, 95. Demonstrator anat, Miami, 81-84, prof, 84-94, nervous and mental diseases, 95-09, *psychiat*, Cincinnati, 09-18, *emer. prof*, 18-; director neurol, Cincinnati Gen. Hosp, 95-12, consulting psychiatrist, 17-; visiting consultant, Cincinnati Sanitarium for Nervous and

- Mental Diseases, 03- A.A.; Am. Med. Ass. (chairman, sect. nervous and mental diseases, 02); Neur. Ass. (v. pres, 08, 09); Medico-Psychol. Ass.; Cincinnati Acad. Med. (pres, 07); Neur. Soc. of Cincinnati (pres, 19); cor. mem. N. Y. Linnean Soc; hon. mem. Brooklyn Neur. Soc; Royal Soc. Med. Anthropology; psychology; psychiatry; bacteriology of paresis; structure of brain membranes; topography of brain; pre-historic Ohio.
- Langdon, Dr. Seth C(hapin)**, 1632 Chicago Ave, Evanston, Ill. *Chemistry*. Leadville, Colo, June 18, 87. B.S, Northwestern, 11; A.M, Washington (Seattle), 13, Ph.D, 15. Instr. chem, Washington (Seattle), 15-18; assoc. chemist, Bur. Standards, 19; *asst. prof. chem, Northwestern*, 19- Research chemist, C.W.S, U.S.A, 18. A.A.; Chem. Soc; Electrochem. Soc. Electrochemistry; passivity; carbon monoxid; gas control of steel.
- Lange, Dr. Mathilde Magarethe**, U. S. Department of Agriculture, 641 Washington St, New York, N. Y. *Zoology*. New York, April 14, 88. Ph.D, Zürich, 19. *With U. S. Dept. Agr*, 20- N. Y. Zool. Soc; Zürich Nat. Gesell. Invertebrate zoology; histology; marine biology; regeneration.
- Lange, Prof. N(orbert) A(dolph)**, Case School of Applied Science, Cleveland, Ohio. *Chemistry*. Sandusky, Ohio, Aug. 4, 92. A.B, Michigan, 15, M.S, 17, Ph.D, 18. Instr. *org. chem*, Michigan, 17-19; *asst. prof. Case*, 19- Chem. Soc. Organic chemistry; condensation of isocyanic acid and of phenols.
- Langelier, Prof. Wilfred F(rancis)**, Berkeley, Calif. *Chemistry*. Nashua, N. H, Sept. 25, 86. B.S, N. H. Col, 09; M.S, Illinois, 11. Asst. chem, Illinois, 09-11; chemist, Ill. Water Surv, 11-16; *asst. prof. sanit. eng, California*, 16- Sanit. engineer, U. S. Shipping Board, summer, 18; U. S. Pub. Health Service, 18-19. Water supply; sewage treatment.
- Langenbeck, Karl**, 1625 Hobart St, N. W, Washington, D. C. **Chemistry, Ceramics*. Cincinnati, Ohio, Oct. 7, 61. Col. of Pharmacy, Cincinnati, 82; Polytech, Zürich, 83; Charlottenburg, 84. Supt, Rookwood Pottery Co, Cincinnati, 86; prof. chem, Miami Med. Col, 88-90; chemist, Am. Encaustic Tiling Co, 90-93; *manager*, Mosaic Tile Co, Zanesville, Ohio, and N. Y. City, 94-04; *Ceramic Lab, Boston*, 04- Assoc. ed, 'Jour. Indust. and Eng. Chem,' 08- A.A.; Chem. Soc. Difference between glass and pottery glazes; aventurin glazes; chemical character of American pottery glazes; kiln constructions and foundations; fire clays of the United States; plasticity; nutrition and psychology.
- Langenberg, Dr. Frederick C(harles)**, 25 Lakeview Ave, Cambridge, Mass. *Metallurgy*. Ohio, 90. M.S, Ohio, 12; Sc.D, Harvard, 15. Instr. metal, Harvard, 12-15; *metallurgist, Watertown Arsenal*, 15-, *ordnance dept, U.S.A*, 19- Ed, 'Tests of Metals,' 15- Mech. Eng; Soc. Test. Mat. Impact tests; heat treatment; cementation by gas.
- Langfeld, Prof. Herbert S(idney)**, 38 Francis Ave, Cambridge, Mass. **Psychology*. Philadelphia, Pa, July 24, 79. Haverford, 97-98; Ph.D, Berlin, 09. Research fellow, *Harvard*, 09-10, instr. psychol, 10; *asst. prof. and director of lab. A.A.; Psychol. Ass; Exp. Psychol. Gesell*. Pupillary action; visual sensations; inhibitory processes; voluntary action; psychological effects of fasting; experimental esthetics.
- Langford, Grace**, Barnard College, Columbia University, New York, N. Y. *Physics*. Plymouth, Mass, June 27, 71. B.S, Mass. Inst. Tech, 00. Instr. *physics*, Wellesley, 99-05; *Barnard, Columbia*, 08- A.A.; Physical Soc. Selective reflection of phosphates in the infra-red spectrum.
- Langley, Dr. Ralph W(alker)**, 84 McKinley Ave, New Haven, Conn. *Chemistry*. New Haven, Aug. 11, 80. Ph.B, Yale, 02, M.S, 04, Ph.D, 10. Asst. city chemist, St. Louis, 03-05; prof. chem, N. Y. Homeop. Med. Col, 05-08; chemist, and later *asst. production manager, Acme Wire Co*, 10- Special research, U. S. Forestry Service, summer, 07. Chem. Soc. Determination of small amounts of barium in rocks; determination of tantalum and columbium.
- Langman, Harry**, 35 W. 61st St, New York, N. Y. *Mathematics*. New York, Nov. 7, 89. B.S, Col. City of N. Y, 11; Columbia. Mem. statist. bur, Metropolitan Life Ins. Co, 15-16; *chief statistician*, Ocean Accident and Guarantee Corp, 16-18; *Bur. Jewish Social Research*, 19-; *instr. statist. Col. City of N. Y*, 19- Head, statist. div, Youroveta Home and Foreign Trade Co. A.A.; Math. Soc; Math. Ass; Statist. Ass. Mathematical and applied statistics.
- Langmuir, Dr. A(rthur) C(omings)**, Oakledge, Hastings-on-Hudson, N. Y. *Chemistry*. Chicago, Ill, Feb. 7, 72. Ph.B, Columbia, 93; Ph.D, Heidelberg, 95. Asst. to Prof. C. F. Chandler, N. Y. City, 95-96; head chemist, Ricketts and Banks, N. Y. City, 96-00; chemist and supt, Marx and Rawolle, Brooklyn, 00-20; *research chemist*, 20-, *assoc. prof. chem. eng, Columbia*, 20- Instr, Pratt Inst, 98-00; lecturer, Brooklyn Polytech, 05. A.A.; Chem. Soc. (chairman, N. Y. sect, 12); Soc. Chem. Indust; Electrochem. Soc; Chem. Eng. (v. pres, 17-19). Analysis and technology of shellac and glycerine.
- Langmuir, Dr. Irving**, Research Laboratory, General Electric Co, Schenectady, N. Y. **Chemistry*. Brooklyn, N. Y, Jan. 31, 81. Met.E, Columbia, 03; Ph.D, Göttingen, 06. Instr. chem, Stevens, 06-09; *research chemist, Gen. Elec. Co*, 09- Nichols medal, Chem. Soc, 15, 20; Hughes medal, Royal Soc, 18. Nat. Acad; A.A.; Chem. Soc; Electrochem. Soc; Physical Soc; Am. Acad. Kinetics of gas reactions, especially at low pressures; dissociation of hydrogen; nitrogen and argon filled tungsten lamps; vapor pressures of metals; production of high vacuum; electron discharges; constitution of solids and liquids; adsorption; surface tension; structure of atoms; theory of chemical valence; ionization of gases; acoustic devices for submarine detection.
- Langsdorf, A(lexander) S(uss)**, 1205 Amherst Place, St. Louis, Mo. *Electrical engineering*. St. Louis, Aug. 31, 77. B.S, Washington (St. Louis), 98; M.M.E, Cornell, 01. Instr. physics, Washington (St. Louis), 98-00, asst. prof. elec. eng, 01-04, prof, 04-20, dean, sch. eng, 10-20; *indust. eng, Crunden Martin Mfg. Co*, 20- A.A.; Elec. Eng; Eng. Educ; St. Louis Acad; St.

- Louis Eng. Club (past pres). Alternating currents; alternating current machinery; fatigue of insulation; magnetic hysteresis; electrolysis of reinforced concrete; principles of direct current machines.
- Langworthy, Dr. C(harles) F(ord)**, U. S. Department of Agriculture, Washington, D. C. *Chemistry*. Middlebury, Vt, Aug. 9, 64. A.B., Middlebury, 87, A.M., 90, Sc.D., 12; Ph.D., Strasbourg, 93. Asst. chem., Wesleyan, 93-94, instr., 94-95; *assoc. ed.*, 'Exp. Sta. Record,' U. S. Dept. Agr., 05-, in charge nutrition investigations, 06-15, *chief*, office home econ., 15- Lecturer, summers, Wesleyan, 02; Illinois, 06; Cornell, 08. A.A.; Chem. Soc; Soc. Biol. Chem; Home Econ. Ass. (v. pres, 09-); Wash. Acad; Soc. d'Hygiène alimentaire. Food; human nutrition; nutritive and economic value of foods.
- Lanier, Prof. A(lexander) C(artwright)**, 300 College Ave, Columbia, Mo. *Electrical engineering*. Nashville, Tenn, June 3, 78. B.S., Tennessee, 00, M.E., 05; M.E.E., Harvard, 09. Instr., mech. eng., Tennessee, 02-05; asst. prof. elec. eng., Cincinnati, 05-08; designing engineer, Westinghouse Elec. and Mfg. Co., 09-15; *prof. elec. eng. and chairman of dept*, Missouri, 15- Elec. Eng; Eng. Educ. Design of electrical machinery.
- Lantz, Prof. C(yrus) W(illiam)**, University of Nevada, Reno, Nev. *Botany*. Brooklyn, Ill, June 27, 89. A.B., Illinois, 13, A.M., 14, fellow, 19; Chicago, 16-17. Asst. bot., Illinois, 14-15; *asst. prof. bot. and hort*, Nevada, 17- A.A.; Bot. Soc; Phytopath. Soc; West. Soc. Nat. Plant physiology and pathology; fungi.
- Lanza, Prof. Gaetano**, The Montevista, 63d and Oxford Sts, Philadelphia, Pa. **Mechanics, Mechanical and civil engineering*. Boston, Sept. 26, 48. C.E., Virginia, 69, B.S., C.E. and M.E., 70. Asst. instr. math., Virginia, 69-71; instr., Mass. Inst. Tech., 71-72, asst. prof., 72-75, *prof. theoret. and applied mech*, 75-11, *emer. prof.*, 11-, in charge, dept. mech. eng., 83-11; *special calculator and consultant*, Baldwin Locomotive Works, 11- Cavaliere dell' Ordine dei Santi Maurizio e Lazzaro, 07. Mech. Eng; hon. mem. Soc. Test. Mat; assoc. mem. Ry. Master Mechanics Ass; Math. and Physical Club (pres, 06-11); Am. Acad; Franklin Inst. (assoc. ed, 'Jour'); Appalachian Mt. Club; Int. Ass. Test. Mat; Circolo Mat. di Palermo. Applied mechanics; strength of materials; dynamic machinery.
- Larew, Prof. Gillie A(ldah)**, Randolph-Macon Woman's College, Lynchburg, Va. *Mathematics*. Pulaski Co., Va., July 28, 82. A.B., Randolph-Macon Woman's Col, 03; A.M., Chicago, 11, fellow, 15-16, Ph.D., 16. *Instr. math.*, Randolph-Macon Woman's Col, 03-09, adj. prof., 09-18, *assoc. prof.*, 18- Math. Soc; Math. Ass. Calculus of variations.
- Larkin, Edgar L(ucien)**, Mt. Lowe, Calif. *Astronomy, Astrophysics*. Freedom, Ill, April 5, 47. High sch. Director, observatory, New Windsor, Ill, 79-88; prof. astron. and director, observatory, Knox, 88-95; *director*, Lowe Observatory, Echo Mt., 00- Astron. ed, 'Kansas City Review,' 81-87; science ed, 'Hearst Newspapers.' A.A.; Astron. Soc; Pacific Astron. Soc; Ill. Soc. Nat. Hist. Spectroscopy; electricity; radiant energy.
- Larsell, Prof. Olof**, Northwestern University, Evanston, Ill. *Anatomy, Zoology*. Rättvik, Sweden, March 13, 86. B.S., McMinville, 10; fellow, Northwestern, 13-14, A.M., 14, Ph.D., 18. Prof. biol., McMinville, 10-15; instr. zool., Northwestern, 15-18; asst. prof. anat., Wisconsin, 18-20; *assoc. prof. zool.*, Northwestern, 20-A.A.; Ass. Anat; Wis. Acad. Embryology and anatomy of the avian lung; the nervus terminalis in vertebrates; cerebellum of Amblystoma; Gustaf Retzius.
- Larsen, Prof. C(hristian)**, South Dakota Agricultural College, Brookings, S. Dak. *Dairy husbandry*. Bellinge, Denmark, Aug. 4, 74. B.S., Iowa State, 02, M.S., 04. Instr. *dairy husbandry*, Mass. Col, 01-02; asst. and later assoc. prof., Iowa State, 02-06; prof., Utah Col, 06-07; *prof. and director exten.*, S. Dak. Col, 07-A.A.; Dairy Instr. Ass. (chairman, committee on feeding standards); Northwest Dairy Off. Ass. (pres, 12-15). Economic and sanitary milk production.
- Larsen, Dr. Esper S(ignius)**, U. S. Geological Survey, Washington, D. C. *Geology*. Astoria, Oregon, March 14, 79. B.S., California, 06, Ph.D., 18. Instr. geol. and miner., California, 06-07; asst. petrographer, geophys. lab, Carnegie Institution, 07-09; asst. geologist, U. S. Geol. Surv., 09-14, geologist, 14-20, *in charge, petrol. sect.*, 19- Acting assoc. prof. geol., California, 14-15. A.A.; Geol. Soc; Miner. Soc; Wash. Geol. Soc; Wash. Acad. Petrology; geology of southwestern Colorado; optical mineralogy; tungsten deposits.
- Larsen, J(ulius) A(ngar)**, Priest River, Idaho. *Forestry*. Drammen, Norway, 77. A.B., Yale, 08, M.F., 10. *With U. S. Forest Service*, 10- Soc. Foresters; Ecol. Soc. Silviculture.
- Larson, Dr. Alfred T(heodore)**, 3461 Lowell St, Washington, D. C. *Chemistry*. Montevideo, Minn, July 4, 84. B.S., Carleton, 08, M.S., 12; Ph.D., Harvard, 17. Instr. chem., Harvard, 14-17; asst. prof., Carleton, 17-19; *catalytical chemist, ordnance dept.*, U. S. A., 19- Asst. gas chemist, Bur. Mines, 18; lieut., N. A., 18; capt., C. W. S., 18-19. A.A.; Chem. Soc. Inorganic complexes; electrodes; carbon monoxid.
- Larson, Dr. Winford Porter**, University of Minnesota, Minneapolis, Minn. *Bacteriology*. Poy Sippi, Wis, 80. M.D., Illinois, 04; Berlin; Paris; Copenhagen. Asst. prof. bacter., Minnesota, 12-15, assoc. prof., 15-18; *prof. bacter. and immunol.*, 18- Ass. Path. and Bact; Ass. Immunol; Int. Ass. Med. Museums. Immunity.
- Lartigau, Dr. A(ugust) J(erome)**, 391 Sutter St, San Francisco, Calif. **Pathology, Gynecology*. San Francisco, Feb. 19, 75. M.D., California, 96. Asst. Bender Hygienic Lab, 96-99; instr. path., Columbia, 99-03; asst. prof. gynec., California, 03-06; *attending surgeon, Children's Hosp.*, 03- Am. Med. Ass; Col. Surg; Calif. Acad. Med; San Francisco Co. Med. Soc. (pres). Bacteriology of B. pyocyaneus; bacterial etiology of gall-stones; tuberculosis of adenoids; hyperplastic tuberculosis of caecum; endotheli-

- oma of ovary; solid tumors of ovary; bacteria and channels of urinary infections.
- La Rue, Carl D(owney)**, Kisaran, Asahan, Sumatra, Dutch East Indies. *Botany*. Williams-ville, Ill, April 22, 88. A.B, Michigan, 14, A.M, 16. Instr. bot, Syracuse, 16-17; *botanist, Hollandsch-Americaansche Plantage Maatschappij, Sumatra*, 17- A.A; Bot. Soc. Mutations in Oenothera; selections within pure lines; the Para rubber tree.
- La Rue, Dr. George R(oger)**, 1078 Ferdon Road, Ann Arbor, Mich. *Zoology*. Paullina, Iowa, Jan. 1, 82. B.S, Doane, 07; A.M, Nebraska, 09; Ph.D, Illinois, 11. Asst. med. col, Nebraska, 07-09; zool, Illinois, 09-11, summer, 10; instr. zool, Michigan, 11-13, *asst. prof*, 13- Temporary sci. asst, Bur. Fisheries, Alaska, summer, 09; hon. curator parasitol, museum, Michigan, and director, Biol. Sta, 17- A.A; Soc. Zool; Micros. Soc; Ill. Acad; Mich. Acad. Parasites of fish, reptiles and amphibians.
- Lasby, Miss Jennie B(elle)**, 309 E. 17th St, Santa Ana, Calif. *Astronomy*. Northfield, Minn, Aug. 23, 83. A.B, Carleton, 04; A.M, Mt. Holyoke, 06. With Mt. Wilson Observatory, 06-14; Goodsell Observatory, 16-18. Astron. Soc. Solar rotation; radial velocity; asteroid positions.
- Lasché, Prof. Alfred J. M.**, 2800 Vine St, Milwaukee, Wis. *Chemistry, Bacteriology*. Milwaukee, Oct. 4, 67. Ph.G, Wisconsin, 89. *Director, Lasché Inst*, 94- A.A; Chem. Soc; Soc. Chem. Indust; Wis. Acad. Death point of microorganisms; methods of sterilization; yeast forms; mycoderma forms; bacteriological analysis of water; diastatic power determination; spirituous liquors; enzymes; diastases of moulds.
- Lashley, Dr. K(arl) S(pencer)**, University of Minnesota, Minneapolis, Minn. *Psychology, Zoology*. Davis, W. Va, 90. A.B, West Virginia, 10; M.S, Pittsburgh, 11; Ph.D, Hopkins, 14, fellow, 13-14, 19, Johnston scholar, 15-16. Teaching fellow, Pittsburgh, 11; instr. psychol, Minnesota, 17-18; investigator, U. S. Interdepartmental Hygiene Board, 19; *asst. prof. psychol, Minnesota*, 20- Psychol. Ass; Soc. Zool. Heredity; color vision; instincts of birds and primates; learning; cerebral localization; reëducation; sex instruction.
- Lasley, Prof. J(ohn) W(ayne), Jr**, Chapel Hill, N.C. *Mathematics*. Burlington, N.C, Sept. 22, 91. A.B, North Carolina, 10, fellow, 10-11, A.M, 11; fellow by courtesy, Hopkins, 15-16; fellow. Chicago, 19-20, Ph.D, 20. Instr. math, North Carolina, 11-15, 16-18, *asst. prof*, 18-20, *assoc. prof*, 20- Math. Soc; Math. Ass; Elisha Mitchell Sci. Soc. Projective differential geometry; transformations of the Fleenode congruence.
- Lassalle, Dr. Leo Joseph**, 214 Golden Rod Ave, Baton Rouge, La. *Physics*. Opelousa, La, Sept. 8, 86. B.S, Louisiana, 08; M.S, Pa. State, 11; Ph.D, Chicago, 17. Asst. physics, Louisiana, 08-09; instr, Pa. State, 09-12; *asst. prof*, Univ. Philippines, 12-13; *assoc. prof*, Pa. State, 13-18, *prof*, 18-20; *mech. eng, and head of dept. Louisiana*, 20- Chief physicist and head, optical dept, Recording and Computing Machines Co, 18-20; mem. faculty, Chicago, summer, 15.
- Optics; atmospheric radioactivity; Stokes law; viscosity coefficient.
- Lathrop, Dr. Elbert C(lyde)**, E. I. du Pont de Nemours and Co, Wilmington, Del. *Industrial chemistry*. Greensburg, Ind, Oct. 6, 85. A.B, DePauw, 07; Ph.D, American, 16. Asst. chem, DePauw, 06-07; Purdue, 07-08; instr, Pratt Inst, 08-09; consulting and anal. chemist, N. Y. City, 08-09; chemist, bur. soils, U. S. Dept. Agr, 09-15, biochemist, bur. plant industry, 15-18; head, gen. div, Jackson lab, *E. I. du Pont de Nemours and Co*, 18-19, *manager, standards div, chem. dept*, 19- Longstreth medal, Franklin Inst, 11. A.A; Chem. Soc; Soc. Test. Mat; Chem. Eng. Organic compounds of soils; fertilizers; coal tar dyestuffs; by-products.
- Lathrop, Frank H(eidman)**, Oregon Agricultural Experiment Station, Corvallis, Oregon. *Entomology*. Orangeburg, S. C, July 31, 91. B.S, Clemson, 13; M.S, Ohio State, 15. Asst. entom, S. C. Exp. Sta, 13; zool. and entom, Ohio State, 13-15; *asst. entomologist*, N. Y. Exp. Sta, Geneva, 15-16; *assoc. entomologist, Oregon Exp. Sta*, 17- A.A; Entom. Soc; Ass. Econ. Entom. Cicadellidae; Aphididae; agricultural and horticultural insect pests.
- Latimer, Prof. Homer B(arker)**, 1226 S. 26th St, Lincoln, Nebr. *Anatomy*. Rock Creek, Ohio, March 2, 82. A.B, Minnesota, 07, A.M, 08. Prof. biol, Charles City Col, 08-09; scientific asst, Bur. Fisheries, 10-11; *prof. zool*, Nebr. Wesleyan, 11-16; *vert. anat, Nebraska*, 16- A.A; Ass. Anat; Micros. Soc. Comparative neurology.
- Latimer, Dr. Wendell M(itchell)**, University of California, Berkeley, Calif. *Chemistry*. Garnett, Kans, April 22, 93. A.B, Kansas, 15; fellow, California, 17-18, Ph.D, 18. Instr. chem, Kansas, 15-17; *lecturer and demonstrator, California*, 18- Dielectric constants; specific heats; heats of fusion.
- Lauer, Dr. A(rnold) W(illiam)**, Carter Oil Co, Tulsa, Okla. *Geology*. Middletown, Iowa, July 18, 81. Ph.B, Iowa, 04; fellow, Yale, 12-13, Ph.D, 17. Geologist, Co. de Petroleo la Corona, 13-16; *asst. econ. geol*, Yale, 16-17; field geologist, *Carter Oil Co*, 17-19, *geologist in charge, sub-surface dept*, 19- Asst, Colo. Geol. Surv, summer, 10, topographer, summer, 11. Petroleum-bearing rocks; sedimentary history of oil-bearing regions.
- Laufer, Dr. Berthold**, Field Museum of Natural History, Chicago, Ill. **Anthropology, Oriental languages*. Cologne, Germany, Oct. 11, 74, Berlin, 93-95; Ph.D, Leipzig, 97. With Jesup exped. to Siberia, 98-99; East Asiatic Committee exped. to China, 01-04; *asst. ethnol*, Am. Museum Nat. Hist, 04-08; *lecturer anthrop*, Columbia, 05-08; *curator anthrop*, Blackstone exped. to Tibet and China, 08-10; *Field Museum Nat. Hist*, 11- Fel. Ethnol. Soc; Anthrop. Ass; Oriental Soc; Royal Asiatic Soc. of Shanghai; Royal Asiatic Soc. London; Hakluyt Soc; Soc. asiat. de Paris; Soc. linguist. de Paris. East Asiatic cultures; Buddhism and Tibetan literature; Chinese archeology and ethnology; Chinese pottery, bronze, jade and precious stones; history of cultivated plants and domestic animals; Sino-Tibetan languages.

- Laughlin, Dr. Harry H(amilton)**, Eugenics Record Office, Cold Spring Harbor, N. Y. *Genetics*. Oskaloosa, Iowa, March 11, 80. B.S.D, N. E. Mo. State Teachers Col, 00, M.S.D, 02; Iowa State, 07-08; Sc.D, Princeton, 17. Principal, high sch, Kirksville, Mo, 00-02; Centerville, Iowa, 02-05; teacher agr, N. E. Mo. State Teachers Col, 08-10; *supt, eugenics record office, Carnegie Institution, 10-* In charge training course for field workers in eugenics, Brooklyn Inst. and eugenics record office, Carnegie Institution, 10- A.A.; Soc. Nat; Eugenics Research Ass. (sec'y-treas, 17-); Soc. Exp. Biol; Statist. Ass. Eugenics; cytology; statistics; international law; sociology.
- Laughlin, Homer, Jr**, 602 Laughlin Building, Los Angeles, Calif. *Chemistry*. Wellsville, Ohio, June 18, 75. A.B, Stanford, 96. V. pres. and manager, Homer Laughlin China Co, 96-99; *pres, Homer Laughlin Eng. Corp, 99-*; *Laughlin Fruit Ref. Co, 99-* A.A.; Chem. Soc; Seismol. Soc; S. Calif. Acad.
- Laurens, Prof. Henry**, Yale University, New Haven, Conn. *Biology*. Charleston, S. C, Oct. 15, 85. A.B, Charleston, 07, A.M, 08; Ph.D, Harvard, 11, Kirkland fellow, Harvard, at Bonn and Freiburg, 11-12. Asst. zool, Harvard, 10-11; instr. *biol, Yale, 12-16, asst. prof, 16-*, in charge, dept. physiol, 17-19; asst. physiologist, C. W. S, 18. A.A.; Soc. Nat; Physiol. Soc; Ass. Anat; Soc. Zool; Soc. Exp. Biol. Reactions of animals to light; physiology and anatomy of the heart; melanophores; spectral sensitivity and visibility.
- Laves, Dr. Kurt**, 5611 Kenwood Ave, Chicago, Ill. *Astronomy*. Lyck, Germany, Aug. 24, 66. Königsberg, 86-87; Ph.D, Berlin, 91. Asst, Royal Observatory, Berlin, 92-93; docent *astron, Chicago, 93-97, instr, 97-01, asst. prof, 01-08, assoc. prof, 08-* A.A.; Math. Soc; Astron. Soc; Astron. Gesell. Lunar equation and the solar parallax; effective potential forces; Jacobi's partial differential equation; Maupertius' principle; graphic method to determine orbits of spectroscopic binaries; cases of libration in the system of small planets; the system Saturn, Hyperion and Titan; problems of 3 bodies in spectroscopic systems.
- Law, J(ohn) Eugene**, University of California, Berkeley, Calif. *Ornithology*. A.B, Stanford, 00. Cashier, First Nat. Bank, Hollywood, Calif, 03-11, pres, 11-14; Hollywood Savings Bank, 11-14; *curator osteol, museum vert. zool, California, 19-* Mem. scientific exped. to Chiricahua Mountains, Ariz, 13, 19. A.A.; mem. Ornith. Union; Soc. Mammal; Cooper Ornith. Club (pres, south. div, 05, 13-15, v. pres, 16, sec'y, 06-12, business manager, 07-); Calif. Acad. Mammalogy; herpetology.
- LaWall, Prof. Charles H(erbert)**, 636 Race St, Philadelphia, Pa. *Chemistry*. Allentown, Pa, May 7, 71. Ph.G, Phila. Col. Pharmacy, 93, Ph.M, 05; hon. Phar.D, Pittsburgh, 19. Instr. *pharmacy, Phila. Col. Pharmacy, 00-05, assoc. prof, 05-18, prof. and dean, 18-* Chemist, Pa. Dairy and Food Dept, 04-; State Pharmacy Examining Board, Pa, 04-; Pa. Health Commission, 05-18; food inspection chemist and assoc. referee medicinal plants, U. S. Dept. Agr,
- 07-12; lecturer applied org. chem, Wagner Inst; sec'y, committee of revision, U. S. Pharmacopœia, 10-18, chairman, 18-20, sec'y, 20. A.A.; Chem. Soc; Pharmaceut. Ass. (pres, 19); Am. Med. Ass; Franklin Inst. Pharmaceutical and food chemistry.
- Lawrence, Prof. Henry E(dmund)**, University of Rochester, Rochester, N. Y. *Physics*. Sodus, N. Y, Aug. 2, 64. A.B, Rochester, 89; Cornell, 92-94. Instr. *physics, Cornell, 92-94; Rochester, 94-95, assoc. prof, 95-01, prof, 01-* A.A.; Physical Soc; Elec. Eng; Rochester Eng. Soc.
- Lawrence, Dr. James N(elson)**, National Aniline and Chemical Co, Buffalo, N. Y. *Chemistry*. Attica, N. Y, May 25, 87. B.S, Syracuse, 09, M.S, 10; Ph.D, Wisconsin, 12. Chemist, Gen. Elec. Co, 12-13; asst. physical chemist, Bur. Mines, 13-15; chemist, U. S. Naval Eng. Exp. Sta, Annapolis, Md, 15-16; *research chemist, Nat. Aniline and Chem. Co, 17-* Lieut. and capt, C.W.S, 17-18. Chem. Soc; Electrochem. Soc. Dyes and intermediates; fuels; gas calorimetry; non-ferrous alloys; explosibility of coal dust; war gases.
- Lawrence, Prof. W(illiam) H(ereford)**, 1454 Williams St, Denver, Colo. *Horticulture*. Lake City, Iowa, Feb. 3, 77. B.S, S. Dak. Col, 99; A.B, M.S, Wash. State, 02. Asst. agr. and bot, S. Dak. Col, 98-99; asst. bot, West. Wash. Exp. Sta, Puyallup, Wash, 01-02; instr. bot. and entom, Wash. State, 02-03, bot, 03-04, asst. prof. and asst. botanist, Exp. Sta, 04-07, plant pathologist, Exp. Sta, and supt, West. Wash. Exp. Sta, 07-11; horticulturist and plant pathologist, Hood River Apple Growers, 11-13; horticulturist, Arizona, and Ariz. Exp. Sta, 13; prof. hort, Missouri, 15-18; *capt, Sanit. C. and chief educ. officer, reconstruction sch, Gen. Hosp. No. 21, 18-* Soc. Hort. Sci. Parasitic fungi; pollination of date palm.
- Laws, Prof. F(rank) A(rthur)**, Massachusetts Institute of Technology, Cambridge, Mass. *Electrical engineering*. North Bridgewater, Mass, May 28, 67. B.S, Mass. Inst. Tech, 89. Asst. physics, *Mass. Inst. Tech, 89-91, instr, 91-94, elec. measurements, 94-97, asst. prof, 97-02, elec. testing, 02-06, assoc. prof, 06-13, prof. elec. eng, 13-* Elec. Eng; Nat. Elec. Light Ass; Am. Acad. Applied electricity; electrical measurements; commercial measuring instruments for electrical work.
- Lawson, Prof. Andrew C(owper)**, University of California, Berkeley, Calif. *Geology*. Anstruther, Scotland, July 25, 61. B.A, Toronto, 83, M.A, 85; Ph.D, Hopkins, 88. Geologist, Can. Geol. Surv, 82-90; *prof. miner. and geol, California, 90-* Mem. U. S. Assay Commission, 16. A.A. (mem. exec. committee, Pacific div, 16); Geol. Soc. (v. pres, 08); Seismol. Soc. (pres, 09); Min. Eng; Am. Acad. Archean geology; petrography; geology of California; economic geology; geomorphology; seismology.
- Lawton, Dr. Ellis E(arle)**, Willard Storage Battery Co, Syracuse, N. Y. *Physics*. Jacks Reefs, N. Y, May 4, 80. Cornell, 98-99; B.S, Rochester, 02; A.M, Yale, 05, Ph.D, 06. Instr. sciences, mil. sch, Highland Park, Ill, 02-03; asst. physics, Yale, 04-07; assoc. prof. physics and astron, Colby, 07-09; prof. physics, Denison,

- 69-13, assoc. prof. elec. eng, Syracuse, 13-18; with Willard Storage Battery Co, 16-20; *Van Wheel Corp*, 20- Assoc. mem. Physical Soc; Eng. Educ. Light.
- Lay, Dr. Wilfrid**, Flushing High School, Flushing, N. Y. *Psychology*. Brooklyn, N. Y., Jan. 3, 72. A.B., Columbia, 93, Ph.D, 98. *Instr. Latin and English*, DeWitt Clinton High Sch, 99-06; *Flushing High Sch*, 06- Instr. logic and psychol. N. Y. Training Sch. for Teachers, 04-05. Mental imagery; psychoanalysis; the unconscious.
- Layng, Dr. Thomas Ernest**, University of Illinois, Urbana, Ill. *Chemistry*. Smith Falls, Can, 86. M.A., McMaster, 12; Ph.D, Illinois, 15. Chief chemist, Am. Tar Products Co, 15-16; research chemist, Am. Creosote Co, 16-19; *asst. prof. applied chem*, Illinois, 18- Organic chemistry; carbonization of coal; hydrogenation of oils; pitch resins.
- Leach, Prof. J(ulian) G(ilbert)**, 721 Remington St, Ft. Collins, Colo. *Botany*. Somerville, Tenn, Nov. 16, 94. B.S., Tennessee, 17; Shevlin fellow, Minnesota, 17-18, M.S., 18. Agent, U. S. Dept. Agr, 16-17; *asst. plant path*, Minnesota, 18-19; *acting head, bot. dept*, Colo. *Agr. Col.*, 19- Bot. Soc; Phytopath. Soc. Plant pathology.
- Leach, Dr. Mary F(rances)**, Western College, Oxford, Ohio. *Chemistry*. Payson, Ill, March 22, 58. Mt. Holyoke, 80; B.S., Michigan, 93, fellow, 01-04, Ph.D, 03; Göttingen, 97-98; Zürich, 98-00. Teacher, pub. schools, Mass. and Mo, 78-79, 81-85; high sch, Sedalia, Mo, 85-89; Detroit, 89-91; *prof. chem*, Mt. Holyoke, 93-00; *asst. hygiene*, Michigan, 06-07; *prof. chem. and hygiene*, Western Col. for Women, 07- A.A.; Chem. Soc. Chemistry of *Bacillus coli communis*; sensitizing portion of egg-white.
- Learn, Prof. C(larence) D(elbert)**, Agricultural and Mechanical College, Stillwater, Okla. *Botany*. Clermont, Iowa, Sept. 30, 75. B.S., Upper Iowa, 09; Mo. Bot. Garden, 09-10; A.M., Cornell, 12. Teaching fellow *bot*, Washington (St. Louis), 09-10; *asst*, Cornell, 10-12; *instr*, Okla. Col, 12, *asst. prof*, 15- *Asst. bot. lab*, Purdue Exp. Sta, summer, 10. Bot. Soc; fel. Iowa Acad. Mycology; plant diseases.
- Leary, Dr. Timothy**, Jamaica Plain, Mass. *Pathology*, *Bacteriology*. Waltham, Mass, 70. M.D., Harvard, 95; hon. A.M., Tufts, 07. First res. *asst. pathologist*, Boston City Hosp, 95-97; *asst. prof. path. and bacter*, Tufts, 97-00, *prof*, 00- Assoc. med. examiner, Suffolk Co, Mass, 08. Ass. Path. and Baet; Am. Med. Ass; Mass. Medico-Legal Soc; Boston Soc. Med. Sci; Boston Med. Library Ass. Etiology of cancer; regeneration and process of repair; vaccine therapy; serum therapy; pernicious anemia.
- Leathers, Prof. A(delbert) L(ewellyn)**, Fargo, N. Dak. *Zoology*. Ph.B, Wesleyan, 07; Michigan, 07-08; fellow, Clark, 11-12; Ph.D, Cornell, 16. *Asst. biol*, Michigan, 07-08; *prof*, Leander Clark, 09-10; *instr*, Northwestern, 13-15; *prof*, Olivet, 16-18; *assoc. prof. zool*, N. Dak. Col, 18- A.A.; Ecol. Soc; N. Dak. Acad. Entomology; fishes.
- Leavenworth, Prof. F(rancis) P**, University of Minnesota, Minneapolis, Minn. *Astronomy*. Mt. Vernon, Ind, Sept. 3, 58. A.B., Indiana, 80, A.M., 87; Cincinnati Observatory, 80-82. *Asst*, Cincinnati Observatory, 80-20; observatory, Virginia, 82-87; director, observatory, Haverford, 87-92; *asst. prof. astron*, Minnesota, 92-97, *prof*, 97- Astron. Soc. Double star measurements; discovery of nebulae; stellar parallax; astronomical photography; position of Eros; parallax of sun from photographic plates of Eros; photographic measurements on ring nebula of Lyra.
- Leavenworth, Prof. William Stowell**, Jacksonville, Ill. *Chemistry*. Brattleboro, Vt, July 28, 62. B.S., Hamilton, 89, M.S., 92; Harvard, summers, 89, 90; Chicago, summers, 99, 01. *Asst. chem*, Hamilton, 88-89; *prof. chem. and physics*, Ripon, 89-03; *chem*, Olivet, 03-18; Maryville, 18-19; Ill. Col, 19- Acting principal, State Nor. Sch, Castleton, Vt, 92. A.A.; Chem. Soc. The marble region of New England; a method of analyzing the inorganic acids; some derivatives of wood tar; methods of sewage disposal; new Tennessee phosphate deposit.
- Leavitt, Clyde**, Commission of Conservation of Canada, Ottawa, Can. *Forestry*. Elk Rapids, Mich, March 1, 78. A.B., Michigan, 01, M.S.F., 04. With U. S. Forest Service, 04-12; *chief forester*, Commission of Conservation of Can, 12- Soc. Foresters; Phytopath. Soc; Can. Soc. Forest Eng. (pres, 16, sec'y, 18-). Forest protection and conservation.
- Leavitt, Miss Henrietta S(wan)**, Harvard College Observatory, Cambridge, Mass. *Astronomy*. Lancaster, Mass. A.B., Radcliffe, 92. *Photographic researches*, Harvard Col. Observatory, 95-96, 02- A.A.; Astron. Soc. 1777 variables in the Magellanic clouds; discovery of eight variable stars in nebulous regions; standard scale of photographic magnitudes; distribution, periods and light curves of variable stars.
- Leavitt, Dr. R(obert) G(reenleaf)**, State Normal School, Trenton, N. J. *Botany*. North Parsonfield, Maine, Sept. 28, 65. A.B., Harvard, 89, A.M., 98, Ph.D, 04. Science master, de Veaux Sch, N. Y., 90-91; head master, Concord Home Sch, Mass, 91-93; teacher physics, Williston Sem, Mass, 93-97; *asst. bot*, Harvard and Radcliffe, 97-99; investigator, Ames Bot. Lab, 99-08; *head, dept. biol. hygiene*, State Nor. Sch, Trenton, N. J., 08- Instr, summer courses bot, Harvard, 03-07. New Eng. Bot. Club. Roots of vascular cryptogams, monocotyledons and angiosperms; absorption of water vapor by plants; homeocosis; cyclical reversion experimentally induced in *Drosera*; recapitulation and morphogenesis in *Drosera*; geographic distribution of nearly related species; Eria in the Philippine Islands; biological education in elementary schools.
- LeBaron, Capt. J(ohn) Francis**, Panama City, Fla, winter, Essex, Mass, summer. *Engineering*, *Geology*. Mass. Inst. Tech. Asst. and chief engineer, Fitchburg R. R., 71-77; chief, archeol. expedition to Florida, 77-78; *asst. engineer*, U.S.A., 80-84, 90; *asst. div. and first asst. engineer* and acting gen. supt, Nicaragua Canal surveys and construction, 87-90; chief engineer, Am. Honduras Co, 98-02; pres, Moccasin Falls Ginseng

- Co, 02-05; consulting engineer, U. S. and Nicaragua Co, and chief engineer, Great Central Ry. of Nicaragua, 05-07; consulting and chief engineer, Sumas Develop. Co, B. C, 08-09; *consulting engineer*, Hatzie Reclamation, 09-10; *Castle Neck Ipswich, Mass, and reclamation and general practise*, 10- U. S. deputy surveyor, 80-00; asst. engineer, Fla. Ship Canal Surv, 83; commissioner, Nicaragua Canal Co. to Nicaragua Govt, 89; engineer for various corporations, canals and railroads; consulting engineer, La Laz and Los Angeles mines, Nicaragua, C. A. A.A; Civil Eng; Mil. Eng; Ass. Eng; Cleveland Eng. Soc. Isthmian canals; archeology; agricultural engineering and tropical agriculture; economic geology; woods of Central America; medicinal plants; anti-teredo woods in sea water; rainfall; temperature; magnetic declinations.
- Le Clerc, Dr. J(oseph) Arthur**, Miner-Hillard Milling Co, Wilkes-Barre, Pa. *Chemistry*. Ware, Mass. B.S, Worcester, 95; Ph.D, Halle, 03. Asst. chemist, Sewage Purification Works, Worcester, Mass, 95; N. Y. Exp. Sta, Geneva, 95-01; physiol. chemist, bur. chem, U. S. Dept. Agr, 03-19; *chief chemist, Miner-Hillard Milling Co*, 19- Jury awards, Paris Expos, 00; La. Purchase Expos, 04; Panama-Pacific Expos, 15; Chevalier du Mérite agricole, 07. A.A; Chem. Soc. (sec'y, Wash. sect, 07-10, pres, 12); Soc. Agron; Soc. Milling and Baking Tech. (sec'y, 12-19); Wash. Acad; Wash. Bot. Soc. Chemistry and physiology of plants; cereal chemistry.
- Le Conte, Prof. Joseph N(isbet)**, 19 Hillside Court, Berkeley, Calif. *Mechanical engineering*. Oakland, Calif, Feb. 7, 70. B.S, California, 91; M.M.E, Cornell, 92. Instr. mech. eng, California, 92-00, prof, 00- Mech. Eng. Experimental and applied mechanics; exploration of Sierra Nevada Mountains; experimental hydraulics.
- Le Conte, Dr. Robert G(rier)**, 2000 Spruce St, Philadelphia, Pa. *Surgery*. Long Branch, N. J, July 17, 65. A.B, Pennsylvania, 85, M.D, 83. Res. physician, Pa. Hosp, 88-90; surgeon, Methodist Hosp, 94; asst. surgeon, Pa. Nat. Guard, 94-98; asst. surgeon and ensign, U. S. Navy, 98; surgeon gen, Pa, 03; adj. prof. surg, Pennsylvania, 03; *surgeon, Pa. Hosp, 00-*; *Bryn Mawr Hosp, 02-*; *consulting surgeon, Germantown Hosp, 04-*; *Gynceean Hosp, 07-* Trustee, Pennsylvania; Children's Hosp; commander, M.C, U.S.N. A.A; Surg. Ass; Soc. Clin. Surg; Am. Med. Ass; Phila. Zool. Soc; Phila. Acad. Surg; Phila. Col. Physicians.
- Le Count, Dr. E(dwain) R(aymond)**, 6026 Monroe Ave, Chicago, Ill. **Pathology*. Fond du Lac, Wis, April 1, 68. Carroll, 87-88; M.D, Rush Med. Col, 92; Hopkins Hosp, 93-94; Pasteur Inst, Paris, 96; Berlin, 05. Resident, Cook Co. Hosp, 92, 93; *prof. path, Rush Med. Col, Chicago, 92-* Attending pathologist, Cook Co, Presbyterian, St. Luke, St. Elizabeth and St. Anthony's Hospitals. A.A; Ass. Path. and Baet. (past pres); Ass. Cancer Research (past pres); Soc. Baet; Am. Med. Ass. Pathology; the relationship between tumors and chronic inflammation; carcinoma of the Fallopian tubes; 'Plimmer's bodies'; lymphoma; hypernephroma;
- Christian Fenger as pathologist; focal necrosis in tuberculosis; tuberculosis of the mammary gland; cholesterol giant-cells; aneurisms of the heart; primary carcinoma of the lung; the rôle of endothelioma in inflammation; cirrhosis of the liver; the inhibition of hemolysis by cholesterol; the amino-acids of feathers; parathyroid infection with purpura hemorrhagica; systematic blastomycosis; blastomycotic lesions of the central nervous system; fibrino-purulent blastomycotic meningitis; secondary introthoracic osteosarcomas; Rocky Mountain spotted fever; fat embolism; the causes of coma; influenzal pneumonia; heat stroke; fracture of the cranial bones and concomitant brain injury; edema of the brain.
- Lederle, Dr. Ernst J(oseph)**, Stamford, Conn. *Sanitary engineering*. Staten Island, N. Y, June 30, 65. Ph.B, Columbia, 86, Ph.D, 95, hon. Sc.D, 05. Chemist, Dept. Health, N. Y. City, 90-02, commissioner, 02-04; N. Y. State Water Supply Commissioner, 05-10; commissioner of health, N. Y. City, 10-14. Chem. Soc; Soc. Chem. Indust. [Died March 7, 21.]
- Ledoux, Dr. Albert R(eid)**, 99 John St, New York, N. Y. *Chemistry, Metallurgy*. Newport, Ky, Nov. 2, 52. Sch. of mines, Columbia, 70-73; Berlin, 73-75; Ph.D, Göttingen, 75; hon. M.S, North Carolina, 81. State chemist, N. C, 77-80; consulting expert, N. Y. City Board of Elec. Control, 89-90; *consulting engineer to several mining companies*, 80- Pres. and director, mining and mfg. companies. A.A; Chem. Soc; Min. Eng. (pres, v. pres, 20); Elec. Eng; Soc. Chem. Indust; fel. N. Y. Acad; Can. Min. Inst. Cost and method of treatment of ores of copper, nickel, etc.
- Ledyard, Edgar M(adison)**, Newhouse Building, Salt Lake City, Utah. *Agronomy, Entomology*. Salem, Mich, May 10, 75. B.S, Univ. Philippines, 13; M.S, California, 15. Principal and supt, pub. schools, Perrinton, Durand and Sterling, Mich, 97-04; head, dept. science, high sch, Surigao, P. I, 04-05; Bulacan, 05-06; Manila, 06-08; dept. zool. and entom, col. agr, Univ. Philippines, 09-14, acting dean, 12-13; *director, agr. dept, U. S. Smelt, Ref, and Min. Co. and various other smelting companies*, 15- Lecturer zool, Santo Tomas, Manila, P. I, 07-08; scientific asst, 'Albatross,' 08-09; in charge insect collections, Michigan, 11-12; consulting agriculturist, Amalgamated Sugar Co, 18-19. A.A; Ass. Eeon. Entom; Soc. Agron; Ass. Sugar Beet Agr. Animal life of the Philippines; beans; lung worms in Angora goats; effect of smelting on agricultural conditions; geographic distribution of animals.
- Lee, Prof. Burton James**, 128 E. 73d St, New York, N. Y. *Surgery*. New Haven, Conn, Feb. 4, 74. Ph.B, Yale, 94; M.D, Columbia, 98. *Clin. prof. surg, med. col, Cornell*, 18- Surg. Ass; Col. Surg. Surgical pathology.
- Lee, Charles H(amilton)**, 2845 Forest Ave, Berkeley, Calif. *Civil engineering*. Oakland, Calif, Feb. 1, 83. B.S, California, 05. Asst. engineer, Los Angeles Aqueduct Bur, 07-12; consulting hydraulic engineer, 12-17; *pres. and exec. mem, Calif. State Water Commission*, 19- Lieut. and capt, E.C, A.E.F, 17-19. Calif. State Water

Commission (pres, 19). Civil Eng; Water Works Ass; Meteorol. Soc. Ground water hydrology; precipitation; evaporation; stream flow.

Lee, Prof. Frederic S(chiller), 437 W. 59th St, New York, N. Y. **Physiology*. Canton, N. Y, June 16, 59. A.B, St. Lawrence, 78, A.M, 81, LL.D, 18; Ph.D, Hopkins, 85; Leipzig, 85-86. Instr. biol, St. Lawrence, 86-87; physiol. and histol, Bryn Mawr, 87-88, assoc, 88-91; demonstrator *physiol*, Columbia, 91-95, adj. prof, 95-04, *prof*, 04- Jesup lecturer, Columbia, 11. Mem. board of editors, 'Am. Jour. Physiol,' 98-14; 'Columbia Univ. Quarterly,' 00-; trustee, Columbia Univ. Press, 07-20; mem. board of scientific directors, N. Y. Bot. Garden, 03-; mem. N. Y. State Commission on Ventilation; consulting physiologist, U. S. Pub. Health Service, 17- A.A. (sec'y, K, 02-04, v. pres, 18-20); Soc. Nat; Physiol. Soc. (sec'y and treas, 94-04, pres, 17); Soc. Exp. Biol. (pres, 08, 09); Harvey Soc. (treas, 05-07, pres, 12-14); assoc. Am. Med. Ass; Sch. Hygiene Ass; Pub. Health Ass; Physical Educ. Ass; Am. Geog. Soc; Nature Study Soc; fel. N. Y. Acad; assoc. fel. N. Y. Acad. Med; fel. N. Y. Zool. Soc; N. Y. State Sci. Teachers Ass; Vt. Bot. Club. Action of intermittent pressure and defibrinated blood on blood-vessels; electric phenomena of muscle; action of salts on arteries; sense of equilibrium; function of ear and lateral line; hearing of fishes; muscle fatigue; muscle rigor; theory of phototaxis; action of alcohol on muscle; pathological phenomena of fatigue; temperature and muscle fatigue; fatigue of cold-blooded compared with warm-blooded muscle; cause of *treppe*; action of fatigue substances on muscle; pseudo-fatigue of spinal cord; fatigue of muscle stimulated directly and indirectly; action of phlorhizin on muscle; physiological properties of diaphragm muscle; summation of stimuli; production of lactic acid by muscle; fatigue and industrial efficiency; chemical properties of mammalian muscle; action of temperature and humidity on the working power of muscles and sugar of blood; physiological action of atmospheric conditions; fatigue toxins; industrial physiology.

Lee, Henry Atherton, Bureau of Science, Manila, P. I. *Plant pathology*. Conn, Jan. 5, 94. B.S, California, 15, M.S, 16. Asst. plant path, California; *pathologist, bur. plant indust, U. S. Dept. Agr*, 16- A.A; Phytopath. Soc. Citrus canker.

Lee, Dr. I(ra) E(iver), E. I. du Pont de Nemours and Co, Wilmington, Del. *Chemistry*. Alamo, Ind, July 10, 83. A.B, Indiana, 11, fellow, 11-12, A.M, 12; Ph.D, Cornell, 15. Asst. chem, Cornell, 12-14; chief chemist, American Refrigeration Co, 14-15; instr. chem, Rochester, 15-18; *research chemist, E. I. duPont de Nemours and Co*, 18- Chem. Soc; Electrochem. Soc. Binary systems.

Lee, Dr. Marguerite T(houron), 66 W. 95th St, New York, N. Y. *Biology*. Brooklyn, N. Y, Oct. 20, 71. B.S, Cornell, 94, Ph.D, Columbia, 14. Teacher *biol, Girls' High Sch, Brooklyn*, N. Y, 94-06, *head of dept*, 06- A.A; N. Y. Acad. Biological chemistry.

Lee; Dr. Oliver J(ustin), Yerkes Observatory, Williams Bay, Wis. *Astronomy*. Montevideo, Minn, Dec. 16, 81. A.B, Minnesota, 07; fellow, Yerkes Observatory, 10-12; M.S, Chicago, 11, Ph.D, 13. Computer, *Yerkes Observatory*, 07-10, 12-13, *instr. astron*, 14-; director, navig. sch, U. S. Shipping Board, 17-19. Lecturer astron, Minnesota, summers, 08, 09. Astron. Soc; fel. Royal Astron. Soc. Astrophysics; stellar spectroscopy and parallax; radial velocities; calcium spectra; sun-spots and solar prominences.

Lee, Dr. (Richard) Edwin, Allegheny College, Meadville, Pa. *Chemistry*. Philadelphia, Pa, Sept. 9, 76. B.S, Mt. Union, 98, M.S, 02; Cornell, 01; A.M, Harvard, 05; Sc.D, N. Y. Univ. 10. *Prof. chem. and physics*, Northeastern Ohio Col, 98-00; *chem*, Mt. Union, 02-07; *Allegheny*, 07- A.A; Chem. Soc; Pub. Health Ass; Royal Soc. Arts; London Authors Club. Qualitative analysis of zinc and calcium groups; thermometric lag; fermentation tubes; brasses, bronzes and babbitt metals; phosphor-tin; raw and pasteurized milk; solution densities; supercooling; application of mass law to disinfection.

Lee, Dr. Roger I(rving), 7 Lowell Street, Cambridge, Mass. *Medicine*. Peabody, Mass, Aug. 12, 81. A.B, Harvard, 02, M.D, 05. Med. intern, Mass. Gen. Hosp, 05-07; asst. med, Harvard Med. Sch, 07-12, *instr*, 12-14, *prof. hygiene, Harvard*, 14- Physician to out-patients, Mass. Gen. Hosp, 08-12, visiting physician, 12-20, asst. chief, med. service, 20- Mem. Pub. Health Council, Mass. A.A; Am. Med. Ass; Am. Physicians; Soc. Clin. Invest; Pub. Health Ass. (treas); Climat. Ass. Internal medicine; hygiene.

Lee, S(tark) O(lan) Ivan, 484 Clifton Ave, Newark, N. J. *Chemistry*. Madison, Ohio, April 17, 88. B.S, Brooklyn Polytech, 11. Research chemist, Colgate and Co, 11-13; chemist, Tagliabue and Co, 13; path. research chemist, Crocker Lab, Columbia and St. Luke's Hosp, 13-17; tech. adviser, Great Am. Chem. Products Co, 17-19; chemist, Antoine Chiris and Co, 19-20; *chem. director, T. M. and G. Chem Co*, 20- Ed-in-chief, 'Polytech. Eng,' 11. N. Y. Chemists Club; N. Y. Miner. Club. Organic, pathological and biological chemistry; terpenes; rare elements; aromatic chemicals; microchemical analysis; selenium and tellurium dyes; colloidal gold; oxidase stain; foaming inhibitors; mercury poisoning.

Lee, Prof. Thomas G(eorge), University of Minnesota, Minneapolis, Minn. **Histology, Embryology*. Jacksonville, N. Y, Nov. 27, 60. B.S, M.D, Pennsylvania, 86; B.S, Harvard, 92. Asst. histol. and embryol, Pennsylvania, 84-86; lecturer histol. and embryol. and director, lab, Yale, 86-91; asst. histol, Radcliffe, 91-92; *prof. histol. and embryol. and director, lab, Minnesota*, 92-09, anat. and director, inst. anat, 09-13, *comp. anat*, 13- Assoc. ed, 'Anat. Record,' Int. Cong. Anat, Brussels, 10; Int. Zool. Cong, Graz, 10. A.A; Soc. Nat. (sec'y, central branch); Ass. Anat; Soc. Zool; Am. Med. Ass; Minn. Acad; fel. Minn. Acad. Med; Anat. Gesell. Human and vertebrate embryology; the embryology of *Spermophilus tridecemlineatus*

and other rodents; the placentation and morphology of *Citellus*, *Geomys*, *Dipodomys* and other mammals.

Lee, Prof. W(illis) T(homas), U. S. Geological Survey, Washington, D. C. **Geology*. Brooklyn, Pa, Dec. 24, 64. Ph.B, Wesleyan, 94, M.S, 98; fellow, Chicago, 98-00; Hopkins, 02, Ph.D, 13. Instr. science, R. I. Col, 94-95; prof. geol. and biol, Denver, 95-98; principal, high sch, Trinidad, Colo, 00-02; *geologist, U. S. Geol. Surv.*, 02-; head, dept. geol. and director, sch. eng. geol, Oklahoma, 19-20; *lecturer geol, Yale*, 20-A.A; Geol. Soc; Paleont. Soc; Wash. Acad; Wash. Geol. Soc. Stratigraphy in southwestern United States applied to ground water investigations; coal deposits in Colorado and New Mexico; stratigraphy in the Rocky Mountain region; interpretative geology and geography of travel routes and national parks.

Leech, Dr. Paul Nicholas, American Medical Association, 535 N. Dearborn St, Chicago, Ill. *Chemistry*. Oxford, Ohio, Aug. 12, 89. A.B, Miami, 10; M.S, Chicago, 11, Ph.D, 13. Research asst, Chicago, 11-13; *chemist, Am. Med. Ass.*, 13- Chem. Soc. Formic acid; triaryl-methylhydroxylamins; medicaments.

Leeds, Morris E(vans), 4901 Stenton Ave, Philadelphia, Pa. *Physics*. Philadelphia, March 6, 69. A.B, Haverford, 88; Berlin, 92-93. With Queen and Co, Philadelphia, 89-99; Morris E. Leeds and Co, 99-03; *pres, The Leeds and Northrup Co*, 03- A.A; Physical Soc; Elec. Eng; Franklin Inst; Phila. Acad. Electrical and heat measuring apparatus.

Lees, Dr. James H(enry), State House, Des Moines, Iowa. *Geology*. Yorkshire, England, July 26, 75. A.B, Coe, 01; fellow, Iowa, 02-03, M.S, 03; fellow, Chicago, 03-04, Ph.D, 15. Asst. geol, Chicago, 04-06; *asst. state geologist, Iowa Geol. Surv.*, 06- Instr. geol, Colorado, summer, 04; Chicago, 05. A.A; Geol. Soc; Iowa Acad. (sec'y, 14-) Vertebrate paleontology; physiography of Iowa; Des Moines stage of the Pennsylvanian; Pleistocene of Iowa.

Lefavour, Dr. Henry, Simmons College, Boston, Mass. **Physics, Education*. Salem, Mass, Sept. 4, 62. A.B, Williams, 83, Ph.D, 86, LL.D, 02; Berlin, 88-90; LL.D, Tufts, 05. Instr. Williston Sem, 83-84; physics and math, Williams, 84-88, prof. physics, 88-02, dean, 97-02; *pres, Simmons (Mass)*, 02- A.A; Am. Acad. Astronomy; chemical physics.

Lefevre, Prof. George, University of Missouri, Columbia, Mo. **Zoology*. Baltimore, Md, Sept. 16, 69. A.B, Hopkins, 91, fellow, 94-97, Ph.D, 96. Asst. zool, Hopkins, 97-98; *prof, Missouri*, 99- Instr. zool, Woods Hole, 98-00, mem. staff of investigation, 06-, trustee, 09-, sec'y, 13-; temporary asst, U. S. Bur. Fisheries, 07-11; ed, 'Univ. of Mo. Studies,' 10- A.A; Soc. Nat; Soc. Zool. Bud development, embryology and anatomy of Tunicata; regeneration and grafting in Cordylophora; artificial parthenogenesis in *Thalassema*; chromosomes; artificial propagation of fresh-water mussels; poultry breeding.

Leffmann, Dr. Henry, 1839 N. 17th St, Philadelphia, Pa. **Chemistry*. Philadelphia, Sept. 9, 47. A.M, Cent. High Sch, Phila, 65; M.D, Jefferson Med. Col, 69; hon. Ph.D, Wagner Free

Inst, 74; D.D.S, Pa. Col. Dental Surg, 84. *Prof. chem, Wagner Free Inst*, 75-; Pa. Col. Dental Surg, 84-99; *Woman's Med. Col. of Pa*, 88- Port physician, Phila, 84-87, 91-92. Chem. Soc; Franklin Inst; British Soc. Pub. Analysts. Food chemistry.

Lefschetz, Prof. S(olomon), 937 Missouri St, Lawrence, Kans. **Mathematics*. Moscow, Russia, Sept. 3, 84. M.E, Ecole Centrale, Paris, 05; Ph.D, Clark, 11. With Westinghouse Elec. and Mfg. Co, 07-11; *instr. math, Nebraska*, 11-13; *Kansas*, 13-16, asst. prof, 16-20, *assoc. prof*, 20- Bordin prize, French Acad, 19. Math. Soc; Math. Ass; Soc. Math. de France; Circolo Mat. di Palermo. Topology of plane curves; algebraic geometry; multiple integrals attached to an algebraic manifold; Abelian manifolds; automorphic functions.

Lehenbauer, Prof. P(hilip) A(ugustus), University of Illinois, Urbana, Ill. *Plant physiology*. Hannibal, Mo, Nov. 1, 83. A.B, Westminster (Mo), 07; A.M, James Millikin, 09; Ph.D, Illinois, 14. Asst. prof. bot. and hort, Nevada, 14-16, *assoc. prof*, 16-17; *plant physiol, Illinois*, 17-18, *asst. prof*, 18- A.A; Bot. Soc; Phytopath. Soc; Soc. Hort., Sci; Pomol. Soc. Growth of plants in relation to temperature and humidity.

Lehmer, Prof. D(errick) N(orman), 2736 Regent St, Berkeley, Calif. **Mathematics*. Somerset, Ind, July 27, 67. A.B, Nebraska, 93, A.M, 96; *Ph.D, Chicago, 00. Head master, Worthington Mil. Acad, 96-97; *instr. math, California*, 00-04, asst. prof, 04-10, *assoc. prof*, 10-18, *prof*, 18- A.A; Math. Soc; Math. Ass; Circolo Mat. di Palermo. Theory of numbers; synthetic geometry; construction of table of smallest divisors of all numbers less than ten millions by new method.

Lehnerts, Edward M, Hunter College, New York, N. Y. *Geography, Geology*. Winona, Minn, March 29, 73. B.S, Pennsylvania, 02; A.M, Minnesota, 08. Instr. geog, State Nor. Sch, Winona, Minn, 96-98, *prof*, 98-07; asst. prof. geog. and geol, Minnesota, 07-18; lecturer geog, Teachers College, Columbia, 18-21; *assoc. prof. geol, Hunter*, 21- Director, Am. Bur. Geog, 00-02; ed, 'Jour. Geog,' 02-05. Physical geography; commercial geography; the teaching of geography; physical and economic geography of the upper Mississippi Valley.

Leib, Prof. D(avid) D(eitch), 358 Mohegan Ave, New London, Conn. *Mathematics*. Allen, Pa, Oct. 28, 79. A.B, Dickinson, 03, A.M, 05; fellow, Hopkins, 08-09, Ph.D, 09. Instr. math, Pennington Sem. (N. J), 03-06; Sheffield Sci. Sch, Yale, 09-16; *prof, Conn. Col. for Women*, 16- A.A; Math. Soc; Math. Ass. Geometry; invariants; statistics.

Leidy, Dr. Joseph, 1319 Locust St, Philadelphia, Pa. *Bacteriology*. A.B, Pennsylvania, A.M, M.D, 87. Asst. demonstrator path, histol. and morbid anat, Pennsylvania, 88, anat, 90. Physician, Pa. Hosp, 87-89; various hospitals, Phila: mem. jury of awards (hygiene) and official delegate, First Int. Cong. Hygiene, Paris, 00; officier de l'Instruction Pub, 00; major, M.R.C. A.A; Soc. Bact; Ass. Anat; Phila. Col. Physi-

- cians. Intestinal flora and fauna; general pathology and hygiene.
- Leigh, Dr. Townes R(andolph)**, University of Florida, Gainesville, Fla. *Chemistry*. Panola Co, Miss, Oct. 26, 80. B.S. Iuka, 01; A.B. Lebanon, 02; Harvard, 03; LL.D. Connor, 08; fellow, Chicago, 14-15, Ph.D. 15. Head, dept. chem, Ouachita, 07-09; Woman's Col. of Ala, 09-14; asst. prof. Carleton, 15-17; head of dept, Georgetown Col. (Ky), 17-20; *Florida*, 20- Anthrop. investigator pre-historic Indian towns. Chem. Soc; hon. mem. Ala. Anthrop. Soc; fel. London Soc. Letters and Sci. Chlorimido-esters; chlorimido-benzil; smoke screen.
- Leighton, Alan**, Brentwood, Md. *Chemistry*. Concord, N. H., March 26, 90. B.S. N. H. Col; Cornell, 12-14. Asst. chem, Cornell, 13-14; junior chemist, Bur. Mines, Denver, 14-16; research chemist, Goodyear Rubber Co, 16-17; asst. chemist, Bur. Mines, Pittsburgh, 17-20; *physical chemist, dairy research lab, bur. animal indust, U. S. Dept. Agr*, 20- Chem. Soc; Coal Min. Inst. Photochemistry; colloid chemistry; dust inflammability.
- Leighton, Prof. Henry**, 937 Ramsay Ave, Wilkesburg, Pa. *Geology*. Canandaigua, N. Y., 84. A.B. Cornell, 06. Instr. geol, Cornell, 06-08; asst. econ. geologist, N. Y. State Geol. Surv, 08-10; instr. *econ. geol, Pittsburgh*, 10-12, asst. prof, 13, *prof*, 14- Economic geology; history of clay working industries; testing of clays; gypsum deposits; Carboniferous stratigraphy.
- Leighton, Prof. J(oseph) A(lexander)**, Ohio State University, Columbus, Ohio. *Psychology*. Orangeville, Can, Dec. 2, 70. A.B. Trinity (Can), 91; fellow, Cornell, 91-94, Ph.D. 94; Episcopal Theol. Sch, and Harvard, 94-96, B.D. 96; Tübingen, Berlin, Erlangen, 96-97; hon. LL.D. Hobart, 13. Prof. philos. and psychol, Hobart, 97-10, *prof. philos and head of dept, Ohio State*, 10- Governor-General's medal, Trinity (Can), 91, examiner philos, 93-95. A.A; Psychol. Ass; Philos. Ass. (v. pres, 05). Logic; epistemology and metaphysics, especially the problems of individuality and personality in logic, psychology and metaphysics.
- Leighton, Marshall O(ra)**, McLachlen Building, Washington, D. C. *Engineering*. Corinna, Maine, May 1, 74. B.S. Mass. Inst. Tech, 96. Supt. health, Montclair, N. J., 96-02; res. hydrographer, U. S. Geol. Surv, 02-13; chief, div. of hydro-econ, 03-06, chief hydrographer, 06-13; *consulting engineer*, 13- Practising sanit. engineer and consulting expert, 00; North N. J. Flood Commission, 03-; Passaic River Flood Commissioner, 05; consulting hydrographer, U. S. Inland Waterways Commission, 07; Washington representative, Eng. Council. Civil Eng; Nat. Pub. Works Ass. (chairman); Wash. Soc. Eng. Hydraulics; water power; sewage pollution in metropolitan area; irrigation; drainage; Passaic floods of 1902 and 1903; flood prevention in Ohio Valley; public utility of water powers and their governmental regulation.
- Leighton, Prof. Morris M(organ)**, University of Illinois, Urbana, Ill. *Geology*. Near Wellman, Iowa, Aug. 4, 87. A.B. Iowa, 12, M.S. 13; fellow, Chicago, 13-15, Ph.D. 16. Instr. *geol*, Washington (Seattle), 15-16; acting prof, Iowa State Teachers Col, 16-17; asst. prof, Washington (Seattle), 17-18; acting prof, Ohio State, 18-19; *asst. prof, Illinois*, 19- Geologist, Wash. Geol. Surv, 17-18; instr. field geol, Washington (Seattle), summer, 16; Chicago and Iowa, jointly, summer, 16; geologist, Ill. Geol. Surv, 19- A.A; fel. Iowa Acad; Ill. Acad. Geology, physiography and climatology of the Pleistocene.
- Leighty, Dr. Clyde E(vert)**, 100 Grafton Ave, Clarendon, Va. *Agronomy*. Lawrence Co, Ill, May 7, 82. A.B. Ill. Wesleyan, 04; Ph.D. Cornell, 12. Soil analyst, Ill. Exp. Sta, 05-06; expert grain standardization, *U. S. Dept. Agr*, 06-07, asst, 07-09; *agronomist in charge east. wheat investigations*, 12- A.A. Plant breeding.
- Leith, Dr. C(harles) K(enneth)**, University of Wisconsin, Madison, Wis. **Geology*. Trempealeau, Wis, Jan. 20, 75. B.S. Wisconsin, 97, Ph.D. 01. Asst. prof. *geol, Wisconsin*, 02-03, *prof*, 03- Asst. geol, U. S. Geol. Surv, 00-05; professorial lecturer pre-Cambrian geol, Chicago, 05-; mineral adviser to U. S. Shipping Board, War Trade Board, War Industries Board and Am. Commission to Negotiate Peace, Paris. Nat. Acad; A.A; Geol. Soc; Min. Eng; Am. Acad; Wis. Acad. Pre-Cambrian, structural, metamorphic and economic geology; geology of the United States iron districts and origin of iron ores.
- Leland, Dean O(ra) M(iner)**, University of Minnesota, Minneapolis, Minn. *Astronomy, Geodesy*. Grand Haven, Mich, June 28, 76. B.S.(C.E), Michigan, 00; C.E, 20. In U. S. Gen. Land Office, 98-99, 00, 03; U. S. Coast and Geod. Surv, 00-03; instr. civil eng, Cornell, 03-06, asst. prof. geod. and astron, 06-16, prof, 16-20, head, dept. topog. and geod. eng, 11-20; *dean, col. eng. and archit. and sch. chem, Minnesota*, 20- Surveyor to U. S. Commissioner for the demarcation of the boundary of Alaska, 04-11; mem. Costa Rica-Panama boundary arbitration commission, 11-13. Capt, major and lieut. col, corps engineers, A.E.F. 17-19; eng. supervisor, J. G. White Eng. Corp, 20. A.A; Civil Eng; Eng. Educ; Astron. Soc; Ass. Prof. Civil engineering; technical education.
- Leman, Dr. E(dwin) D(aniel)**, 84 Hillcrest Terrace, Orange, N. J. *Chemistry*. Shreveport, La, Sept. 27, 88. B.S. Chicago, 12, Ph.D. 15. Instr. chem, Lewis Inst, 09-11; asst. physical chem, Chicago, 12-15; *supt, Carnotite Reduction Co*, 15-20; *Radium Luminous Mat. Corp*, 20- Radioactivity.
- LeMay, Prof. Clifford J(oseph), S.J.**, St. Louis University, St. Louis, Mo. *Physics*. Amherstburg, Ont, Feb. 24, 88. Detroit, 11-12; A.M. St. Louis, 19. *Prof. physics*, Creighton, 19-20; *St. Louis*, 20-
- Lemon, Prof. Harvey B(race)**, University of Chicago, Chicago, Ill. *Physics*. Chicago, April 23, 85. A.B. Chicago, 06, M.S. 11, Ph.D. 12. Instr. *physics, Chicago*, 12-17, *asst. prof*, 17- Research asst, Yerkes Observatory, summers, 05, 06, 08. Physical Soc. Spectroscopy of line structure and intensity distribution in hydrogen; polarization Brace spectrophotometer; adsorption of gases by carbon.

- Lemp, Hermann**, General Electric Co, Erie, Pa. *Electrical engineering*. Switzerland, Aug. 8, 62. Electrician, Edison Lab, 81-82; elec. engineer, Schuyler Elec. Light Co, 83-87; Thomson H. Elec. Co, 87-89; chief engineer, Thomson Elec. Welding Co, 89-95; elec. engineer, *Gen. Elec. Co*, Lynn, Mass, 95-11; *Erie, Pa.*, 11-12, *works engineer*, 12- Elec. Eng; A.W.S. Electrical welding; oil engine design; incandescent lamp, arc and dynamo manufacture.
- Lendall, Prof. H(arry) N(elson)**, Rutgers College, New Brunswick, N. J. *Municipal engineering*. Essex, Mass, July 13, 78. B.S.(C.E). Tufts. Practising engineer, 06-09; instr. *civil eng*, Pennsylvania, 09-12; *assoc. prof.*, *Rutgers*, 12- A.A.; Eng. Educ; Ass. Prof; N. J. Sci. Teachers Ass. Hydraulics.
- Leng, Charles William**, Public Museum, Staten Island, N. Y. *Entomology*. Staten Island, April 6, 59. B.S. Brooklyn Polytech, 77. Pres, John S. Leng's Son and Co, merchants, 88-19; *director*, *Pub. Museum, Staten Isl.*, 19- Research assoc, Am. Museum Nat. Hist, 11-19; Am. Museum Nat. Hist. expeditions to Labrador, Newfoundland, Fla. and Cuba. A.A.; fel. Entom. Soc; N. Y. Entom. Soc. (pres, sec'y, 11-19); Staten Isl. Inst. (sec'y, 81-85, 17-19); Brooklyn Entom. Soc. (curator); Wash. Entom. Soc. Coleoptera; Rhynchophora of northeastern America; Lampyridae of West Indies.
- Lengfeld, Dr. Felix**, 1507 Gough St, San Francisco, Calif. **Chemistry*. San Francisco, Feb. 18, 63. Ph.G, California, 80, 84-86; Hopkins, 86-88, fellow, Ph.D, 88; Zürich, Liège and Munich, 88-90. Prof. chem, S. Dak. Sch. of Mines, 90-91; instr, California, 91-92; docent, instr. and asst. prof, Chicago, 92-01; *consulting and mfg. chemist*, 01- A.A.; Chem. Soc. Organic and inorganic chemistry.
- Lenher, Prof. Victor**, 158 Summit Ave, Madison, Wis. **Chemistry*. Belmond, Iowa, July 13, 73. Dickinson, 90; certificate in chem, Pennsylvania, 93, Ph.D, 98. Asst. chem, California, 93-96; Columbia, 98-00; asst. prof. gen. and theoret. chem, *Wisconsin*, 00-04, *assoc. prof. chem*, 04-07, *prof.*, 07- Instr. chem, evening high sch, N. Y. City, 99-00; mem. Nat. Research Council (mem. sub-committee on selenium and tellurium); major, on staff of Col. Bogert and Major Gen. Siebert, C.W.S. A.A.; Chem. Soc. (past chairman, Wis. sect); Franklin Inst; Wash. Acad; Wis. Acad. Inorganic chemistry; rare elements; selenium; tellurium; rare earths; geochemistry.
- Lenne, Prof. N(els) J(ohann)**, 1107 Gerald Ave, Missoula, Mont. *Mathematics*. Norway, June 15, 74. B.S. Chicago, 98, M.S. 03, Ph.D, 07. Instr. *math*, Mass. Inst. Tech, 07-10; Columbia, 10-13; *prof. and head of dept*, *Montana*, 13- Head of math. dept, Chautauqua, 08-13. Math. Soc. Analysis situs; foundations of mathematics; projective geometry; mathematical education.
- Lenox, Prof. L(ionel) R(emon)**, Stanford University, Calif. *Chemistry*. Brooklyn, N. Y., March 8, 65. Ph.B, Columbia, 88. Instr. chem, Lehigh, 88-91; *Stanford*, 92-93, asst. prof, 93-94, *assoc. prof. anal. chem*, 94-96, *prof.*, 96- Chemist, bur. ordnance, U. S. N, 91-92. Chem. Soc.
- Leonard, Prof. A(rthur) G(ray)**, University of North Dakota, Grand Forks, N. Dak. *Geology*. Clinton, N. Y., March 15, 65. A.B, Oberlin, 89, A.M, 95; Ph.D, Hopkins, 98. Prof. geol. and biol, Western, 94-96; asst. state geologist, Iowa Geol. Surv, 96-97; asst. prof. geol, Missouri, 99-00; asst. state geologist, Iowa Geol. Surv, 00-03; *prof. geol, North Dakota, and state geologist*, 03- Field asst, U. S. Geol. Surv, 05-07. A.A.; Geol. Soc; Iowa Acad. Coal fields of North Dakota and Montana; Cretaceous and Tertiary formations of Montana and North Dakota; glacial deposits and Pleistocene drainage in North Dakota.
- Leonard, Prof. F(red) E(ugene)**, 174 E. College St, Oberlin, Ohio. *Physical education*. Darlington, Wis, June 2, 66. A.B, Oberlin, 89, A.M, 92; M.D, Columbia, 92; student, summer schools physical training, Springfield, 88; Chautauqua, 92; Baron Posse, 93; Harvard, 94, 98; hon. grad, Sargent Nor. Sch. Physical Educ, 07; Stockholm and Berlin, 00-01. *Prof. hygiene and physical educ. and director men's gymnasium*, *Oberlin*, 92- Special lecturer, Harvard Summer Sch, 99, 02, 08-19; Columbia, summer, 07; special instr, Y. M. C. A. Col, Chicago, 03, 05, 07, 09. Physical Educ. Ass; Soc. Directors Physical Educ. Colleges (v. pres, 10, pres, 12); Cleveland Acad. Med. History and theory of physical education.
- Leonard, Dr. Heman Burr**, University of Arizona, Tucson, Ariz. *Mathematics*. Detroit, Mich, Aug. 22, 72. B.S. Michigan, 95; Ph.D, Colorado, 06. Prof. *math*, Wesleyan (Ill), 01-03; instr, Oregon, 06-09, asst. prof, 09-12, *prof.*, 12-14; *Arizona*, 15- A.A.; Math. Soc; Eng. Educ; Ass. Prof. Linear associative algebra; the definition of reducibility and the factoring of composite hypercomplex number systems; properties of the characteristic equations of hypercomplex number systems.
- Leonian, Prof. Leon H(atchig)**, State College, N. Mex. *Plant pathology*. Van, Armenia, Feb. 27, 88. B.S. Kentucky, 16; M.S. Michigan, 17. Asst. research horticulturist, S. C. Exp. Sta, 17-18; *asst. prof. bot. and plant pathologist*, *N. Mex. Col.*, 18- Field asst, plant disease surv, U. S. Dept. Agr, summer, 18. A.A.; Bot. Soc; Phytopath. Soc. Plant breeding.
- Leroy, Dr. Louis**, Exchange Building, Memphis, Tenn. *Medicine*. Chelsea, Mass, Sept. 15, 74. M.D, Medico-Chirurg. Col, Phila, 96; B.S. Nashville, 00. Prof. path. and bacter, Vanderbilt, 96-06; *theory and practice of med*, *Tennessee*, 06- State bacteriologist, Tenn, 96-10; city bacteriologist, Nashville, 00-04; lecturer path, Harvey Med. Col. and med. dept, Illinois, 00-02; pathologist, Nashville City Hosp, 00; pres, Tenn. State Board Health, 10-11. Am. Med. Ass. Pathology; bacteriology; smallpox; tuberculosis; pellagra; hookworm; meningitis; malaria.
- Leslie, Prof. E(ugene) H(endricks)**, University of Michigan, Ann Arbor, Mich. *Chemical engineering*. Ottawa, Ill, Aug. 28, 92. B.S. Illinois, 13; Ph.D, Columbia, 16. Chief chemist, Gen. Petrol. Corp, 16-18; asst. to pres, U. S. Indust. Alcohol Co, 18-20; *assoc. prof. chem.*

- eng, Michigan, 20- Chem. Soc; Chem. Eng; Soc. Chem. Indust. Petroleum; motor fuels; hydrocarbon reactions; gas.
- Leslie, William Russel**, Northern Ontario Plant Breeding Station, Fort William, Ont, Can. *Horticulture*. Saskatoon, Sask, March 26, 91. B.S.A, Manitoba, 16. With hort. div, Cent. Exp. Farm, Ottawa, 16; *plant specialist in charge*, North. Ont. Plant Breeding Sta, 17- Soc. Hort. Sci; Pomol. Soc. Plant breeding; development of native fruits; hardy fruits; early maturing vegetables.
- Lester, Dr. H(orace) H(ardy)**, 192 Prospect St, East Orange, N. J. *Physics*. Nottingham, England, 84. A.B, Minnesota, 06; A.M, Washington (Seattle), 12; fellow, Princeton, 12-14, Ph.D. Instr. physics, Washington (Seattle), 10-12; Princeton, 14-15; radio laboratorian, Puget Sound Navy Yard, 17-20; *physicist*, *Westinghouse Lamp Co*, 20- A.A; Physical Soc. Index of refraction of H_2O ; thermionics; resistance in magnetic field.
- Lester, Prof. O(liver) C(larence)**, 1061 11th St, Boulder, Colo. *Physics*. Morris Co, Kans, Nov. 3, 73. A.B, Central (Mo), 97; A.M, Yale, 02, Loomis fellow, 03-04, Ph.D, 04. Prof. Latin and Greek, Hendrix, 97-98; asst. prof, Central (Mo), 98-01; asst. *physics*, Yale, 02-04, instr, Sheffield Sci. Sch, 04-07; *prof*, *Colorado*, 07-, *dean*, *grad. sch*, 19- A.A; Physical Soc; Math. Soc; Soc. de Physique. Spectroscopy; atomic theory; radioactivity.
- Leuba, Dr. James H(enry)**, Bryn Mawr, Pa. **Psychology, Philosophy*. Neuchâtel, Switzerland, April 9, 68. B.S, Neuchâtel, 86; Ph.D, Clark, 95. *Prof. psychol*, *Bryn Mawr*, 98- A.A; Psychol. Ass. Social psychology; psychology of religion; belief in God and immortality; religious mysticism.
- Leuschner, Prof. A(rmin) O(tto)**, 1816 Scenic Ave, Berkeley, Calif. **Astronomy*. Detroit, Mich, Jan. 16, 68. Grad, Royal Friederichs and Wilhelms Gym, Cassel, Germany, 86; A.B, Michigan, 88; California and Lick Observatory, 88-92; Ph.D, Berlin, 97; hon. Sc.D, Pittsburgh, 00; Michigan, 13. Instr. math, *California*, 90-92, asst. prof, 92-94, astron. and geod, 94-98, assoc. prof. and *director, students' observatory*, 98-07, *prof. astron*, 07-, *dean, grad. div*, 13-18, 20-Major, C.W.S, 18-19; acting chairman, div. physical science, Nat. Research Council, 18; chairman, comet committee, Int. Astron. Union; mem. Geophys. Union. Watson gold medal, Nat. Acad, 16. Nat. Acad; A.A. (v. chairman, A, 17); Astron. Soc; Math. Soc; Seismol. Soc; Pacific Astron. Soc. (pres, 07); Wash. Acad; Astron. Gesell. Theoretical astronomy; perturbations of the Watson asteroids; improvement in the methods of determining preliminary orbits of comets and planets.
- Levene, Dr. P(hoebe) A(aron Theodore)**, 129 E. 82d St, New York, N. Y. **Physiological chemistry*. Petrograd, Russia, Feb. 25, 69. M.D, St. Petersburg Imp. Mil. Med. Acad, 91; Berlin; Marburg; Berne; Munich; Columbia. Assoc. chem, State Path. Inst, N. Y, 96-05; *chemist, Saranac Lab. for Study Tuber*, 00-; Herter lecturer path. chem, Univ. and Bellevue Hosp. Med. Col, 05-06; asst. chem, 06-07; *mem. Rockefeller Inst*, 08- Nat. Acad; A.A; Soc. Nat; Physiol. Soc; Soc. Biol. Chem; Chem. Soc; Soc. Exp. Biol; N. Y. Chemists Club; Chem. Gesell; *Upsala Royal Soc. Sci*; Soc. Royale des Sci. Méd. et Nat. Bruxelles. Chemistry of proteins, nucleins, carbohydrates and enzymes.
- Leverett, Frank**, 1724 S. University Ave, Ann Arbor, Mich. **Geology*. Denmark, Iowa, March 10, 59. B.S, Iowa State, 85. Instr. nat. science, Denmark Acad, Iowa, 80-83; field asst, *U. S. Geol. Surv*, 86-90, asst. geologist, 90-01, *geologist*, 01-; *lecturer glacial geol*, *Michigan*, 09- A.A; Geol. Soc; Forestry Ass; Am. Geog. Soc; Wis. Iowa, Mich. and Wash. Academies; Wash. Geol. Soc. Glacial geology; physiography; water resources; glacial deposits of Europe; glacial investigations in the upper Mississippi and Great Lakes regions.
- Levi, Dr. Louis E(manuel)**, Care Pfister and Vogel Leather Co, Milwaukee, Wis. *Chemistry*. Buffalo, N. Y, Jan. 12, 62. Cornell, 84; Ph.D, Göttingen, 87. Asst. to Prof. Victor Meyer, Göttingen, 86-87; instr. chem, Mass. Inst. Tech, 88-90; *chief chemist*, Schoelkopf and Co, 97-03; *Pfister and Vogel Leather Co*, 03- Chem. Soc. (past chairman, leather sect); Soc. Chem. Indust; Leather Chem. Ass. (past pres). Derivatives of thiophene and anthranol; biophene; leather analysis and manufacture.
- Levin, Dr. Isaac**, 119 W. 71st St, New York, N. Y. *Physiology, Pathology*. Sagor, Russia, Nov. 1, 66. M.D, St. Petersburg Imp. Mil. Med. Acad, 90. Assoc. path, Columbia, 09-15; *clin. prof. cancer research*, *Univ. and Bellevue Hosp. Med. Col*, 15- A.A; Physiol. Soc; Ass. Path. and Bact; Soc. Exp. Biol; Ass. Cancer Research; Radium Soc; Am. Med. Ass; Harvey Soc; N. Y. Acad. Med. Fat absorption; protein absorption; physiology of the thyroid and adrenals; etiology of tumors; function of the spleen; hemolysis; function of the kidney capsule; fat necrosis and acute pancreatitis; transplantation of blood-vessels; experimental cancer; arteriosclerosis; assimilation of food in different segments of the gastro-intestinal tract; biological action of X-rays and radium; crown gall and other parasitic diseases of plants.
- Levine, Dr. B(enjamin) S(amuel)**, U. S. Department of Agriculture, Washington, D. C. *Chemistry*. Yekaterinoslav, Russia, 87. B.S, Trinity, 12; M.S, Brown, 13, Ph.D, 15. *With bur. chem*, *U. S. Dept. Agr*, 15- Teacher indust. chem, R. I. Sch. Design. Chem. Soc; Soc. Bact; Leather Chem. Ass. Cotton fiber; mildew resistance of textiles; toxicity of insoluble soaps to microorganisms; manufacture of leather.
- Levine, Dr. Michael**, 1646 University Ave, Bronx, New York, N. Y. *Botany, Physiology*. Mohilev, Russia, April 16, 86. B.S, Col. City of N. Y, 06; A.M, Columbia, 10, Ph.D, 13. Instr. pub. sch, 64, N. Y. City, 06-12; Commercial High Sch, Brooklyn, 12-18; *High Sch. of Commerce*, *N. Y. City*, 18-; *Montefiore Hosp*, 16- Ketchum prize, Col. City of N. Y. A.A; Bot. Soc; Phytopath. Soc; Ass. Cancer Research; Torrey Bot. Club; N. Y. Acad; N. Y. Soc. Exp. Educ. Cytology of the Boleti; chromosome number in *Drosera*; morphology of the Coprini; effect of ethyl alcohol on fatigue in frog muscle; speech

- defects; crown gall and its relation to cancer; poisonous mushrooms; industrial hygiene.
- Levine, M(oses) N(aphtali)**, 2075 Scudder Ave, St. Paul, Minn. *Plant pathology*. Lutsin, Russia, June 23, 86. B.S. Minnesota, 15, M.S., 16. Asst. plant path, Minnesota, 15-17; Kansas State, 17; agent cereal disease investigations, bur. plant indust, U. S. Dept. Agr, 17, field asst, 17-18, asst. pathologist, 19- In charge irrig. and path. truck crop exp, Minn. Exp. Sta, 14, asst, summer, 15; plant quarantine inspector, fed. hort. board, U. S. Dept. Agr, 16-17. A.A; Phytopath. Soc. Cereal rusts and smuts.
- Levine, Dr. Samuel A(lbert)**, 21 Bay State Road, Boston, Mass. *Medicine*. Poland, Jan. 1, 91. A.B. Harvard, 11, M.D. 14. Assoc. med, Peter Bent Brigham Hosp, Boston, 14-15; asst, Rockefeller Hosp, N. Y. City, 15-17; assoc, Peter Bent Brigham Hosp, 19-; asst, *Harvard Med. Sch.*, 20- Soc. Clin. Invest. Clinical medicine; action of drugs on the heart.
- Levine, Prof. Victor E(manuel)**, Creighton University, Omaha, Nebr. *Biological chemistry*. Russia, Aug. 4, 91. A.B. Col. City of N. Y., 09; A.M. Columbia, 11, Ph.D. 14. Asst. biol. chem, Columbia, 14-16; instr. chem. hygiene, 16-17; org. chem, Fordham, 15-16; director of chem. lab, Beth Israel Hosp, 16-17; asst. prof. biol. chem, *Creighton*, 18- Lecturer chem, Hunter, summer, 16. A.A; Chem. Soc; Pharmaceut. Ass; Soc. Bact; Ass. Study Int. Secretions; Pub. Health Ass; Nebraska Acad; fel. N. Y. Acad. (sec'y, sect. astron. physics and chem, 16, 17); Columbia Biochem. Ass. Nutrition; enzymes concerned with oxidations and reductions; biological aspects of the rare elements.
- Levison, Wallace Goold**, 1435 Pacific St, Brooklyn, N. Y. *Chemistry*. Brooklyn, Nov. 27, 46. B.S. Harvard, 70. Director, lab, Cooper Union, 71-84. Fel. N. Y. Acad; N. Y. Miner. Club (sec'y, 03-); Brooklyn Inst; Brooklyn Acad. of Photog. (pres, 87-90). Chemistry; electric arc lamps; photography of luminous objects; moving pictures and the apparatus for producing them; fluorescence and phosphorescence of minerals; classification of luminescent substances; origin and sequences of the minerals of the trap rocks of New Jersey.
- Levy, Dr. Ernest C(oleman)**, Monroe Terrace, Richmond, Va. *Sanitary science*. Richmond, Aug. 11, 68. Richmond, 84-87; M.D. Med. Col. of Va, 90; Mass. Inst. Tech, 03-04. Prof. histol. path. and bacter, Med. Col. of Va, 97-00; director, lab, City Water Dept, Richmond, 04-06, city bacteriologist, 05-06, chief health officer, 06-17; major, M.C, 18; director pub. welfare, *Richmond*, 19- A.A; Soc. Bact; Pub. Health Ass. (sec'y, sect. munic. health officer, 08-17); Am. Water Works Ass; Am. Med. Ass. Municipal public health.
- Levy, Max**, 1305 Spruce St, Philadelphia, Pa. *Photography*. Detroit, Mich, March 9, 57. Pub. schools. Medal and diploma, Columbian Expos, 93; highest silver medal, Royal Cornwall Polytech, 94; John Scott medal, Franklin Inst, 97; gold medal, Paris, 00; Buffalo, 01; La. Purchase Expos, 04. Franklin Inst. Photo-mechanical theory and practice.
- Levy, Dr. Robert Louis**, Hospital of the Rockefeller Institute, New York, N. Y. *Medicine*. New York, Oct. 14, 88. A.B. Yale, 09; M.D. Hopkins, 13. Asst. med, Hopkins, 13-16; physiol, Harvard Med. Sch, 16; instr. med, Hopkins, 16-18; assoc, *Rockefeller Inst. and res. physician, Hosp*, 19- Soc. Clin. Invest; Soc. Pharmacol; Ass. Study Int. Secretions. Physiology; pharmacology; internal medicine.
- Lewis, Dr. Albert B(uell)**, Field Museum, Chicago, Ill. *Anthropology*. Clifton, Ohio, June 21, 67. A.B. Chicago, 94; fellow, Nebraska, 97-99; Ph.D. Columbia, 06. Asst. instr, Nebraska, 99-02; asst, *Field Museum*, 07-08, asst. curator, 08- Asst. biol, Chicago, summer, 94, histol, summer 95, bacter, summer, 96; S. Pacific exped. to Melanesia and New Guinea, 09-13. A.A; Anthropol. Ass. (mem. council, 19); Ethnol. Soc. American and Melanesian ethnology.
- Lewis, Dr. Charles E(dward)**, R. F. D. 39, Waterville, Maine. *Botany*. Rensselaer, Ind, Feb. 10, 76. A.B. Indiana, 02, A.M. 03; Ph.D. Cornell, 05. Acting prof. biol, Idaho, 05-06; instr. bot, Wisconsin, 07-08; assoc. plant pathologist, *Maine Exp. Sta*, 08- A.A; Bot. Soc. Embryology and cytology of plants; plant pathology.
- Lewis, Dr. D(ean) D(eWitt)**, 122 S. Michigan Ave, Chicago, Ill. *Medicine*. Kewanee, Ill, Aug. 11, 74. A.B. Lake Forest, 95; M.D. Rush Med. Col, 99. Asst. anat, *Chicago*, 00-01, assoc, 01-03, instr, 03, assoc. prof. surg, *Rush Med. Col.* Physiol. Soc; Surg. Ass; Ass. Anat. Elastic tissue of the human larynx; the hypophysis of man.
- Lewis, Prof. E(xum) P(ercival)**, Berkeley, Calif. **Physics*. Washington Co, N. C, Sept. 15, 63. B.S. George Washington, 88; Ph.D. Hopkins, 95; Berlin, 98-00. Asst. physics, Hopkins, 91-95; instr, *California*, 95-96, asst. prof, 96-02, assoc. prof, 02-08, prof, 08- Instr. physics, George Washington, 91-95; Crocker eclipse exped, 07-08, 18. A.A. (v. pres, B, 15); Physical Soc. (mem. council, 05, ed, 'Review,' 15-17, sec'y, Pacific Coast div, 16-). Spectroscopy; electric discharge through gases; photo-electric effect.
- Lewis, Prof. Francis J(ohn)**, University of Alberta, Edmonton, Alta, Can. *Botany*. London, England, 75. D.Sc. Liverpool. Demonstrator bot, Liverpool, 00-05, lecturer geog. bot, 05-12; prof. biol, *Alberta*, 12- Cuthbert Peek award, Royal Geog. Soc, 05; Neill gold medal, Royal Soc. Edinburgh, 10. A.A; Bot. Soc; Royal Soc. Can; British Ass; Royal Soc. Edinburgh; London Linnean Soc. Pleistocene plant deposits in northwestern Europe; geographical distribution of vegetation; osmotic pressure and electrical conductivities of plant sap.
- Lewis, Dr. Frederic T(homas)**, Harvard Medical School, Boston, Mass. **Embryology*. Cambridge, Mass, March 18, 75. A.B. Harvard, 97, A.M. 98, M.D. 01. Austin teaching fellow, *Harvard Med. Sch.*, 01-02, instr. histol. and embryol, 02-06, asst. prof. embryol, 06-15, assoc. prof, 15- Ed, 'Am. Naturalist,' 07; assoc. ed, 'Anat. Record.' A.A; Ass. Anat. (v. pres, 14-16); Am. Acad; Boston Soc. Nat. Hist. Development of the vena cava inferior and other

veins; development of the lymphatic system and of the digestive tract; vertebrate embryology.

- Lewis, Dr. Garland E(dison)**, Roessler and Hasslacher Chemical Co, Niagara Falls, N. Y. *Chemistry*. Broken Bow, Nebr., Dec. 17, 80. Ph.G., Nebraska, 13, Ph.D., 16. Asst. prof. chem., Nebraska, 16-17; Rutgers, 17-18; *research chemist, Roessler and Hasslacher Chem. Co*, 18-
- Lewis, Dr. G(ilbert) N(ewton)**, University of California, Berkeley, Calif. **Chemistry*. Weymouth, Mass., Oct. 23, 75. Nebraska, 90-93; A.B., Harvard, 96, A.M., 98, Ph.D., 99; Leipzig and Göttingen, 00-01. Teacher, Phillips Acad., 96-97; instr. chem., Harvard, 99-00, 01-06, on leave in charge weights and measures, Bur. Govt. Laboratories, P. I., 04-05; asst. prof. physicochem. research, Mass. Inst. Tech., 07-08, assoc. prof., 08-11, prof., 11-12, acting director, research lab., 07-09; *prof. chem. and dean col. chem., California*, 12- Major, lieut. col., chief of defense div., gas service, A.E.F., and chief of training div., C.W.S. Chevalier, Légion d'honneur. Nat. Acad.; Physical Soc.; Chem. Soc.; Philos. Soc.; Am. Acad. Thermodynamic theory and its application to chemistry; free energy tables; equilibrium in numerous reactions; electric potentials of the common elements; properties of solutions and the activity of ions; distribution of thermal energy; specific heat of electrons; the principle of relativity and non-Newtonian mechanics; application of four-dimensional vector analysis to electro-magnetic theory; the geometry of the space time manifold of relativity; ultimate rational units; calculation of Stefan's constant; the structure of the atom and the molecule and the theory of valence; entropy of elements; third law of thermodynamics.
- Lewis, Dr. H(arry) F(letcher)**, National Aniline and Chemical Co, Buffalo, N. Y. *Chemistry*. Denver, Colo., May 27, 91. B.S., Wesleyan, 12, M.S., 13; Ph.D., Illinois, 16. Pharmaceut. research chemist, Illinois, 16-17; instr. chem., Grinnell, 17; asst. org. chemist, color lab., U. S. Dept. Agr., 17-18; assoc. prof. chem., Maine, 18-19; *research chemist, Nat. Aniline and Chem. Co*, 19- Chem. Soc. Organic and analytical chemistry; catalytic reactions.
- Lewis, Prof. Howard B(ishop)**, University of Illinois, Urbana, Ill. *Physiological chemistry*. Southington, Conn., Nov. 8, 87. A.B., Yale, 08, Ph.D., 13. Asst. *physiol. chem.*, Yale, 11-13; instr., Pennsylvania, 13-15; assoc., Illinois, 15-17, asst. prof., 17-19, *assoc. prof.*, 19- A.A.; Chem. Soc.; Soc. Biol. Chem.; Soc. Exp. Biol. Nutrition; hydantoin, uric acid and sulphur metabolism; inulin as a food; hippuric acid synthesis; scurvy.
- Lewis, Dr. I(saac) M(cKinney)**, University of Texas, Austin, Tex. *Botany*. Rensselaer, Ind., Sept. 21, 78. A.B., Indiana, 06, A.M., 07, Ph.D., 09. Instr. *bot.*, N. H. Col., 08-09; Texas, 09-12, adj. prof., 12-14, assoc. prof., 14-19, *prof.*, 19- A.A.; Bot. Soc.; Phytopath. Soc.; Ind. Acad.; Tex. Acad. (sec'y, 11-). Bacterial diseases of plants; cytology of gymnosperms.
- Lewis, Prof. I(vey) F(oreman)**, University, Va. *Botany*. Raleigh, N. C., Aug. 31, 82. A.B., North Carolina, 02, M.S., 03; Ph.D., Hopkins, 08. Prof. *biol.*, Randolph-Macon, 05-06, 08-12; asst. prof. *bot.*, Wisconsin, 12-14; *prof.*, Missouri, 14-15; *biol.*, Virginia, 15- Scientific asst., Bur. Fisheries, 06, investigator, 09; holder, Smithsonian table, Naples Zool. Sta., 08; Walker prize, Boston Nat. Hist. Soc., 09. A.A.; Bot. Soc.; Ass. Prof. (chairman, Va. branch, 16-19). Ecology; morphology of Algae.
- Lewis, J(ames) O(gier)**, Bureau of Mines, Washington, D. C. *Geology*. San Jose, Calif., Jan. 21, 86. A.B., Stanford, 16. Oil geologist and engineer, 09-14; petrol. engineer, *Bur. Mines*, 14-19, *chief petrol. technologist*, 19- Min. and Metal. Eng.; Ass. Petrol. Geol. Recovery of oil and gas.
- Lewis, Prof. J(oseph) Volney**, University of New Jersey, New Brunswick, N. J. *Geology*. Rutherford Co., N. C., Sept. 14, 69. B.E., North Carolina, 91; B.S., Harvard, 93; Hopkins, 93-94; Columbia. Asst. geologist, N. C. Geol. Surv., 91-96; *prof. geol.*, Clemson, 96-04; *Rutgers*, 04-, curator, *geol. museum*, 13-14, *director*, 14- Field asst., U. S. Geol. Surv., 91, 02, 18; prof. physical geog., S. C. State Sch. for Teachers, summers, 00, 01; with N. J. Geol. Surv., 05- A.A.; Geol. Soc.; Min. Eng.; Min. and Metal. Soc. Peridotites of North Carolina; Newark formation; copper ores; building stones of New Jersey; mining geology; pillow lavas; zeolites.
- Lewis, Dr. Julian H(erman)**, 5200 Wabash Ave., Chicago, Ill. *Pathology*. Shawneetown, Ill., May 26, 91. A.B., Illinois, 11, A.M., 12; Ph.D., Chicago, 15; M.D., Rush Med. Col., 17. *Instr. path.*, Chicago, and *mem.*, *Sprague Mem. Inst.*, 17- Pathologist, Provident Hosp., 19. Ricketts prize, 15; Benjamin Rush medal, 17. Anaphylaxis; chemotherapy; metabolism of amino acids; cancer.
- Lewis, Dr. Lowery Laymon**, 424 West St., Stillwater, Okla. *Bacteriology*. Newport, Tenn., 69. B.S.A., Tex. Col., 92, M.S., 94, D.V.M., Iowa State, 96. *Bacteriologist and veterinarian*, Okla. *Col. and Exp. Sta.*, 96- Soc. Bact.; Vet. Med. Ass. Dairy bacteriology; veterinary physiology.
- Lewis, Nelson P(eter)**, Municipal Building, New York, N. Y. *Municipal engineering*. Annandale, N. Y., Feb. 1, 56. A.B., St. Stephen's, 75, LL.D., 11; C.E., Rensselaer, 79. *Chief engineer* of highways, Brooklyn, 94-02; *Board of Estimate and Apportionment*, N. Y. *City*, 02- Trustee, Brooklyn Polytech; lecturer, Columbia; Rensselaer; Brooklyn Inst.; chairman, Nat. Conf. of City Planning; Int. Road Congresses, 08, 10, 13; Int. Cong. of Cities, Ghent, 13. Civil Eng. (director, 04-06, v. pres., 18, 19); Soc. Munic. Improv. (pres., 99); Road Builders Ass. (pres., 12); N. Y. Munic. Eng. (pres., 03); Brooklyn Inst. (pres., dept. eng.); Brooklyn Eng. Club (pres., 98). Highway design and construction; city planning.
- Lewis, Dr. Paul A(din)**, The Henry Phipps Institute, Seventh and Lombard St., Philadelphia, Pa. **Pathology*. Chicago, Ill., April 14, 79. Wisconsin; M.D., Pennsylvania, 04. House officer path., Boston City Hosp., 04-05; research asst., antitoxin lab., Mass. Board of Health, 05-08; Austin teaching fellow comp. path., Harvard Med. Sch., 06-08; asst. path., Rockefeller Inst., 08-09, assoc., 09-10; *asst. prof. path.*, Pennsylvania, and *director*, *Henry Phipps Inst.*, 10-

- A.A.; Ass. Path. and Bact; assoc. mem. Am. Physicians; Soc. Exp. Path; Soc. Pharmacol; Soc. Exp. Biol. Bacteriology of diarrhoeas of infancy; pneumonia; pathological lesions accompanying immunization of horses; effects of repeated injections of foreign protein; hemolysis; anaphylaxis; epidemic anterior poliomyelitis; tuberculosis.
- Lewis, Prof. Robert C(urtis)**, University of Colorado, Boulder, Colo. *Biochemistry*. Stratford, Conn, March 3, 88. Ph.B, Yale, 09, Ph.D, 12. Research physiologist, Gen. Mem. Hosp, N. Y. City, 12-14; asst. biochemist, U. S. Pub. Health Service, 14-16; asst. prof. biochem. and physiol, Colorado, 16-17, *prof.*, 17-18, *biochem.*, 18-A.A.; Chem. Soc. Metabolism; blood chemistry.
- Lewis, Dr. Warren Harmon**, Johns Hopkins University, Baltimore, Md. **Anatomy*. Suffield, Conn, June 17, 70. B.S, Michigan, 94; M.D, Hopkins, 00. Asst. zool, Michigan, 94-96; anat, Hopkins, 00-01, instr, 01-03, assoc, 03-04, *prof.*, 04-13, *prof. physiol. anat.*, 13- Research assoc, Carnegie Institution, 19- A.A.; Soc. Nat; Ass. Anat; hon. mem. Gand Med. Soc. Development of the arm, eye, ear, muscular system and head in man; experimental embryology and cytology; tissue culture.
- Lewis, Mrs. Warren H. (Margaret A. Reed)**, Johns Hopkins University, Baltimore, Md. *Physiology*. Kittaning, Pa, Nov. 9, 81. Woods Hole, 00; A.B, Goucher, 01; Bryn Mawr, 01-03, fellow, 08-09; Paris and Berlin, 08. Preparator in zool, Columbia, and asst, Barnard, 03-06, instr, Barnard, 06-10; anat. and physiol, training sch. for nurses, Hopkins Hosp; *collaborator*, Carnegie Institution. Lecturer physiol, N. Y. Med. Col, 04-05. Tissue cultures; Bacillus typhosus; heart muscle of chick embryo.
- Lewis, Prof. W(arren) K(endall)**, Massachusetts Institute of Technology, Cambridge, Mass. **Chemical engineering*. Laurel, Del, Aug. 21, 82. B.S, Mass. Inst. Tech, 05; Ph.D, Breslau, 08. Research assoc, lab. applied chem, Mass. Inst. Tech, 08-09; chemist, W. H. McElwain Co, 09-10; *prof. chem. eng.*, Mass. Inst. Tech, 10- Chem. Soc; Leather Chem. Ass; Am. Acad. Distillation; flow of heat.
- Lewis, Dr. W(elcome) B(abcock)**, 367 Champion St, Battle Creek, Mich. *Biological chemistry*. Adams Center, N. Y, June 14, 83. B.S, Alfred, 07; M.D, Illinois, 12. Asst, lab, Battle Creek Sanitarium, 07-08, *chief chemist, physiol. laboratories*, 12- A.A.; Chem. Soc. Hydrogen-ion concentration of physiological liquids.
- Lewis, Wilfred**, Haverford, Pa. *Mechanical engineering*. Philadelphia, Oct. 16, 54. B.S, Mass. Inst. Tech, 75. With Wm. Sellers and Co, in shops, 75-78, draftsman and design engineer, 78-86, asst. engineer, 86-00; *pres*, Tabor Mfg. Co, 00- Lecturer, Franklin Inst. John Scott medal, Franklin Inst; Phila. Eng. Club prize. A.A.; Mech. Eng. (past v. pres); Phila. Eng. Club (past pres); Franklin Inst. Gearing; belting; counterbalancing; molding machines for foundry use.
- Lewis, Prof. W(inford) Lee**, Northwestern University, Evanston, Ill. *Chemistry*. Gridley, Calif, May 29, 78. A.B, Stanford, 02; A.M, Washington (Seattle), 04; fellow, Chicago, 06-08, Ph.D, 09. Asst. chemist, U. S. Dept. Agr, 08-09; instr. *chem.*, Northwestern, 09-12, asst. prof, 13-17, assoc. prof, 17-19, *prof. and chairman of dept.*, 19- Capt, C. W. S., 17-19. A.A.; Chem. Soc. Sugars; sanitation; toxic gases.
- Lewton, Frederick L(ewis)**, 113 Chestnut Ave, Takoma Park, D. C. *Botany*. Cleveland, Ohio, March 17, 74. Rollins, 88-90; Drexel, 92-95. Chem. asst, test. dept, Baldwin Locomotive Works, 95; instr. chem. and qual. anal, Drexel Inst, 95-04; curator, Phila. Museums, 00-04; scientific asst. bot, U. S. Dept. Agr, 04-08, asst. botanist, 08-12; *curator, div. textiles*, U. S. Nat. Museum, 12- Economic botanist, Phila. Commercial Museum, 96-00. Mus. Ass; Phila. Acad; Wash. Acad; Wash. Bot. Soc. Industrial chemistry; classification of vegetable exudates; plant breeding; taxonomy of cotton; terminology and technology of textile industries.
- Libbey, Prof. William**, Princeton, N. J. *Physiography*. Jersey City, N. J, March 27, 55. A.B, Princeton, 77, A.M, Sc.D, 79. Asst. prof. *physical geog.*, Princeton, 80, *prof. and director*, E. M. Museum of Geol, 83- Prof. histol, Princeton, 83-98. Officier d'Acad. A.A.; Soc. Nat. (v. pres); Geol. Soc; Ass. Geog; Am. Geog. Soc. (for. cor. sec'y); Nat. Rifle Ass. (pres, 15); Philos. Soc; cor. mem. Phila. Acad; Phila. Geog. Soc. (v. pres); cor. mem. N. Y. Acad; cor. mem. Boston Soc. Nat. Hist; N. Y. Hist. Soc; N. J. Hist. Soc; Alaskan Hist. Soc; fel. Royal Geog. Soc; fel. London Geol. Soc; hon. mem. Liverpool Geog. Soc; Soc. de Géog; Soc. géol. de France; cor. mem. Soc. de Géog. de Genève. Oceanography; Hawaiian volcanoes; Alaskan and Greenland glaciers; the Jordan valley.
- Libman, Dr. E(manuel)**, 180 E. 64th St, New York, N. Y. *Bacteriology, Pathology*. New York, Aug. 22, 72. A.B, Col. City of N. Y, 91; M.D, Columbia, 94; Berlin and Vienna, 96-97, 10; Berlin, 03; Hopkins, 06. House physician, Mt. Sinai Hosp, 94-96, *asst. pathologist*, 98-, adj. visiting physician, 03-14, attending physician, 14-20, *physician*, 20-; *prof. clin. med.*, Columbia, 09- A.A.; Ass. Path. and Bact; Am. Physicians; Soc. Clin. Invest; Ass. Tuber; Ass. Immunol; Am. Med. Ass; Harvey Soc; fel. N. Y. Acad. Med; N. Y. Path. Soc. (pres, 08); Int. Ass. Med. Mus. Streptococcus intestinal infection; precipitation in serum-sugar media; sarcoma of the small intestine; paracolon infections; systematic and otitic infections; transfusion; endocarditis.
- Lichty, Prof. D(avid) M(artin)**, 922 Olivia Ave, Ann Arbor, Mich. *Chemistry*. Goodville, Pa, July 10, 62. B.S, Pa. State Nor. Sch, 87; M.S, Michigan, 91; Ph.D, Heidelberg, 06. Asst. anal. chem, Michigan, 88-90, instr. inorg. chem, 91-07, asst. prof. *gen. chem.*, 07-14, *assoc. prof.*, 14- A.A.; Chem. Soc. Rate of esterification of halogen substituted acids; decomposition of oxalic acid in concentrated sulphuric acid; sulphur trioxide; sulphuric acid; action of insoluble oxides, hydroxids and carbonates of metals on ammonium chlorid.
- Lidbury, F(rank) A(ustin)**, 33 Sugar St, Niagara Falls, N. Y. **Chemistry*. Middlewich, Eng, March 14, 79. Manchester, 95-99, M.Sc; London, 99-00; Physik-Chem. Inst, Leipzig, 00-01.

- Demonstrator chem, Manchester, 02-03; chemist, *Oldbury Electrochem. Co.*, 03-05, *works manager*, 05- Chem. Soc; Electrochem. Soc. (pres, 14-15); Chem. Eng; Elec. Eng; Mech. Eng; Min. Eng; Soc. Chem. Indust; Faraday Soc; Buffalo Eng. Soc. (pres, 17-18).
- Lieb, Prof. Charles C(hristian)**, Columbia University, New York, N. Y. *Pharmacology*. New York, April 19, 80. A.B, Columbia, 02, M.D, 06. *Asst. prof. pharmacol*, Columbia, 11- Soc. Pharmacol; Soc. Exp. Biol; Physiol. Soc; Am. Med. Ass.
- Lieb, J(ohn) W(illiam)**, Edison Co, Irving Place and 15th St, New York, N. Y. *Electrical engineering*. Newark, N. J, Feb. 12, 60. M.E, Stevens, 80. Draftsman, Brush Elec. Co, 80; Edison Elec. Light Co, 81, asst, exp. dept, Edison Machine Works, 82, electrician, Edison Elec. Illum. Co, 82-83; chief electrician, director and chief engineer, Italian Edison Co, 83-94; Edison Elec. Illum. Co, 94; *v. pres*, N. Y. *Edison Co*; *pres*, *Elec. Test. Laboratories*. Director in various elec. corporations. Commander Order of the Crown, Italy. A.A; Elec. Eng. (past pres); Nat. Elec. Light Ass. (past pres); Mech. Eng. (past v. pres); Civil Eng; Franklin Inst; Am. Geog. Soc; N. Y. Acad; N. Y. Elec. Soc; Ass. Electrotech. Ital; hon. mem. Ital. Soc. Eng. and Archit. Management of utility corporations.
- Liebowitz, Dr. Sidney**, 31 W. 89th St, New York, N. Y. *Chemistry*. New York, Dec. 4, 87. A.M, Columbia, 12; Ph.D, Pittsburgh, 15; fellow, Clark, 13-14; Pittsburgh, 14-15. Consulting chemist, 15-18; research chemist, C.W.S, U.S.A, 18-19; *pres*, *Atriken Chem. Works*, 19- Chem. Soc. Physical and organic chemistry; catalysis; chemical dynamics.
- Liebowitz, Dr. Benjamin**, 22 Ferdinand Place, New Rochelle, N. Y. *Physics*. New York, N. Y, Feb. 20, 90. E.E, Columbia, 11, fellow, 13-14, Ph.D, 15. *In independent research and development*, 15- With T. A. Edison, 17; with E. J. Simon, 18. Assoc. Physical Soc; Radio Eng; Automotive Eng. Motor car engineering; radio telegraphy; electrical oscillations; vehicle springs.
- Light, Prof. George H(eyser)**, 958 Pleasant St, Boulder, Colo. *Mathematics*. Bedington, W. Va, March 19, 75. A.B, Princeton, 99, A.M, 00; Ph.D, Yale, 16. Adj. prof. math, Ga. Tech, 01-05; instr, Purdue, 05-13; instr, asst. prof. and later *assoc. prof*, *Colorado*, 16- Math. Soc; Math. Ass. (see'y-treas, Rocky Mountain sect, 17-). Calculus of variations; intrinsic geometry.
- Lilienthal, Prof. Howard**, 52 E. 82d St, New York, N. Y. *Surgery*. Albany, N. Y, Jan. 9, 61. A.B, Harvard, 83, M.D, 87. *Prof. clin. surg, med. col*, *Cornell*, 17- Lieut. col, M.C. Surg. Ass; N. Y. Surg. Soc. (past pres). Surgery of the thorax.
- Lillie, Prof. Frank R(attray)**, University of Chicago, Chicago, Ill. **Zoology, Embryology*. Toronto, Can, June 27, 70. B.A, Toronto, 91, Sc.D, 20; Clark, 91-92; Ph.D, Chicago, 94. Reader embryol, Chicago, 93-94; instr. zool, Michigan, 94-99; prof. biol, Vassar, 99-00; asst. prof. zool, *Chicago*, 00-02, *assoc. prof. embryol*, 02-06, *prof. and chairman of dept*, 06- Asst. director, Woods Hole, 00-08, director, 08-; managing ed, 'Biol. Bul'; ed, 'Jour. Exp. Zool'; 'Jour. Morph.' Nat. Acad; A.A. (v. pres, F, 15); Soc. Nat. (v. pres, 14, pres, 15); Soc. Zool. (pres, 05-08, central branch, 05); Ass. Anat; Philos. Soc; Soc. Exp. Biol; cor. mem. Phila. Acad; Soc. biol. de Paris; Soc. belge de Biol. Early history of ovum; fertilization of ovum; physiology of development; heredity; biology of sex.
- Lillie, Prof. Ralph S(tayner)**, Nela Research Laboratory, Cleveland, Ohio. **Physiology, Zoology*. Toronto, Can, Aug. 8, 75. B.A, Toronto, 96; Michigan, 96-97; Ph.D, Chicago, 01; Naples Zool. Sta, 04-05. Instr. physiol. and histol, Nebraska, 02-03, adj. prof, 03-05; instr. physiol, Harvard, 05-06; Johnston scholar, Hopkins, 06-07; instr. physiol. and zool, Pennsylvania, 07-11, asst. prof, 11-13; prof. and head, dept. biol, Clark, 13-20; *biologist*, *Nela Research Lab*, 20- Instr. gen. and comp. physiol, Woods Hole, 01- A.A; Soc. Nat; Physiol. Soc; Soc. Exp. Biol; Soc. Biol. Chem; Ass. Prof; Am. Acad. Histology and development of nephridia; oxidation in cells; physiology of protoplasmic contractility; stimulation; cell-division; artificial parthenogenesis; osmotic pressure of colloids; physiology of growth processes; protoplasmic transmission (nerve conduction, etc); salt-action; anesthesia.
- Lincoln, Prof. A(zariah) T(homas)**, 1625 Tibbits Ave, Troy, N. Y. *Chemistry*. Montfort, Wis, June 25, 68. B.S, Wisconsin, 94, M.S, 98, fellow, 98-99, Ph.D, 99. Research asst. physical chem, Cornell, 99-00; instr. chem, Cincinnati, 00-01, Illinois, 01-03, asst. prof, 03-08; *Rensselaer*, 08-12, *prof*, 12- A.A; Chem. Soc; Electrochem. Soc. Solution of silicates of the alkalis; dissociative power of solvents; electrical conductivity of non-aqueous solutions; physical reaction and the mass law; ternary system, benzene, acetic acid and water; determination of phosphates in natural waters; vapor pressure of solutions; colloids; electrolytic corrosion of brasses; ternary mixtures; analytical chemistry.
- Lincoln, Director Francis Church**, University of Nevada, Reno, Nev. *Geology, Mining*. Boston, Mass, Sept. 8, 77. B.S, Mass. Inst. Tech, 00; E.M, New Mex. Sch. Mines, 04; A.M, Columbia, 06, fellow, 06-07, Ph.D, 11. Assayer, Butterfly-Terrible Gold Mining Co, Colo, 00-01; prof. geol, New Mex. Sch. Mines, 01-02, chem. and metal, 02-04; asst. supt, Ruby Gold and Copper Co, Mexico, 04; Arizona Gold and Copper Co, 05; asst. physics, Columbia, 06; prof. geol. and miner, Mont. State Sch. Mines, 07-10; consulting mining engineer, 10-11; assoc. mining, Illinois, 11-12, asst. prof, 12-13; res. mining engineer, Bolivian Development and Exploration Co, Bolivia, 13-14; *director Mackay Sch. of Mines, Nevada*, 14-; *state ore sampler*, Nev, 17- A.A; Min. Eng; Mont. Soc. Eng. Magmatic emanations; geology of ore deposits; microscopic associations of gold; mineralogical classification of igneous rocks; ore sampling.
- Lincoln, Paul M(artyn)**, 1884 Stanwood Road, Cleveland, Ohio. *Electrical engineering*. Norwood, Mich, Jan. 1, 70. Western Reserve, 88-89; M.E, Ohio State, 92. With Brush Elec. Co, 92; Westinghouse Elec. and Mfg. Co, 92-95;

- elec. supt, Niagara Falls Power Co, 95-02; elec. engineering, Westinghouse Elec. and Mfg. Co, 02-19; *consulting elec. engineer, Lincoln Elec. Co, 19-* Elec. Eng. (pres, 14); Electrochem. Soc; Mech. Eng.
- Lind, Dr. S(amuel) C(olville)**, U. S. Bureau of Mines, Reno, Nev. **Chemistry*. McMinnville, Tenn, June 15, 79. A.B, Washington and Lee, 99; B.S, Mass. Inst. Tech, 02; Ph.D, Leipzig, 05; Paris, 10; Radium Inst, Vienna, 11. Asst. chem, Mass. Inst. Tech, 02-03; instr. gen. and physical chem, Michigan, 05-12, asst. prof, 12-15; chemist, radioactivity, *Bur. Mines*, 13-18, *physical chemist*, 18- A.A; Chem. Soc; Electrochem. Soc. Radioactivity; radium extraction and measurement; influence of radiation on chemical action; kinetics of chemical reactions; relation of gaseous ionization to chemical action.
- Lindenthal, Dr. G(ustav)**, Metuchen, N. J. *Civil engineering*. Bruenn, Austria, May 21, 50. Govt. Col, Brünn, hon. D.Ing, 20; private study, Vienna, 70; hon. D.Ing, Dresden, 11. Asst. engineer, Vienna, 70-72; railroad, Switzerland, 72-74; Centennial Expos, Phila, 74-77; Atlantic and Great Western R.R, 78-81; *consulting engineer*, Pittsburgh, 81-91; *N. Y. City, 91-* Chief engineer, Monongahela Bridge Co, 81-89; chief engineer and pres, North River Bridge Co, N. Y, 90-01; commissioner of bridges, N. Y, 02-03; designer of Hell Gate arch bridge; new Kentucky River high bridge; Queensborough cantilever bridge; Scootsville continuous girder bridge. Rowland prize, Civil Eng, 83. A.A; Cleveland Eng. Club; Can. Civil Eng; British Inst. Civil Eng; Berlin Soc. Mech. Eng; cor. mem. Austrian Civil Eng. and Archit. Soc. Long-span bridges; foundations; submarine tunnels; railroads; harbor piers and light-houses.
- Lindgren, J(usta) M(orris)**, Urbana, Ill. *Chemistry*. Moline, Ill, July 28, 79. A.B, Illinois, 02, A.M, 07. Chemist, State Water Surv, Ill, 03-07; *chemist, eng. exp. sta, Illinois, 07-* Chem. Soc. Analytical chemistry; coals.
- Lindgren, Prof. W(aldeemar)**, Massachusetts Institute of Technology, Cambridge, Mass. **Geology*. Kalmar, Sweden, Feb. 14, 60. M.E, Sch. of Mines, Freiberg, 83; Sc.D, Princeton, 16. Asst. geologist, Northern Transcont. Surv, 83; chemist, Gregory Smelting Works, Mont, 84; asst. geologist, U. S. Geol. Surv, 84-95, geologist, 95-11, in charge investigations metal deposits and metal statistics, 07-11, chief geologist, 11-12; *Rogers prof. econ geol, Mass. Inst. Tech, 12-* Assoc. prof. mining and metal, Stanford, 98; lecturer econ. geol, Mass. Inst. Tech, 08-11. Nat. Acad; A.A; Geol. Soc; Min. Eng; Min. and Metal. Soc. (pres, 20); Am. Acad; Philos. Soc; Wash. Acad. Economic geology of metallic ores; mineral deposits.
- Lindley, Dr. Ernest H(iram)**, Lawrence, Kans. **Psychology, Philosophy*. Paoli, Ind, Oct. 2, 69. A.B, Indiana, 93, A.M, 94; Ph.D, Clark, 97; Jena, Leipzig and Heidelberg, 97-98; Harvard, 04-05. Instr. philos, Indiana, 93-98, assoc prof. psychol, 98-02, prof, 02-17; pres, Idaho, 17-20; *chancellor, Kansas, 20-* Instr, summer sch, Clark, 96, 99, 01; summer sch, Columbia, 07. A.A; Psychol. Ass; Religious Educ. Ass. Motor and mental automatisms; psychology of invention; arithmetical prodigy; psychology of pedagogy of leadership; psychology of prayer; some relations of mental hygiene to practical ethics; philosophy and psychology of value.
- Lindquist, Prof. Theodore**, 1119 State St, Emporia, Kans. *Mathematics*. Andover, Ill, Aug. 11, 75. A.B, Lombard, 97; M.S, Northwestern, 99; Ph.D, Chicago, 11. Prof. math, Mt. Morris, 97-98; instr. physics and math, Kansas State, 99-01; math, high sch, Kankakee, Ill, 01-03; prof, N. Dak. Sch. of Science, 03-07; instr, Michigan, 07-12; prof, Lombard, 12-14; *head, dept. math, State Nor. Sch, Emporia, 14-* Math. Ass; Kans. Mat. Teachers Ass. Teaching of mathematics; engineering mathematics; modern arithmetic.
- Lindsay, Dr. George Allan**, 609 Hill St, Ann Arbor, Mich. *Physics*. Wyandotte, Mich, Nov. 1, 79. A.B, Michigan, 05, A.M, 08, Ph.D, 13. Instr. *physics*, Washington (St. Louis), 07-12; *Michigan, 13-20, asst. prof, 20-* Assoc. Physical Soc; Astron. Soc. Structure of matter; elastic properties of solids; X-rays.
- Lindsey, Dr. J(oseph) B(ridgeo)**, 47 Lincoln Ave, Amherst, Mass. *Chemistry*. Marblehead, Mass, Dec. 26, 62. B.S, Mass. Col, 83; Ph.D, Göttingen, 91; Zürich, 91-92. *Chemist, Hatch Exp. Sta, 92-07; Mass. Agr. Exp. Sta, 07-, v. director, 09-, Goosmann prof. chem. and head of dept, Mass. Col, 11-* A.A; Chem. Soc; Soc. Animal Production. Chemistry of carbohydrates, dairying and of animal nutrition.
- Lindstrom, Prof. E(rnest) W(alter)**, University of Wisconsin, Madison, Wis. *Genetics*. Chicago, Ill, Feb. 5, 91. A.B, Wisconsin, 14; Ph.D, Cornell, 18. Asst. and investigator plant breeding, Cornell, 14-17; *asst. prof. genetics, Wisconsin, 18-* A.A; Bot. Soc. Plant breeding; chlorophyll inheritance in maize.
- Lineback, Prof. Paul Eugene**, Emory University, Atlanta, Ga. *Anatomy*. Winston-Salem, N. C, 79. A.B, Drake, M.D, 11; A.M, Harvard. Teaching fellow, Harvard, 14-16; *prof. micros. anat, Emory, 16-* A.A; Ass. Anat. Musculature and development of the colon.
- Linebarger, C(harles) E(lijah)**, 4315 Kenmore Ave, Chicago, Ill. **Physical chemistry*. Plainfield, Ill, Feb. 21, 67. A.B, Northwestern, 88; Tübingen, 89-90; Paris, 90-91, 93-94; Göttingen, 92-93. *Teacher*, N. Div. High Sch, Chicago, 91-92, S. Div. High Sch, 94-96, *Lake View High Sch, 96-* The properties of solutions; surface tension of liquids; improvements in the steam calorimeter; the specific heats of solid elements; educational apparatus.
- Linehan, Prof. Paul H(enry)**, 346 Convent Ave, New York, N. Y. *Mathematics*. Boston, Mass, Jan. 15, 79. A.B, Harvard, 02; Ph.D, Columbia, 16. Tutor *math, Col. City of N. Y, 03-12*, instr, 12-16, *asst. prof, 16-* Asst. director, evening session, Col. City of N. Y, 16- A.A; Math. Soc; Math. Ass. Equilong geometry.
- Lines, Edwin F(uller)**, Kensington, Md. *Geology*. New Haven, Conn, April 30, 75. A.B, Cornell, 04. *With U. S. Geol. Surv, 04-09; Ill. Geol. Surv, 07-09; Internal Revenue Bur, 19-* A.A. Areal geology of Clarion quadrangle, Pennsyl-

vania; fire clays of the Pennsylvania formation in Illinois.

Linfield, Dean F(rederick) B(loomfield), Bozeman, Mont. *Agriculture*. Twillingate, Newfoundland, July 18, 66. B.S.A., Ont. Agr. Col., 91. Instr. dairying, Ont. Agr. Col., 92-93; prof. live stock and dairying, Utah Col. and Exp. Sta., 93-02; agr. *Mont. Col.* and agriculturist, *Exp. Sta.*, 02-04, *director*, 04-, *dean*, *col. agr.*, 14-A.A.; Soc. Prom. Agr. Sci. Dairying; animal husbandry.

Ling, Dr. Charles J(oseph), Allegheny College, Meadville, Pa. *Physics, Astronomy*. Auburn, N. Y., Dec. 8, 67. B.S., Cornell, 90; A.M., Denver, 00, Ph.D., 02. Prof. nat. science, State Nor. Sch., La., 90-92; teacher science, high sch., Pueblo, 92-94; instr. physics, Manual Training High Sch., Denver, 94-06; *prof. physics and astron.*, *Allegheny*, 06- Instr. math. and astron., Denver, summer, 03. A.A.; Physical Soc. Strong solutions with special reference to change of density with temperature; maximum density; freezing and boiling points; observations of Eros; observations of minor planets and comets; light efficiency and life of incandescent lamps.

Ling, Prof. G(eorge) H(erbert), University of Saskatchewan, Saskatoon, Can. **Mathematics*. Wallacetown, Ont., Jan. 15, 74. B.A., Toronto, 93; A.M., Columbia, 94, Ph.D., 96. Instr. math., Wesleyan, 96-01; tutor, Columbia, 01-05, instr., 05-09, adj. prof., 09; *prof.*, *Saskatchewan*, 09-, *dean of arts*, 11-, acting pres., 19-20. In charge math., summer sch., Cincinnati, 00. A.A.; Math. Soc. Tidal theory; theory of groups; search for simple groups; hyper-algebra.

Lingle, Prof. D(avid) J(udson), University of Chicago, Chicago, Ill. *Physiology*. Rock Island, Ill., June 6, 63. B.S., Chicago, 85; Ph.D., Hopkins, 92. Instr. science, Beloit, 86-87; *asst. prof. biol.*, Tulane, 90-91; reader *physiol.*, *Chicago*, 92-93, *asst.*, 93-94, *instr.*, 94-04, *asst. prof.*, 04-20, *assoc. prof.*, 20- Physiol. Soc. Physiology of the heart; action of salt on the heart.

Lingle, L(ester) F., U. S. Bureau of Fisheries, San Pedro, Calif. *Chemistry*. Paoli, Ind., Aug. 30, 94. A.B., Indiana, 17; Wisconsin. Asst. prof. hort. products, Oregon Col., 17-18; *in charge*, *U. S. Fisheries Lab.*, *San Pedro, Calif.*, 18- Chem. Soc. Preservation of fruits, vegetables and fish.

Linhart, Dr. George A(ugustus), Brentwood, Calif. *Physical chemistry*. Bohemia, 84. A.B., Cent. High Sch., Phila., 06, B.S., Pennsylvania, 09; A.M., Yale, 11, Ph.D., 13. Asst. instr. chem., Yale, 10-12; instr. high sch., New Haven, Conn., 13; teaching fellow, Washington (Seattle), 14; California, 15-18, instr. soil chem. and bacter., 19-20; *educ. research in co-ordination of curriculum*, *High Sch.*, *Brentwood, Calif.*, 20- Chem. Soc. Mercury; electrolytes; purification of water; free energy of biological processes; soil structure.

Link, Dr. George K(onrad) K(arl), University of Chicago, Chicago, Ill. *Plant physiology*. Mt. Clemens, Mich., March 14, 88. B.S., Chicago, 10, Ph.D., 16; A.M., Nebraska, 12. Asst. bot., Kansas State, 10-11; adj. prof. agr. bot., Nebraska, 11-13, *asst. prof.*, 13-14, *assoc. prof.*, 14-17, *prof.*

plant physiol., 17-19; pathologist, bur. plant industry, *U. S. Dept. Agr.*, 17-20, *specialist market path.*, 20- A.A.; Bot. Soc.; Phytopath. Soc. Potato diseases; immunity; tuberization.

Link, Mrs. George K. K. (Dr. Adeline DeSale), Lawrence College, Appleton, Wis. *Chemistry*. Omaha, Nebr., Jan. 4, 92. A.B., Vassar, 14; Ph.D., Chicago, 17. *Asst. prof. chem.*, *Lawrence*, 17- Chem. Soc. Physico-organic chemistry; physiological chemistry.

Link, Dr. Henry C(harles), U. S. Rubber Co., New Haven, Conn. *Psychology*. Buffalo, N. Y., Aug. 27, 89. A.B., Yale, 13, A.M., 15, Ph.D., 16. Indust. psychologist and director educ., Winchester Repeating Arms Co., 17-19; *director educ.*, *U. S. Rubber Co.*, 19- Lecturer, Harvard, Yale, Bur. Indust. Research; chairman, Committee on Psychol. Tests and Rating Scales in Industry. Applied industrial psychology; industrial fatigue; control of education in industry.

Linn, Prof. A(lvin) F(rank), Wittenberg College, Springfield, Ohio. *Chemistry, Mineralogy*. Springfield, Sept. 23, 64. A.B., Wittenberg, 84, A.M., 87; fellow, Hopkins, 88, Ph.D., 92. Prof. nat. science, *Wittenberg*, 88-91, *chem. and miner.*, 92- Lecture asst., Hopkins, 87-88. A.A.; Chem. Soc. Sulphon-phthalein and derivatives; method for determination of nitric acid; electrical deposition of lead; electrical separation of lead and manganese; phosphids of metals; constitution of hematoxylin.

Lint, Dr. H(enry) Clay, Alphano Humus Co., 17 Battery Place, New York, N. Y. *Agronomy*. Ada, Kans., Oct. 20, 90. B.S., Kansas State, 12; fellow, Rutgers, 13-16, M.S., 15, Ph.D., 16. *Chemist and bacteriologist*, *Alphano Humus Co.*, 16- A.A.; Phytopath. Soc.; Peat Soc. Soil biology and chemistry; potato diseases.

Linton, Prof. Edwin, 400 E. Maiden St., Washington, Pa. **Zoology*. East Bethlehem, Pa., March 14, 55. A.B., Washington and Jefferson, 79; Yale, 81-82, Ph.D., 90. Teacher, pub. sch., 73-74; instr. math., *Washington and Jefferson*, 79-81, *prof. biol. and geol.*, 82-20, *emer. prof.*, 20- Asst. scientific research, Bur. Fisheries, Woods Hole, 82-87, 89, 98-00, 03-18; Yellowstone Park, 90; Beaufort, N. C., 01-02; Bermuda, 03; Tortugas, 06-08. Silver medal, Paris Expos., 00. A.A.; Soc. Nat.; Soc. Zool.; Wash. Acad. Entozoa of fishes; helminth parasites of fishes; food of young marine fishes.

Linville, Clarence P(hilander), 408 Chilton St., Elizabeth, N. J. *Metallurgy*. Urbana, Ohio, March 29, 79. B.S., Ohio State, 00, fellow, 00-02, A.M., 02. Instr. metal, Pa. State, 03-06, *asst. prof.*, 06-07, *assoc. prof. in charge*, dept. metal. eng., 07-12; supt. blast-furnace, J. E. Thropp, 12-13; *asst. supt. blast-furnace dept.*, *Am. Smelting and Ref. Co.*, 13-14, *research metallurgist and supt. by-products dept.*, 14- Min. Eng.; Chem. Soc.; Eng. Educ.; West. Pa. Eng. Soc. Blast furnace phenomena; metallurgy of arsenic; nickel; electrolytic tin; bismuth.

Linville, Dr. Henry R(ichardson), Jamaica High School, Jamaica, N. Y. *Biology*. St. Joseph, Mo., Aug. 12, 66. A.B., Kansas, 93; Harvard, 94, A.M., 95, Ph.D., 97. *Instr. biol.*, *DeWitt Clinton High Sch.*, *N. Y.*, 97-08; *high sch.*, *Ja-*

maica, N. Y, 08- Maturation and fertilization in pulmonate gasteropods; natural history of annelids; circulation in Nereis; adapting the researches of biology to educational uses.

Lipka, Prof. Joseph, Massachusetts Institute of Technology, Cambridge, Mass. *Mathematics*. Briessen, Poland, Sept. 7, 83. B.S. Columbia, 05, A.M. 06, Ph.D. 12. Instr. math, California, 07-08; *Mass. Inst. Tech.*, 08-17, asst. prof., 17-18; asst. math, summer sch, Columbia, 05-06. A.A.; Math. Soc.; Math. Ass.; Am. Acad.; Circolo Mat. di Palermo. Differential geometry; dynamical trajectories.

Lipman, Prof. C(harles) B(ernard), University of California, Berkeley, Calif. *Plant physiology*. Russia, Aug. 17, 83. B.Sc. Rutgers, 04, M.Sc. 09; M.S. Wisconsin, 09; Ph.D. California, 10. Instr. soil bacter, California, 09-10, asst. prof. soils, 10-12, assoc. prof., 12-13, *prof. soil chem. and bacter.*, 13- A.A.; Bot. Soc.; Soc. Bacter; Ecol. Soc.; Chem. Soc.; Soc. Agron.; Soc. Prom. Agr. Sci.; Agr. Chem. (referee on soils, 15-17). Alkali salts in soils and plant growth; bacteria of arid soils; soil colloids and soil fertility.

Lipman, Dr. Jacob G(oodale), State University of New Jersey, New Brunswick, N. J. *Soil chemistry and bacteriology*. Friedrichstadt, Russia, Nov. 18, 74. B.S. Rutgers, 98; A.M. Cornell, 00, Sage fellow, 01, Ph.D. 03. Asst. chemist, *N. J. State Exp. Sta.*, 98-99, *soil chemist and bacteriologist*, 01-, *director*, 11-; instr. agr. chem, *Rutgers*, 02-06, asst. prof. agr. 06-07, assoc. prof., 07-10, *prof. soil chem. and bacter.*, 10-13, *agr.*, 13-, *dean agr.*, 15- Lecturer soil bacter, Illinois and Cornell, 06; Tennessee, 09, 10; Iowa State, 10; Nebraska, 11; Columbia, 20. Ed-in-chief, 'Soil Science,' 16-; asst. ed., 'Jour. Soc. Agron.'; assoc. ed., 'Jour. Agr. Research'; investigator, nitrate div, ordnance dept, U.S.A., 19; chairman, fertilizer committee, Nat. Research Council. A.A. (sec'y, 0, 20); Chem. Soc.; Soc. Agron. (past v. pres, pres, 19); Soc. Prom. Agr. Sci. (sec'y-treas, 20); Agr. Chem.; Soc. Bact.; Pub. Health Ass.; Wash. Acad. Nitrification; denitrification; chemistry of decay; physiology of nitrogen fixation; availability of organic soil nitrogen; ammonification; chemical and bacteriological effect of liming; utilization of nitrogen in fertilizer materials; bacteria in relation to country life.

Lippincott, J(oseph) B(arrow), Central Building, Los Angeles, Calif. *Hydraulic engineering*. Scranton, Pa, Oct. 10, 64. B.S. Kansas, 86, C.E. 14. Hydrographer, U. S. Geol. Surv. 95-02, supervising engineer, reclamation service, 02-06; asst. chief engineer, Los Angeles aqueduct, 06-13; *consulting engineer*, 13- Lecturer, California; consulting engineer for various cities; civil service commissioner, Los Angeles, 04. Civil Eng. Storage of water on Gila River, Arizona, and King's River, California; development and application of water in southern California; California hydrography; water supply of Santa Barbara County, California.

Lippincott, Prof. W(illiam) A(dams), Kansas State Agricultural College, Manhattan, Kans. *Poultry husbandry*. Jacksonville, Ill, July 3, 82. A.B. Ill. Col. 03; B.S. Iowa State, 11; M.S. Wisconsin, 17, Ph.D. 20. Asst. prof. animal

husbandry, Iowa State, 11-12; *prof. poultry husbandry*, Kansas State, 12- A.A.; Int. Ass. Instructors and Investigators Poultry Husbandry (hon. sec'y, 19-). Poultry genetics.

Littell, Captain Frank B(owers), U. S. Naval Observatory, Washington, D. C. *Astronomy*. Scranton, Pa, Feb. 21, 69. Ph.B. Wesleyan, 91, hon. Sc.D. 19; A.M. George Washington, 94. Computer, U. S. Naval Observatory, 91-96; teacher math, high sch, Scranton, Pa, 96-97; computer, U. S. Naval Observatory, 97-98, asst. astron., 98-01; *prof. math. U.S.N.*, 01- Mem. U. S. eclipse exped, Ga, 00; Sumatra, 01; Spain, 05; Washington-Paris longitude by radio, 13-14. A.A.; Astron. Soc.; Wash. Acad.; Wash. Philos. Soc.; Soc. Astron. de Mex. Transit circle observations of sun, moon, planets and stars; vertical circle observations of declinations of standard stars; photographic zenith tube observations for variation of latitude; Trans-Atlantic longitude by radio signals.

Little, Dr. Arthur D(ehon), 30 Charles River Road, Cambridge, Mass. *Chemistry*. Boston, Dec. 15, 63. Mass. Inst. Tech. 81-84; hon. Chem.D. Pittsburgh, 18. *Engineering chemist*, Boston, 86-; *pres.*, A. D. Little, Inc., 09- State assayer, Mass, 86-94; lecturer wood pulp and paper making, Mass. Inst. Tech.; assoc. ed., 'Jour. Indust. and Eng. Chem.' 08-; research director, United Fruit Co; director, Research Corp; mem. corp, Mass. Inst. Tech.; mem. research information service, Nat. Research Council (mem. advisory board, super-power surv); war work with Sig. C. and C.W.S. A.A.; Chem. Soc. (pres, 12-14, director, 14-); Chem. Eng. (pres, 19, councilor); Electrochem. Soc.; Mech. Eng.; Soc. Test. Mat.; Am. Acad.; London Soc. Chem. Indust.; Can. Inst. Eng. Engineering chemistry; utilization of industrial wastes; chemistry of cellulose, paper making and fibre treatment; airplane dopes; acetone production; inventor of processes in chrome tanning; electrolytic manufacture of chlorates; artificial silk; smoke filters.

Little, Prof. C(harles) N(ewton), Moscow, Idaho, *Civil engineering*. Madura, India, May 19, 58. A.B. Nebraska, 79, A.M. 84; Ph.D. Yale, 85. Instr. math. and civil eng, Nebraska, 80-84, assoc. prof. civil eng, 84-90, *prof.*, 90-93; math, Stanford, 93-01; *civil eng, Idaho*, 01-, *dean, col. eng.*, 11- A.A.; Civil Eng.; Eng. Educ. Highway engineering; theory of knots; topology.

Little, Dr. C(larence) C(ook), Cold Spring Harbor, Long Island, N. Y. *Genetics*. Brookline, Mass, Oct. 6, 88. A.B. Harvard, 10, M.S. 12, Sc.D. 14. Research asst. genetics, Harvard, 10-13, research fellow biol, Cancer Commission, 13-19; *research assoc.*, Carnegie Institution, 19- Sec'y, corp. Harvard Col, 10-12, asst. dean, 16-17; trustee, Noble and Greenough Sch, Boston, 15- A.A.; Soc. Nat.; Soc. Zool.; Soc. Cancer Research; Soc. Exp. Biol. Heredity of color in mice; inheritance of susceptibility or non-susceptibility to cancer.

Little, Dr. George, 325 Queen City Ave, Tuscaloosa, Ala. *Geology*. Tuscaloosa, Feb. 11, 38. A.B. Alabama, 55, A.M. 56, LL.D. 06; Ph.D. Göttingen, 57. Prof. chem, Oakland Col, 60-61, 66-67; geol, Mississippi, 66-74, 81-89; mem. Ala. Geol. Surv. 92. State geologist, Miss, 68-

- 72; Ga, 74-81. Ores of Georgia; clays and minerals of Alabama; coal and iron about Chattanooga, Tennessee; soil analysis; development of the resources of the south; phosphates from Tallahassee and Tampa, Florida; manganese, zinc, lead and silver in Arkansas.
- Little, Prof. H(omer) P(ayson)**, National Research Council, Washington, D. C. *Geology*. Columbia, Conn, Aug. 3, 84. A.B, Williams, 06; fellow, Hopkins, 09-10, Ph.D, 10. Instr. geol, Colby, 10-12, asst. prof, 12-14, assoc. prof, 14-15, prof, 15-20; *exec. sec'y, div. geol. and geog, Nat. Research Council*, 20- Lecturer geol, Bangor Theol. Sem, 13, 16, 19. A.A; Geol. Soc. Coastal plain of Maryland; Pleistocene of central Maine.
- Littlehales, G(eorge) W(ashington)**, 2132 Le Roy Place, Washington, D. C. *Hydrographic engineering*. Near Pottsville, Pa, Oct. 14, 60. Grad, U. S. Naval Acad, 83; C.E, George Washington, 88. Asst, U. S. *Hydrog. Office*, 85-00, *hydrog. engineer*, 00-; *prof. nautical science, George Washington*, 13- Assoc. ed, 'Int. Jour. Terrestrial Magnetism', 96-00; consulting hydrographer, dept. terrestrial magnetism, Carnegie Institution, 04-06. A.A; Ass. Geog. (v. pres, 07); Naval Eng; Wash. Acad. (v. pres, 06, 12, 13); Wash. Philos. Soc. (pres, 05). Oceanography; terrestrial magnetism; astronomy applied to aerial and marine navigation.
- Littleton, Dr. Jesse T(albot), Jr**, Corning Glass Works, Corning, N. Y. *Physics*. Belle Haven, Va, July 7, 87. A.B, Southern (Ala), 06; fellow, Tulane, 06-08, A.M, 08; Wisconsin, 08-09, Ph.D, 11. Asst. physics, Southern (Ala), 05-06; Wisconsin, 09-11; instr, Michigan, 11-13; *chief, physical lab, Corning Glass Works*, 13-A.A; Physical Soc. Optical constants of metals, alloys, and steels; mechanical and physical properties of glass.
- Littleton, Dr. Leonidas B(osser)**, National Aniline and Chemical Co, Buffalo, N. Y. *Chemistry*. Belle Haven, Va, Aug. 1, 89. A.B, Southern (Ala), 07, 07-08; fellow, Tulane, 08-10, A.M, 10; fellow, Illinois, 10-12, Ph.D, 12. Asst. science, Southern (Ala), 07-08; instr. chem, Grinnell, 12-13; prof, Emory and Henry, 13-17; asst. chemist, Picatinny Arsenal, 17-18; chief chemist, Mathieson Alkali Wks, 18-19; *chemist, Nat. Aniline and Chem. Co*, 19- A.A; Chem. Soc. Rearrangements in the camphor series.
- Livermore, Prof. K(enneth) C(arter)**, Cornell University, Ithaca, N. Y. *Agriculture*. Watertown, Mass, Jan. 3, 86. B.S, Cornell, 09. Instr. farm crops, Cornell, 09-10, investigator, 10, asst. prof, *farm management*, 10-11, *prof*, 13- Agricultural surveys; business analysis of successful farms.
- Livingston, Dr. A(lfred) E(rwin)**, Hygienic Laboratory, Washington, D. C. *Physiology*. Frost, Ohio, Dec. 6, 83. B.S, Ohio (Athens), 10, M.S, 11; Ph.D, Cornell, 14. Instr. physiol. Cornell, 11-14; junior pharmacologist, U. S. Dept. Agr, 14-16; assoc. physiol, med. dept, Illinois, 16-18; *assoc. pharmacologist, hygienic lab, U. S. Pub. Health Service*, 18- Physiol. Soc. Pharmacology; internal secretions; oil of Chenopodium; benzylalcohol; mercury fulminate; tricrosol; carvacrol.
- Livingston, Dr. Burton E(dward)**, Johns Hopkins University, Baltimore, Md. **Plant physiology*. Grand Rapids, Mich, Feb. 9, 75. B.S, Michigan, 98; Ph.D, Chicago, 01. Asst, bot. lab, Michigan, 95-98; instr. science, high sch, Freeport, Ill, 98-99; asst. plant physiol, Chicago, 99-04, assoc, 04; soil expert, U. S. Bur. Soils, 05-06; mem. staff bot. research, desert bot. lab, Carnegie Institution, 06-09; *prof. plant physiol, Hopkins*, 09-, *director, plant physiol. lab*, 13- Field work, Mich. Geol. Surv, 01; collaborator, U. S. Bur. Forestry, 02; Carnegie research asst, 04; managing ed, 'Physiol. Researches'; editor-in-chief, 'Bot. Abstracts.' Walker prize, Boston Soc. Nat. Hist, 03. A.A. (v. pres, G, 18, permanent sec'y, 20-); Soc. Nat; Bot. Soc; Chem. Soc; Ecol. Soc; Am. Acad. Physical aspects of plant physiology; chemical stimulation; plant distribution; relation of soils to plant growth; water relation of plants; salt nutrition of plants.
- Lloyd, Curtis Gates**, Court and Plum Sts, Cincinnati, Ohio. *Mycology*. Florence, Ky, July 17, 59. Private schools. Founder, The Lloyd Library; Lloyd Museum of Fungi.
- Lloyd, E(dwin) Russell**, Cosmos Club, Washington, D. C. *Geology*. Lloydsville, W. Va, Nov. 3, 82. A.B, Ohio Wesleyan, 05; Rhodes scholar, Oxford, 05-08, B.A, 08, Burdette Coutts scholar, 08-10; fellow, Chicago, 09-11. Junior geologist, U. S. Geol. Surv, 11-12, asst. geologist, 12-13, assoc. geologist, 13; *geologist, Costa Rica Oil Co*. V. chairman, coal sect, Land Classification Board, 15- A.A; Wash. Geol. Soc. Petrography; stratigraphic and economic geology; coal; classification and valuation of public lands.
- Lloyd, Prof. Francis E(rnest)**, McGill University, Montreal, Can. **Botany*. Manchester, England, Oct. 4, 68. Lafayette, 87-89; A.B, Princeton, 91, A.M, 95; Munich, 98; Bonn, 01. Instr. biol, Williams, 91-92; prof, Pacific, 92-97; adj. prof, Teachers Col, Columbia, 97-06; staff mem, desert bot. lab, Carnegie Institution, 06; cytologist, Ariz. Exp. Sta, 07; director, dept. investigation, Continental-Mexican Rubber Co, 07-08; *special expert, U. S. Rubber Co*, 08, 18-; prof. bot, Ala. Polytech. Inst, 08-12; *MacDonald prof. bot, McGill*, 12- Botanist, Lumholtz Mexican exped, 90; ed, 'Plant World', 05-; assoc. ed, 'Am. Rev. Trop. Agr.', 09- A.A. (sec'y, G, 02-07); Bot. Soc; Ecol. Soc; fel. N. Y. Acad; Torrey Bot. Club (assoc. ed, 'Bul.', 98-02, treas, 02-06); hon. mem. Phila. Col. Pharm; St. Louis Acad; fel. Royal Soc. Can. Embryology, anatomy and morphology; transpiration and physiology of stomata; rubber culture; botanical pedagogies; general physiology.
- Lloyd, Prof. Howard H(untley)**, Goucher College, Baltimore, Md. *Chemistry*. Baltimore, Md, Aug. 1, 92. A.B, Hopkins, 12, Ph.D, 15. Research asst. chem, Hopkins, 15-16; instr, Goucher, 16-17; assoc. prof. and acting head of dept, 17-19, *prof. and head of dept*, 17- Lecturer physical chem, Hopkins, 16-17. A.A; Chem. Soc. Electrical conductance of alcoholic solutions.
- Lloyd, Prof. John Uri**, The Lloyd Library, 309 W. Court St, Cincinnati, Ohio. **Chemistry*,

Pharmacy. West Bloomfield, N. Y., April 19, 49. *Phar.M.*, Phila. Col. *Pharmacy*, 90; *Ph.D.*, Ohio (Athens), 97; *LL.D.*, Wilberforce; *Sc.D.*, Cincinnati, 19; *Phar.D.*, Cincinnati Col. *Pharmacy*, 20. *Prof. pharmacy*, Cincinnati Col. *Pharmacy*, 83-87; *chem.*, Eclectic Med. Inst., 78-87, *pres.*, 96-04; *senior mem.* *Lloyd Bros.* *Pres.*, Lloyd Library Bot. and *Pharmacy*; *assoc. ed.*, 'Pharmaceut. Rev'; 'Eclectic Med. Jour.' Gold medals, *Pharmaceut. Ass.*, 82, 92, 99, Remington honor medal, 20. *A.A.*; *Chem. Soc.*; *Pharmaceut. Ass.* (*pres.*, 87); *Eclectic Med. Ass.* *Plant chemistry and pharmacy*; *alkaloids*; *glucosids and proximate principles*; *precipitates in fluid extracts*; *phenomena of capillarity*; *phytochemistry as applied to medicine*; *superstition and folk-lore of northern Kentucky*; *pharmacy of plant products*.

Lloyd, Prof. J(ohn) W(illiam), Agricultural Experiment Station, Urbana, Ill. *Horticulture*. St. Charles, Ill., Feb. 19, 76. *B.S.*, Wheaton, 97; *B.S.A.*, Cornell, 99, *M.S.A.*, 03; *Ph.D.*, California, 17. *Instr. hort.*, *Illinois*, 99-02, *olericulture*, 02-03, *asst. prof.*, 03-09, *assoc. prof.*, 09-11, *prof.*, and *chief in olericulture*, *Exp. Sta.*, 11- Soc. *Hort. Sci.* (*v. pres.*, 13); *Pomol. Soc.* *Spraying*, *fertilizing and marketing fruits and vegetables*.

Lloyd, Dr. M(orton) G(ithens), Bureau of Standards, Washington, D. C. *Electrical engineering*. Beverly, N. J., Sept. 10, 74. *B.S.*, Pennsylvania, 96, Tyndale fellow, 96-99, *Ph.D.*, 00, *E.E.*, 08; *Harvard*, 97-98; *Berlin*, 98-99. *Instr. physics*, Pennsylvania, 99-02; *lab. asst.*, *Bur. Standards*, 02-04, *asst. physicist*, 04-08, *assoc. physicist*, 08-10; *tech. ed.*, 'Elec. Rev. and West. Electrician,' 10-17; *assoc. elec. engineer*, *Bur. Standards*, 17, *elec. engineer in charge, safety sect.*, 18- *Int. Elec. Cong.*, St. Louis, 04. *A.A.*; *Physical Soc.*; *Elec. Eng.*; *Franklin Inst.* (*v. pres.*, *physics sect.*, 02); *Electrochem. Soc.*; *Illum. Eng. Soc.* (*v. pres.*, 16-18); *Wash. Philos. Soc.*; *Prog. Educ. Ass.* *Effects of self-induction and capacity in alternating current circuits*; *thermodynamic and galvanomagnetic effects in Bi and Te*; *effect of wave form upon induction meters, core loss and ratio of transformers and upon hysteresis*; *effect of phases of harmonics upon quality of sound*; *measurement of hysteresis and eddy currents*; *magnetic hysteresis in rotary field*.

Lloyd, Prof. Stewart J(oseph), University, Ala. *Chemistry*. Hamilton, Ont., Sept. 12, 81. *B.A.*, Toronto, 04; *M.S.*, McGill, 06; *Ph.D.*, Chicago, 10. *Demonstrator chem.*, McGill, 04-06; *asst.*, Chicago, 08-09; *assoc. prof.*, *Alabama*, 09-11, *prof. and director of lab.*, 11- *Electrochem. Soc.* *Physical and metallurgical chemistry*; *radioactivity*.

Lloyd-Jones, Prof. Orren, Sippy Farms, Biteley, Mich. *Genetics*. Hillside, Wis., 85. *B.S.*, Wisconsin, 08, *M.S.*, 11, *Ph.D.*, 13. *Asst. exp. breeding*, Wisconsin, 11-13; *asst. prof. animal husbandry*, Iowa State, 13-14, *assoc. prof.*, 14-15; *farm manager*. *A.A.*; *Soc. Nat.*; *Soc. Zool.* *Pigmentation inheritance in pigeons and swine*; *heredity in hybrid cattle*.

Lobeck, Prof. Armin Kohl, University of Wisconsin, Madison, Wis. *Geology*. New York, N. Y., Aug. 16, 86. *A.B.*, Columbia, 11, *A.M.*,

13, *Ph.D.*, 17. *Instr. bot.*, Phila. Col. *Pharmacy*, 11-14; *geol.*, Columbia, 16-18; *asst. prof.*, *Wisconsin*, 19- *Physiog. study in P. R.*, 16-17; attached to *Am. Geog. Soc.*, 17-18; attached to *Am. Commission to Negotiate Peace*, Paris, 18-19. *Fel. N. Y. Acad.* *Physiography of Porto Rico and the United States*.

Lochhead, Prof. W(illiam), Macdonald College, Quebec, Can. *Biology*. Listowel, Ont., April 3, 64. *B.A.*, McGill, 85; *fellow*, Cornell, 86-87, *M.S.*, 95. *Teacher science*, Galt Col. Inst., 89-94; *London Col. Inst.*, 96-98; *prof. biol.*, Ont. *Agr. Col.*, 98-05; *Macdonald*, 05- *Ed.*, 'Quebec Jour. Agr.', 08- *A.A.*; *Ass. Econ. Entom.*; *Ont. Entom. Soc.* (*pres.*, 02-04); *Que. Soc. Protection Plants* (*pres.*, 08-); *Ottawa Field-Nat. Club.* *Economic entomology*; *scale insects*; *Hessian fly*; *pea-weevil*; *economic fungi*; *insect and fungous diseases of orchards*.

Locke, Dr. Augustus, 788 Mills Building, San Francisco, Calif. *Geology*. North Adams, Mass., Aug. 22, 83. *A.B.*, Harvard, 04, *B.S.*, 05, *M.E.*, 09; *Sheldon fellow*, 10-11, *Sc.D.*, 13. *Field worker*, *Secondary Enrichment Investigation*, 13-; *consulting mining geologist*, 15- *Min. and Metal. Eng.* *Mining geology*; *secondary enrichment of copper ores*.

Locke, Prof. Charles E., Massachusetts Institute of Technology, Cambridge, Mass. *Mining engineering*. Milton, N. H., Aug. 29, 74. *B.S.*, Mass. Inst. Tech., 96. *Engineer*, Sweetwater Coal Mining Co., 96-97; *private asst.* to Prof. Robert H. Richards, 97-05; *asst. prof. mining eng. and metal*, *Mass. Inst. Tech.*, 05-19, *assoc. prof. mining eng. and ore dressing*, 19- *Min. Eng.* *Ore dressing*.

Locke, Dr. Edwin A(llen), 311 Beacon St., Boston, Mass. *Medicine*. Halifax, Mass., Oct. 15, 74. *Ph.B.*, Brown, 96, *A.M.*, 97; *M.D.*, Harvard, 01. *Asst. instr. and later asst. prof. clin. med.*, *Harvard Med. Sch.*, 03- *Visiting physician*, Boston City Hosp.; *chief of staff*, Boston Consumptives' Hosp. *Assoc. Am. Physicians*; *Climat. Ass.*; *Soc. Clin. Invest.*; *Ass. Tuber.*; *Int. Bur. for Tuberculosis*. *Internal medicine*.

Lockwood, Prof. E(dwina) H(oyt), 51 Sheldon Terrace, New Haven, Conn. *Mechanical engineering*. New Canaan, Conn., Oct. 31, 66. *Ph.B.*, Yale, 88, *M.E.*, 92, *Ph.D.*, 01. *Designing engineer*, 89-95; *instr. mech. eng.*, *Sheffield Sci. Sch.*, Yale, 92-01, *asst. prof.*, 01- *A.A.*; *Mech. Eng.*; *Heat. and Vent. Eng.*; *Automotive Eng.*; *Conn. Acad.*

Locy, Prof. W(illiam) A(ibert), 1745 Orrington Ave., Evanston, Ill. *Zoology*. Troy, Mich., Sept. 14, 57. *B.S.*, Michigan, 81, *M.S.*, 84, *hon. Sc.D.*, 06; *fellow*, Harvard, 84-85; *Berlin*, 91; *hon. fellow*, Chicago, 94-95, *Ph.D.*, 95; *Naples Zool. Sta.*, 02-03. *Prof. biol.*, Lake Forest, 87-89, *animal morph.*, 89-96; *zool.*; and *director*, *zool. lab.*, *Northwestern*, 96- *Prof. physiol.*, Rush Med. Col., 91; *trustee*, Woods Hole, 01- *A.A.* (*v. pres.*, 13); *Soc. Nat.*; *Soc. Zool.* (*pres.*, 15); *Ass. Anat.* *Embryology of Arachnida*; *structure and development of vertebrate head*; *pineal eye*; *accessory optic vesicles in embryo elasmobranchs and chicks*; *metameric segmentation of the neural axis*; *olfactory nerve*; *new cranial nerve (nervus terminalis) in selachians*; *aortic*

- arches in birds and mammals; embryology of bird's lung; embryology of cranial nerves of selachians; the olfactory nerve; primary segments of vertebrate brain.
- Lodge, R(ichard) W(alley)**, Redlands, Calif. *Mining, Metallurgy*. Boston, Mass, Jan. 14, 57. Mass. Inst. Tech, 79. Asst. mining and metal, Mass. Inst. Tech, 79-80; mining in the west, 80-82; asst. mining and metal, Mass. Inst. Tech, 82-83; head chemist, N. Chicago Rolling Mill Co, 83-85; chemist, Sloss Iron and Steel Co, Ala, 87; instr. mining and metal, Mass. Inst. Tech, 89-94, asst. prof, 95-07; *consulting engineer*, 07- A.A; Min. Eng; Forestry Ass.
- Lodholz, Prof. Edward**, University of Pennsylvania, Philadelphia, Pa. *Physiology*. Philadelphia, Pa, 75. M.D, Pennsylvania, 97; Göttingen, 03; Bonn, summers, 10-12, 14. Asst. demonstrator *physiol*, Pennsylvania, 01-02, demonstrator, 03-12, asst. prof, 12-20, *prof*, 20-A.A; *Physiol. Soc*; Am. Med. Ass; Phila. Col. Physicians. *Physiology of the nerves*.
- Loeb, Dr. Hanau W(olf)**, 537 N. Grand Ave, St. Louis, Mo. *Anatomy, Laryngology*. Philadelphia, Pa, Aug. 25, 65. A.B, Missouri, 83, A.M, 86; M.D, Columbia, 88. *Prof. nose and throat diseases*, Marion-Sims Col. Med, 90-04; *St. Louis, 04-*, *dean sch. med*, 13- Ed, 'Annals of Otol, Rhinol. and Laryngol,' 98-; major, M. C, 17-18, Col, M. R. C, 19- Ass. Anat; Am. Med. Ass; Laryngol. Ass; Otol. Soc; Laryngol, Rhinol. and Otol. Soc. *Anatomy of the accessory sinuses of the nose; operative surgery of the nose, throat and ear; military surgery of the ear, nose and throat*.
- Loeb, Prof. Jacques**, Rockefeller Institute, New York, N. Y. **Physiology*. Germany, April 7, '59. Berlin; Munich; M.D, Strasbourg, 84; hon. Sc.D, Cambridge, 09; hon. M.D, Geneva, 09; hon. Ph.D, Leipzig, 09. Asst. *physiol*, Würzburg, 86-88; Strasbourg, 88-90; Naples Zool. Sta, 89-91; assoc. *biol*, Bryn Mawr, 91-92; asst. *prof. physiol. and exp. biol*, Chicago, 92-95, *assoc. prof*, 95-00, *prof. physiol*, 00-03; California, 03-10; *mem. Rockefeller Inst*, 10- Trustee, Woods Hole. Nat. Acad; A.A; Soc. Nat. (pres, 20); *Physiol. Soc*; Soc. Exp. Biol; Soc. Biol. Chem; Philos. Soc; Am. Acad; Phila. Acad; Wash. Acad; hon. *mem. Royal Inst*; *for. fel. London Linnean Soc*; hon. *mem. Cambridge Philos. Soc*; *cor. mem. Acad. Sci. Inst. France*; Soc. *biol. de Paris*; *cor. mem. Frankfurt Senckenberg Naturforscher Verein*; Erlangen Physik-Med. Gesell; *for. mem. Belgian Acad*; hon. *mem. Acad. Royale de Méd. de Belgique*; *assoc. mem. Soc. Belge de Biol*; Soc. Royale des Sci. Méd. et Nat. Bruxelles; *cor. mem. Cracow Acad*; Moscow Soc. Nat; *cor. mem. Budapest Med. Gesell*; Vienna Med. Gesell; Bataafsch Genootschap der Proefondervindelijke Wijsbegeerte te Rotterdam. Heliotropism; heteromorphosis; organization and growth; comparative physiology of the brain and comparative psychology; dynamics of living matter; artificial parthenogenesis and fertilization; the mechanistic conception of life; the organism as a whole; forced movements, tropisms and animal conduct.
- Loeb, Prof. Leo**, Washington University Medical School, St. Louis, Mo. **Pathology*. Mayen, Germany, Sept. 21, 69. Heidelberg, Berlin, Zürich, Basel and Freiburg, 89-96; Staats-examen, 96; M.D, Zürich, 97; research fellow, McGill, 03. Adj. *prof. path*, Illinois, 00-01; exp. pathologist, N. Y. State Path. Lab, Buffalo, 02; asst. demonstrator path, Pennsylvania, 03, asst. *prof. exp. path*, 04-10; director, path. dept, St. Louis Skin and Cancer Hosp, 10-15; *prof. comp. path, Washington (St. Louis)*, 15- A.A; Soc. Nat; Ass. Path. and Bact. (pres, 14); Soc. Exp. Path. (v. pres, 16, 17); *Physiol. Soc*; Ass. Anat; Soc. Exp. Biol; Am. Physicians; Ass. Cancer Research (pres, 11); Am. Med. Ass. (chairman, sect. path. and physiol, 11); Philos. Soc; Wash. Acad. Sci. Thrombosis and blood coagulation; tissue and tumor growth; experimental production of maternal placenta; physiology of sexual organs; venom of heloderma; analysis of cell death; pathology of circulatory organs, kidneys, stomach and thyroid gland; edema; homoiotoxins; growth in experimental cell fibrin tissue.
- Loeb, Dr. Leonard B(enedict)**, University of Chicago, Chicago, Ill. *Physics*. Zürich, Switzerland, Sept. 16, 91. California, 10; Columbia, 11; B.S, Chicago, 12, Ph.D, 16. Asst. *physics*, Chicago, 14-16; asst. physicist, Bur. Standards, 16-17; *National research fellow, Chicago*, 19- Second lieut, Air Service, A.E.F, 17-19; asst. physics, Manchester, England, 19. Assoc. mem. Physical Soc; Soc. de Physique. Mobilities of gaseous ions; deflection of alpha particles by light atoms.
- Loel, Wayne**, 425 Union Oil Building, Los Angeles, Calif. *Geology*. Los Angeles, Calif, Jan. 6, 88. A.B, Stanford, 16, A.M, 17. Asst. geologist, South. Pacific R. R, 17-18; geologist, Gen. Petrol. Corp, 19; *consulting geologist, Ralph Arnold*, 20- With corps engineers, U.S.A, 18. Paleont. Soc; Min. Eng; LeConte Geol. Soc; Calif. Acad. The lower Miocene of southern California.
- Loevenhart, Dr. Arthur S(olomon)**, University of Wisconsin, Madison, Wis. **Physiology, Chemistry, Pharmacology*. Lexington, Ky, Dec. 29, 78. B.S, Ky. State, 98, M.S, 99; M.D, Hopkins, 03. Asst. *physiol. chem*, Hopkins, 03-04, *assoc. physiol. chem. and pharmacol*, 04-06, *assoc. prof*, 06-08; *prof. pharmacol. and toxicol. col. med, Wisconsin*, 08- Chief, pharmacol. sect, research div, C. W. S. A.A; *assoc. mem. Am. Physicians*; Soc. Biol. Chem; Soc. Exp. Biol; Soc. Pharmacol. (treas, 10, pres, 20); *Physiol. Soc*. Induced oxidations; catalysis; enzyme action; biological oxidation antiseptics; mechanism of enzyme action; pharmacological action of substances which increase and which interfere with biological oxidation.
- Loewenstein, Dr. Louis C(entennial)**, 15 Kimball Road, Lynn, Mass. *Mechanical engineering*. Mora, N. Mex, June 17, 76. B.S, Pennsylvania, 97, E.E, 02; Ph.D, Berlin, 99; Charlottenburg. With Foos Gas Engine Co; N. Y. Shipbuilding Co; Wm. Cramp and Sons; Elec. Storage Battery Co; Vulcan Schiffbau Werke, Germany; instr. mech. and marine eng, Lehigh, 03-07; *engineer, steam turbine dept, Gen. Elec. Co. Lynn, Mass*, 07- Lecturer, Columbia, Harvard and Mass. Inst. Tech. A.A; Mech. Eng; Elec.

- Eng. Steam turbines; centrifugal pumps; marine engines; thermodynamics.
- Loftfield, Gorm**, Desert Laboratory, Tucson, Ariz. *Botany*. Onalaska, Wis, Sept. 27, 90. A.B., 15, A.M., 17. Physiologist, agr. research sta, A. S. and R. Co, 16; *desert bot. lab, Carnegie Institution*, 18- Eccl. Soc; Soc. Mammal. Plant physiology; ecology; stomatal movement; effect of grazing on grasses; relation of rodents to vegetation.
- Loftin, U(lphian) C(arr)**, Federal Horticultural Board, Washington, D. C. *Entomology*. Mt. Olive, N. C, July 2, 90. B.S., N. C. Col, 10; M.S., Florida, 13. Asst. entomologist, Fla. Exp. Sta., 10-13; *asst. bur. entom. U. S. Dept. Agr.*, 13-17, *fed. hort. board*, 18- A.A.; Ass. Econ. Entom.; Wash. Entom. Soc; Fla. Entom. Soc. Sugar-cane insects; Cuban parasites of sugar-cane moth borer; cotton insects.
- Logan, Prof. W(illiam) N(ewton)**, Bloomington, Ind. *Geology, Mineralogy*. Barboursville, Ky, Nov. 4, 69. A.B., A.M., Kansas, 96; fellow, Chicago, 98-00, Ph.D., 00. Supt. schools, Pleasanton, Kans, 96-98; prof. geol. and miner, St. Lawrence, 00-03; geol. and mining eng, Miss. Agr. Col. and geologist, Exp. Sta. and State Geol. Surv, 03-16; *assoc. prof. econ. geol. and miner, Indiana*, 16-19, *prof.*, 19- Mem. Kans. Miss., N. Y. and Ind. Surveys; state geologist, Ind, 19- A.A.; Geol. Soc; Ass. Prof; Kans. Acad; Miss. Acad; fel. Ind. Acad. Paleontology and geology of Kansas, Wyoming, Maine, New York, Mississippi and Indiana.
- Löhnis, Dr. F(elix)**, 1801 Columbia Road, Washington, D. C. *Bacteriology*. Dresden, Germany, Aug. 3, 74. Jena and Halle, 95; Ph.D., Leipzig, 01. Instr. bacter, Leipzig, 03-11, prof, 11-14; *soil biologist, U. S. Dept. Agr.*, 14- A.A.; Soc. Bact; Soc. Agron. Agricultural bacteriology; micro-organisms in soil, manure and dairy products; life history of bacteria.
- Lomax, Clarence S(tanley)**, American Coke and Chemical Co, Chicago, Ill. *Chemistry*. Oxton, England, June 6, 70. B.S., Cornell, 91. Asst. supt, Cambria Steel Works, 92-93; engineer and chemist, Gas Engineering Co, Pittsburgh, 94-99; supt, Gas Works, Lorain, Ohio, 99; chemist and asst. supt, New England Gas and Coke Co, 00-05; supt, coke works, Carnegie Steel Co, 05-10; chem. engineer, 11-14; gen. supt, Lehigh Coke Co, 14-17; *chief engineer, Am. Coke and Chem. Co*; *gen. manager, St. Louis Coke and Chem. Co, Chicago*, 17- Am. representative, Actien Gesell. f. Kohlendestillation, Düsseldorf, Germany. Chem. Soc; Am. Gas Light Ass; New Eng. Gas Light Ass.
- Lombard, Dr. Robert H(amilton)**, Geophysical Laboratory, Washington, D. C. *Chemistry*. Ashburnham, Mass, Dec. 3, 87. B.S., Mass. Inst. Tech, 10; Ph.D., Columbia, 15. Asst. physical chem, Mass. Inst. Tech, 10-11, chem, Columbia, 11-12, instr, 12-15; *chemist, geophys. lab, Carnegie Institution*, 15- Manufacture optical glass, W. I. B., 17-18. Chem. Soc. Conductivity of aqueous solutions; vapor density of ammonium and phosphorus halids; dissociation pressure of copper and iron sulphids; optical glass; Buchner cyanid process.
- Lombard, Prof. Warren P(limpton)**, 805 Oxford Road, Ann Arbor, Mich. **Physiology*. Newton, Mass, May 29, 55. A.B., Harvard, 78, M.D., 81; Leipzig, 83-84; Harvard, Hopkins and Columbia, 85; hon. Sc.D., Hobart, 10. Asst. *physiol.*, Columbia, 86-88; asst. prof, Clark, 89-92; *prof., Michigan*, 92- A.A.; Soc. Nat; Physiol. Soc. (pres, 19, 20); Soc. Exp. Biol; Soc. Royale des Sci. Méd. et Nat. Bruxelles; cor. mem. Soc. Belge de Biol. Reflexes; nerve-muscle; fatigue; circulation in man; action of two joint muscles; periodicity in fatigue; nature of knee-jerk; changes in body weight; effect of age on endurance; the tickle sense; capillary pressure in human skin; duration of systole in human heart.
- Long, Dr. Alfred George**, University, N. Dak. *Public health*. Winnipeg, Can, 86. M.D., Manitoba, 08. Bacteriologist, Winnipeg Gen. Hosp, 08-16; Minn. State Board of Health, 16-18; *asst. prof. path. and acting director, pub. health lab, North Dakota*, 18- A.A.; Soc. Bact; Pub. Health Ass. Preventable diseases; water supply.
- Long, Bayard**, Ashbourne, Pa. *Botany*. Philadelphia, Pa, Sept. 22, 85. B.S., Pennsylvania, 08. Assoc. curator, *herbarium, Phila. Bot. Club*, 10-13, *curator*, 14- A.A.; Fern. Soc; Torrey Bot. Club; New Eng. Bot. Club; Phila. Bot. Club; Phila. Acad. Phytogeography and taxonomy of flowering plants and ferns; plant distribution.
- Long, Dr. Esmond R(ay)**, University of Chicago, Chicago, Ill. *Pathology*. Chicago, June 16, 90. A.B., Chicago, 11, Ph.D., 19. Asst. path, Chicago, 11-13; assoc. desert lab, Carnegie Institution, 14-15; on staff, Saranac Lab, 17-18; *instr. path, Chicago*, 19- A.A.; Chem. Soc; Soc. Biol. Chem; Ass. Tuber. Chemical pathology; purin metabolism; metabolism of succulent plants; chemical physiology of tubercle bacillus.
- Long, Prof. Joseph A(braham)**, University of California, Berkeley, Calif. *Zoology*. Lebanon, Pa, March 4, 79. B.S., Harvard, 04, A.M., 05, Ph.D., 08. Austin teaching fellow bot, Harvard, 04-05, asst. zool, 01-04, 05-07; *instr, California*, 08-14, asst. prof. *embryol.*, 14-20, *assoc. prof.*, 20- A.A.; Soc. Zool; West. Soc. Nat; Calif. Acad. Maturation of the egg of the mouse; sexual physiology of the rat and other animals.
- Long, W(illiam) H(enry)**, Korber Building, Albuquerque, N. Mex. *Forest pathology*. Navarro Co, Tex, March 7, 67. A.B., Baylor, 88; A.M., Texas, 00, Ph.D., 16; Cornell, summers. Prof. nat. sciences, Baylor, 88-92; Burleson, 92-99; asst. bot, Texas, 00-01; prof, North. Tex. State Nor. Col, 01-09; *forest pathologist, bur. plant indust, U. S. Dept. Agr.*, 11-; *in charge path. lab, Albuquerque*. Ed, 'Exp. Sta. Record,' 10-11. A.A.; Eccl. Soc; Phytopath. Soc; Tex. Acad; Wash. Bot. Soc. Agricultural botany; taxonomic mycology; plant pathology; deterioration in timber caused by fungi.
- Longcope, Dr. Warfield T(heobald)**, Columbia University, New York, N. Y. **Medicine*. Baltimore, Md, March 29, 77. A.B., Hopkins, 97, M.D., 01. Res. pathologist, Pa. Hosp, Phila, 01-04, director, Ayer Clin. Lab, 04-11; instr. med, Pennsylvania, 05-08, asst. prof. applied med,

- 08-11; assoc. prof. *practise of med*, Columbia, 11-14, *Bard prof*, 14- Assoc. attending physician, Presb. Hosp, 11-14, med. director, 14-A.A.; Am. Physicians; Soc. Clin. Invest. (pres, 19, 20); Harvey Soc. (pres, 19-20); Soc. Exp. Path; Soc. Exp. Biol; Ass. Tuber; Am. Med. Ass; N. Y. Acad. Med; N. Y. Path. Soc. The lymph glands; bone marrow; blood; autolysis; bacteriology of pneumococcus and paratyphoid infections; aortic insufficiency; cardiac hypertrophy; chronic protein intoxication; serum disease; protein hypersensitiveness in man.
- Longden, Prof. A(ladine) C(ummings)**, Knox College, Galesburg, Ill. **Physics*. Leesville, Ohio, Feb. 19, 57. A.B, De Pauw, 81, A.M, 84; Ph.D, Columbia, 00. Instr. physics and chem, State Nor. Sch, Westfield, Mass, 88-97; *physics*, Wisconsin, 00-01; *prof*, Knox, 01- A.A; Physical Soc; Soc. Belge d'Astron. Electrical resistance of thin films; carbon resistances; the percentage bridge; selenium interference rings; methods of comparing standard cells; determination of *g*; motion of Foucault pendulum.
- Longley, Prof. W(illiam) H(arding)**, Goucher College, Baltimore, Md. *Zoology*. Paradise, N. S. Can, Oct. 27, 81. B.A, Acadia, 01; Yale, 07, A.M, 08, Ph.D, 10. Asst. biol, Yale, 07-10, instr, 10-11; assoc. prof. bot, Goucher, 11-14, instr. biol, 11-14, *prof*. bot, 14-19, *biol*, 19-A.A; Soc. Nat; Soc. Zool. Mammalian cytology; biological significance of color and color-pattern of tropical reef-fishes.
- Longley, Prof. W(illiam) R(aymond)**, 595 Orange St, New Haven, Conn. *Mathematics*. Noblesville, Ind, Oct. 28, 80. A.B, Butler, 02; B.S, Chicago, 02, M.S, 05, Ph.D, 06. Instr. *math*, Butler, 03-04; *Sheffield Sci. Sch*, Yale, 06-09, asst. prof, 09-20, *prof*, 20- Math. Soc. Periodic orbits; theory of implicit functions and applications; differential equations.
- Longwell, Prof. Chester R(ay)**, Yale University, New Haven, Conn. *Geology*. Spalding, Mo, Oct. 15, 87. A.B, Missouri, 15, A.M, 16; fellow, Yale, 19-20, Ph.D, 20. Instr. *geol*, Yale, 16-17, *asst. prof*, 20- Capt, F. A, 17-19. Geology of the Muddy Mountain area in southeastern Nevada; fauna of the Auburn chert, Lincoln County, Mo; trap rocks of the Connecticut Valley; geology of Lebanon, Conn.
- Longyear, Prof. B(urton) O(range)**, 628 Elizabeth St, Fort Collins, Colo. *Botany*, *Forestry*. Leslie, Mich, July 16, 63. Registered pharmacist, Mich; B.S, Mich. Agr. Col, 03. Instr. bot, Mich. Agr. Col, 94-04, botanist, Exp. Sta, 03-04; asst. bot. and hort, *Colo. Agr. Col*, 04-08, assoc. prof. bot. and forestry, 08-10, prof, 10-14, *assoc. prof. forestry*, 15-; state forester, 10-14; *acting horticulturist*, *Exp. Sta*, 09- Mich. Acad. (v. pres, 03); Colo. State Teachers' Ass; hon. mem. Detroit Mycol. Club. Mycology; fungous diseases of plants; Rocky Mountain wild flowers; evergreens, trees and shrubs of Colorado.
- Loomis, Prof. E(lmer) H(oward)**, Princeton University, Princeton, N. J. **Physics*. Vermilion, N. Y, May 24, 61. A.B, Colgate, 83, Sc.D, 11; Ph.D, Strassbourg, 93. Instr. physics and chem, Colgate Acad, 83-90; *physics*, Princeton, 94-97, asst. prof, 97-00, *prof*, 00- A.A; Physical Soc; Electrochem. Soc. Freezing-points of dilute aqueous solutions; densities and electrical conductivities of various electrolytes; freezing-points of some benzene derivatives.
- Loomis, Prof. F(rederic) B(rewster)**, Amherst College, Amherst, Mass. *Geology*. Brooklyn, N. Y, Nov. 22, 73. A.B, Amherst, 96; Ph.D, Munich, 99. Instr. biol, *Amherst*, 99-03, assoc. prof, 03-08, *prof. comp. anat*, 08-17, *geol*, 17-A.A; Geol. Soc; Paleont. Soc. (pres, 20); Am. Acad; Conn. Acad. Cretaceous fishes; Jurassic stratigraphy; skull heaps of Maine; extinct animals of Patagonia; rhinoceroses of lower Miocene; origin of Wasatch deposits; Wasatch and Wind River rodents and primates; Eocene and Miocene vertebrates.
- Loomis, Leverett Mills**, California Academy of Sciences, San Francisco, Calif. *Ornithology*. Roseville, Ohio, Oct. 13, 57. Curator, dept. ornith, Calif. Acad. Sciences, 94-12, director, museum, 02-12. Fel. Ornith. Union. Migration of birds; Tubinares.
- Loomis, Dr. N(athaniel) Edward**, Standard Oil Co, Box 16, Elizabeth, N. J. *Physical chemistry*. Grand Rapids, Wis, March 16, 88. B.S, Beloit, 08; M.S, Syracuse, 09; Hopkins, 09, fellow, 10-11, Ph.D, 11. Asst. chem, Syracuse, 08-09; instr, Bowdoin, 11-12, asst. prof, 12-14; instr. physical chem, Purdue, 14-15, asst. prof, 15-18; chief chemist, Wood River Refinery, Standard Oil Co. (Ind), 18; *chief, exp. div, development dept*, Standard Oil Co. (N. J.), 18- Expert chem, U. S. Dept. Agr, 09-10. Chem. Soc; Chem. Gesell. Lead silicates; calomel and hydrogen electrodes; application of hydrogen electrode to the study of organic compounds.
- Lord, Dr. Edwin Chesley Estes**, Cosmos Club, Washington, D. C. *Geology*, *Petrography*. Brooklyn, N. Y, May 7, 68. Ph.D, Heidelberg, 94; M.S, Harvard, 01. Asst. geologist, U. S. Geol. Surv, 95-97; prof. geol. and miner, Hamilton, 99-00; Austin teaching fellow miner. and petrog, Harvard, 00-01; *petrographer*, U. S. Dept. Agr, 01- Wash. Geol. Soc. Geology and petrography of Germany and the United States; chemical and mineralogical properties of blast furnace and converter slags; relation of mineral composition and rock structure to the physical properties of road materials; disperse colloids in bituminous road materials.
- Lord, Prof. Frederic P(omeroy)**, 39 College St, Hanover, N. H. *Anatomy*. Hanover, N. H, Dec. 28, 76. A.B, Dartmouth, 98, M.D, 03. Demonstrator anat, Iowa, 04-09, instr, 09-11; *prof, anat. and histol*, Dartmouth, 11- Ass. Anat. Joint of human jaw; muscles of mastication.
- Lord, Dr. F(rederick) T(aylor)**, 305 Beacon St, Boston, Mass. *Medicine*. Bangor, Maine, Jan. 16, 75. A.B, Harvard, 97, M.D, 00. Asst. *clin. med*, Harvard Med. Sch, 05-09, *instr*, 09- House officer, Mass. Gen. Hosp, 00-01, physician to out-patients, 03-12, visiting physician, 12-; mem. Am. Red Cross Commission to Serbia, 17. Am. Physicians; Soc. Clin. Invest; Am. Med. Ass; Mass. Med. Soc; Boston Soc. Med. Sci. Flies and tuberculosis; tuberculin; diseases of the bronchi, lungs and pleura; respiratory infections; pneumonia.

- Lord, Prof. H(enry) C(urwen)**, Emerson McMillin Observatory, Columbus, Ohio. **Astronomy*. Cincinnati, Ohio, April 17, 66. Ohio State, 84-87; B.S., Wisconsin, 89. Student asst., Washburn Observatory, 87-89; with Thomson-Houston Elce. Co, 89-91; asst. math. and astron., Ohio State, 91-95, assoc. prof. astron. and director, observatory, 95-00, prof., 00- With Alaska Boundary Surv. Astron. Soc.; Physical Soc.; Optical Soc.; fel. Royal Astron. Soc. Stellar motion in the line of sight; double stars.
- Lorenz, Miss Annie**, 96 Garden St., Hartford, Conn. *Botany*. Brooklyn, N. Y., Feb. 5, 79. Public and private schools. A.A.; Bot. Soc.; Torrey Bot. Club; Sullivant Moss Soc.; Conn. Bot. Soc.; Vt. Bot. Soc. Hepaticæ.
- Lorenz, Dr. C(harles) F(rederick)**, Westinghouse Research Laboratory, East Pittsburgh, Pa. *Physics*. Burlington, Iowa, March 1, 75. B.S., Iowa, 97, fellow, 97-98, M.S., 98; Chicago, 99-00; Ph.D., Hopkins, 09. Instr. physics, Iowa, 00-06; lecturer, Queen's (Can), 08-10; assoc. physicist and later physicist, Nela Research Lab, 10-20; *Westinghouse Research Lab*, 20- A.A.; Physical Soc.; Illum. Eng. Soc. Flame conduction; radiation.
- Loring, John Alden**, Owego, N. Y. *Ornithology*. Cleveland, Ohio, March 4, 71. Owego Free Acad. With biol. surv., U. S. Dept. Agr, 91-97; curator animals, N. Y. Zool. Park, 97-01; Denver Zool. Park, 08-09; field naturalist, Roosevelt-Smithsonian exped. to Africa, 09-10. Ornith. Union; Cooper Ornith. Club; Soc. Mammal; Biol. Soc.; Audubon Soc. Oology; mammalogy.
- Loring, Dr. Mildred West**, University of Minnesota, Minneapolis, Minn. *Psychology*. Tacoma, Wash., May 4, 91. A.B., Washington (Seattle), 12, A.M., 13; Ph.D., Hopkins, 16. Sarah Berliner fellow, Hopkins, 16-17; instr. psychol., Washington (Seattle), 17-19; research asst. ophthal., Air Service, U.S.A., 20; *professorial lecturer psychol.*, Minnesota, 20- Psychol. Ass. Experimental psychology; special senses; association reaction times; retinal sensitivity.
- Lory, Pres. Cha(rle)s A(lfred)**, Ft. Collins, Colo. *Physics*. Sardis, Ohio, Sept. 25, 72. B.S., Colorado, 01, M.S., 02, LL.D., 09; Sc.D., Denver, 14. Principal, high sch., Cripple Creek, Colo., 02, 03; acting prof. physics, Colorado, 04; prof., *Colo. State Agr. Col.*, 05-07, physics and elec. eng., 07-09, *pres.*, 09- A.A.; Eng. Educ.; Ass. Agr. Col. (pres, 19); Ass. Adv. Agr. Teaching; Ass. Agr. West. Colleges (pres, 15). Integrating water meter.
- Lothrop, Prof. Alfred P(eirce)**, Queen's University, Kingston, Can. *Biological chemistry*. Leominster, Mass., June 25, 84. A.B., Oberlin, 06, A.M., 07; Ph.D., Columbia, 09. Asst. *biol. chem.*, Columbia, 08-09, instr., 09-12, assoc., 12-14; asst. prof., *Queen's (Can)*, 14-16, *prof.*, 16- A.A.; Chem. Soc.; Soc. Biol. Chem. Saliva in its relation to dental diseases; salivary mucin and mucinates.
- Lothrop, Prof. Howard A(ugustus)**, 101 Beacon St., Boston, Mass. *Surgery*. Sharon, Mass., 64. A.B., Harvard, 87, A.M., M.D., 90. *Asst. prof. surg.*, *Harvard Med. Sch.*, 96-; *surgeon-in-chief*, *Boston City Hosp.*, 96-; surgeon, L. I. Hosp., 97-00; Mt. Sinai Hosp., Boston, 98; Boston Dispensary, 98-01; *consulting surgeon*, *Arlington Hosp.*, 10- Warren prize, 99. Surg. Ass.; Col. Surg.; Am. Med. Ass. Anatomy.
- Lotka, Dr. Alfred J(ames)**, 27 McDonough St., Brooklyn, N. Y. *Physics*. Lemberg, Austria, March 2, 80. B.Sc., Birmingham, England, 01, D.Sc., 12; Leipzig, 01-02; A.M., Cornell, 09. Asst. chemist, Gen. Chem. Co., 02-08; asst. physics, Cornell, 08-09; asst. examiner, U. S. Patent Office, 09-11; asst. physicist, Bur. Standards, 09-11; ed., 'Sci. Am. Supplement,' 11-14; chemist, Gen. Chem. Co., 14-19. A.A.; Physical Soc.; Chem. Soc.; Statist. Ass.; Econ. Ass.; Wash. Acad. Mathematical theory of evolution; vital statistics; epidemiology; economics; kinetics of change of state; enlarging photographs without a lens.
- Loud, Dr. Frank H(erbert)**, 1203 N. Tejon St., Colorado Springs, Colo. **Astronomy, Mathematics*. Weymouth, Mass., Jan. 26, 52. A.B., Amherst, 73; Clark, 90-01; A.M., Harvard, 99; Ph.D., Haverford, 00. Instr. math., Amherst, 73-76; prof. astron. and math., *Colo. Col.*, 77-07, *emer. prof.*, 07- Instr. geom., Smith, 79. Astron. Soc.; Math. Soc.; West. Ass. for Stellar Photog. (sec'y). Fragments of the theory of curves; logarithmic computation.
- Louderback, Prof. Geo(rge) D(avis)**, University of California, Berkeley, Calif. **Geology*. San Francisco, Calif., April 6, 74. A.B., California, 96, Ph.D., 99. Asst. miner, California, 97-00; prof. geol. and physics, Nevada, 00-03, *geol.*, 03-06; asst. prof., *California*, 06-07, assoc. prof., 07-17, *prof.*, 17-, *dean*, *col. letters and science*. Carnegie research asst., 03-05; in charge Standard Oil geol. exped. to China, 14-15; for Chinese Govt., 15-16; consulting engineer, U. S. Bur. Mines and U. S. Geol. Surv., 18-19; mem. committee sedimentation, Nat. Research Council, 20- A.A.; Geol. Soc. (see'y, Cordilleran sect., 06-14, chairman, 20); Seismol. Soc. (see'y, 06-10, pres, 14); Min. Eng.; Am. Geog. Soc.; Wash. Acad.; Calif. Acad. West coast stratigraphy; mineralogy; physiographic and structural geology; sedimentation; basin range structure; physical history of Pacific Coast, China and the Philippine Islands.
- Lough, Prof. James E(dwin)**, New York University, New York, N. Y. *Psychology*. Eaton, Ohio, June 24, 71. A.B., Miami, 91, A.M., 94, hon. Pd.D., 13; A.B., Harvard, 94, A.M., 95, Ph.D., 98. Teacher, pub. schools, Ohio, 91-93; instr. psychol., Radcliffe, 94-98, Harvard, 96-98; Wellesley, 97-98; *prof.*, State Nor. Sch., Oshkosh, Wis., 98-01; *physiological and exp. psychol. sch. of pedag.*, *N. Y. Univ.*, 01-, see'y, 02-16, *director*, *summer sch.*, 04-, *dean*, *extra-mural div.*, 08- A.A.; Psychol. Ass.; Philos. Ass. Physiological basis of intensity of sensations; mental development of school children; habit formation and control.
- Loughlin, Dr. G(erald) F(rancis)**, U. S. Geological Survey, Washington, D. C. *Geology*. Hyde Park, Mass., Dec. 11, 80. B.S., Mass. Inst. Tech., 03; Harvard, 03; Ph.D., Yale, 06. Asst. geol., Mass. Inst. Tech., 03-04; Yale, 05-06; instr., Mass. Inst. Tech., 06-12; assoc. geologist, *U. S. Geol. Surv.*, 12-17, *geologist*, 17- Field asst., U.

- S. Geol. Surv, 03; Conn. Nat. Hist. and Geol. Surv, 04-06; instr. geol. Tufts, 07-08; Boston, 08-09. A.A.; Geol. Soc; Min. Eng; Wash. Acad; Wash. Geol. Soc. Economic geology; metaliferous deposits; rock products.
- Lounsberry, Alice**, 131 E. 66th St, New York, N. Y. *Botany*. New York, N. Y. Private schools, New York, England and France. Wild flowers; trees; shrubs; gardens and garden flowers.
- Lounsbury, William C(otton)**, 1518 Tower Ave, Superior, Wis. *Chemistry, Engineering*. Brooklyn, N. Y, Feb. 13, 80. B.S. Mass. Inst. Tech, 04. Asst. to Prof. L. P. Kinnicutt, Worcester, 04-05; scientific asst, U. S. Dept. Agr, 05; chemist and supt. water works, Superior, Wis, 06-12; gen. supt, *Water, Light and Power Co*, 12-18, *gen. manager*, 18- A.A.; Water Works Ass; Pub. Health Ass; New Eng. Water Works Ass; Wis. Soc. Eng; Wis. Elec. Ass. (pres, 19-). Iron removal from ground waters; water supply.
- Love, Prof. Clyde E(hton)**, Ann Arbor, Mich. *Mathematics*. Bancroft, Mich, Dec. 21, 82. A.B. Michigan, 05, A.M. 08, Ph.D. 13. Instr. *math*, Michigan, 05-13, asst. prof, 13-20, *assoc. prof*, 20- Math. Soc. Integral, linear differential and linear difference equations.
- Love, Prof. Harry H(ouser)**, 102 Oxford Road, Ithaca, N. Y. *Plant genetics*. Taylorville, Ill, March 19, 80. B.S. Ill. Wesleyan, 04, A.M. 06; Illinois, 06-07; Ph.D. Cornell, 09. Asst. chem, Illinois, 04-05, *plant breeding*, 05-07; Cornell, 08-09, asst. prof, 09-11, *prof*, 11- A.A.; Soc. Nat; Soc. Agron. Plant and cereal breeding.
- Love, Prof. J(ames) L(ee)**, Gastonia, N. C. *Mathematics*. Gastonia, Dec. 30, 60. Ph.B, North Carolina, 84; Hopkins, 84-85; A.M, Harvard, 90. Asst. prof. math, North Carolina, 85-89; instr, Harvard, 90-01, asst. prof, 01-11. Sec'y of faculty, North Carolina, 87-89; sec'y, Lawrence Sci. Sch, and clerk, summer sch, Harvard, 00-06, chairman, summer school, 06-09. A.A.; Math. Soc. Geometry; calculus.
- Lovejoy, Prof. A(rthur) O(ncken)**, Johns Hopkins University, Baltimore, Md. *Philosophy*. Berlin, Germany, Oct. 10, 73. A.B. California, 95; A.M, Harvard, 97; Paris, 98-99. Asst. prof. *philos*, Stanford, 99-00, *assoc. prof*, 00-01; *prof*, Washington (St. Louis), 01-03; Missouri, 08-10; Hopkins, 10- Lecturer *philos*, Columbia, 07-08. A.A.; Philos. Ass. (pres, 15); West. Philos. Ass. (pres, 08); Ass. Prof. (pres, 19). Eighteenth century philosophy; history of theory of evolution; religions of primitive peoples; meaning of the psycho-physical distinction; eighteenth century evolutionists.
- Lovelace, Prof. B(enjamin) F(ranklin)**, Johns Hopkins University, Baltimore, Md. *Chemistry*. Edgefield Co, S. C. B.S. Alabama, 04; fellow, Hopkins, 06-07, Ph.D. 07. Asst. *chem*, Alabama, 02-04; Hopkins, 07-08; prof, Alabama, 08-11; *assoc. prof*, Hopkins, 11- A.A. (v. pres, chairman, C, 19); Chem. Soc; Electrochem. Soc; Min. Eng. Osmotic pressure of aqueous solutions; vapor pressure; electrolytic production of permanganates and manganese dioxid; hydrofluosilicic acid and its derivatives.
- Loveland, Prof. George A(ndrew)**, 1130 S. 20th St, Lincoln, Nebr. *Meteorology*. Norwich, Vt,
- Oct. 9, 63. B.S. N. H. Col, 82; LL.B, N. Y. Univ, 86; A.M, Nebraska, 08. Observer, *U. S. Weather Bur*, 82-88, *sect. director*, *Climate and Crop Service in Nebr*, 88- Instr. gen. and agr. meteorol, Nebraska, 00-07, asst. prof. meteorol, 07-13, prof, 13- Nebr. Acad. Humidity in living rooms; cold waves; distribution of water vapor in air.
- Lovett, Prof. A(rthur) L(ester)**, 130 N. 25th St, Corvallis, Oregon. *Entomology*. Neal, Kans, Aug. 23, 85. B.S.(Agr), Okla. Col, 08. Asst. entomologist, Okla. Col, 08-11; *Oregon Col*, 11-15, *assoc. prof. entom*, and acting entomologist, *Exp. Sta*, 15-16, *entomologist and chief, entom*, 16- A.A.; Entom. Soc; Colo. Acad. Toxicity of insect spray solutions.
- Lovett, Pres. E(dgar) O(dell)**, Rice Institute, Houston, Texas. **Mathematics, Celestial mechanics*. Shreve, Ohio, April 14, 71. A.B, Bethany (W. Va), 90, B.S. A.M, 92; A.M, Ph.D, Virginia, 95; Ph.D, Leipzig, 96; fellow by courtesy, Hopkins, 97. Instr. *math*, West Ky. Col, 90-92; astron, Virginia, 92-95; lecturer, Chicago, 97; instr. *math*, Princeton, 97-98, asst. prof, 98-00, prof, 00-05, astron, 05-08; *pres*, *Rice Inst*, 08- A.A. (v. pres, 08); Math. Soc. (assoc. ed, 'Bul,' 97-02); Astron. Soc; Philos. Soc; Math. Societies of France, London and Palermo; fel. Royal Astron. Soc. The theories of Sophus Lie and celestial mechanics; applications of the theory of periodic orbits; integrals of the problem of n bodies.
- Lovett, Prof. Robert W(illiamson)**, 234 Marlborough St, Boston, Mass. **Surgery*. Beverly, Mass, Nov. 18, 59. A.B, Harvard, 81, M.D, 85. *Prof. orthop. surg*, *Harvard Med. Sch*, 15- Surgeon, Children's Hosp, Boston; surgeon-in-chief, Mass. Hosp. Sch; chairman, Harvard Infantile Paralysis Commission; consulting orthop. surgeon, state Dept. Health, N. Y. Orthop. Ass. (pres, 97); Am. Med. Ass; French and Ital. Orthop. Ass; Swedish Med. Soc; Royal Soc. Physicians Budapest. Orthopedic surgery; infantile paralysis; lateral curvature of the spine and round shoulders.
- Loving, Prof. R(obert) E(dward)**, Richmond College, Richmond, Va. *Physics*. Wilmington, Va, April 20, 74. A.B. Richmond, 96, A.M, 98; fellow, Hopkins, 01-02, Ph.D, 05; Cornell, 19-20. Prof. *physics*, Cornell (Iowa), 06-07; instr, Missouri, 07-08; *prof. Richmond*, 08- Assoc. physicist, Bur. Standards, 17. A.A.; assoc. mem. Physical Soc; Chem. Soc. Electrical discharge.
- Low, Albert H**, Colorado School of Mines, Golden, Colo. *Chemistry*. Chelsea, Mass, June 27, 55. B.S. Mass. Inst. Tech, 76. Asst. quant. lab, Mass. Inst. Tech; assayer and chemist, Calif. Smelter, Leadville; American Smelter, Leadville; Boyd's Smelter, Boulder, Colo; chief assayer, U. S. Mint, Denver; assayer and chemist, Boston and Colo. Smelting Works, Argo, Colo; *mem. firm of Von Schuls and Low, Denver*; *prof. chem*, *Colo. Sch. of Mines*. Assoc. ed. 'Jour. Indust. and Eng. Chem,' 08-; 'Sch. of Mines Quart.' Chem. Soc; Soc. Chem. Indust; West. Ass. Tech. Chem. and Metal. Metallurgical chemistry; improvements in analytical methods; poisonous minerals in drinking water; azo colors in butter; technical methods of ore analysis.

- Low, A(lbert) P(eter)**, 154 McLaren St, Ottawa, Can. *Geology*. Montreal, Can, May 24, 61. B.A.S, McGill, 82; LL.D, Queen's (Can), 07. Geologist, *Can. Geol. Surv.*, 82-06, director, 06-08, *deputy minister mines*, 08- Royal Geog. Soc. explor, Labrador, 96. A.A.; Geol. Soc.; Royal Geog. Soc. *Geology of Labrador and northern Canada*.
- Low, Wilson H(enry)**, Low and Show, Los Angeles, Calif. *Chemistry*. Chelsea, Mass, Nov. 15, 64. B.S, Mass. Inst. Tech, 86. Chemist, Penobscott Chem. Fiber Co, 86-87; The N. K. Fairbanks Co, 87-93; manufacturing chemist, Kenilworth, Ill, 93-95; assayer and chemist, Cripple Creek, Colo, 95-98; head chemist, Cudahy Packing Co, S. Omaha, Nebr, 98-20; *with exp. indust. lab. and works*, Low and Show, 20- Chem. Soc. (pres, Nebr. sect, 09); Soc. Test. Mat.; London Soc. Chem. Indust. Deposits of volcanic ash in western Nebraska and adjacent states; fats; soaps; glues; meat products; oil refining; glycerol.
- Lowater, Dr. F(rances)**, Wellesley College, Wellesley, Mass. *Physics*. Stoke-sub-Hamdon, England. Univ. Col, Nottingham, 89-91, 92-93; Newnham Col, Cambridge, 91-92; fellow, Bryn Mawr, 96-97, Ph.D, 06; B.S, London, 00. Asst. demonstrator *physics*, Bryn Mawr, 94-98, acting sec'y, 98-99, demonstrator, 99-10; acting assoc. prof, Western Col, 10-11; prof, Rockford, 11-15; instr, *Wellesley*, 15-18, *asst. prof*, 18- Research asst, Yerkes Observatory, summers, 11, 13, 15, 16, 18. A.A.; Physical Soc; Ass. Prof; fel. London Physical Soc. Spectroscopy; the absorption spectrum of sulphur dioxide; stellar wave length of λ 468 and other lines in the spectrum of 10 Lacertae.
- Lowber, Dr. J(ames) W(illiam)**, 1706 Brazos St, Austin, Tex. *Geography, Astronomy*. Chaplin, Ky, Aug. 30, 47. A.B, Butler, 71, A.M, 74; hon. Ph.D, Syracuse, 80; LL.D, South Kentucky, 89; hon. Sc.D, Wooster, 97; Litt.D, National Univ, 97. Pres, Columbia (Ky), 80-82; chancellor, Tex. Christian Univ, 93-98; *pastor, Cent. Christian Church, Austin, Tex*, 98-A.A.; Math. Soc; fel. Royal Geog. Soc; fel. Royal Astron. Soc; fel. Royal Meteor. Soc; fel. Royal Scottish Geog. Soc; Royal Asiatic Soc; fel. Royal Soc. Arts; London Authors Club; fel. Soc. Antiq. Scot; Soc. astron. de France; life mem. French Acad. Int. Hist; Circolo Mat. di Palermo. The history of science; the history of philosophy; the history of civilization; comparative civilization; the highest culture and Christianity.
- Lowe, Prof. E(phraim) N(oble)**, Jackson, Miss. *Geology*. Crystal Springs, Miss, May 5, 64. Ph.B, Mississippi, 84; M.D, Tulane, 92; Chicago, summers, 04-06. Asst. biol. and geol, Mississippi, 04-06, acting prof. geol, 06-08, prof, 08-09; *director, State Geol. Surv, Miss*, 09- Asst. state geologist, Miss, 08-09. A.A.; Am. Geog. Soc. Plants of Mississippi in their relations to soils and geological structure; geology and mineral resources of Mississippi.
- Lowe, Prof. John N(icholas)**, Marquette, Mich. *Zoology*. Princeton, Wis, Oct. 14, 85. A.B, Ripon, 10, A.M, 12; Ph.D, Wisconsin, 15. Instr. biol, Ripon, 10-12; asst. zool, California, 12-13; instr, Wisconsin, 14-17; *assoc. prof. biol*, Tex. Col, 17-19; *North. Normal Col*, 19- Scientific asst, N. J. Commission, summer, 14; Wis. Conservation Commission, 16; field agent, bur. entom, U. S. Dept. Agr, 18; lieut. Sanit. C, 18. A.A.; Ecol. Soc; Wis. Acad. Birds of Green Lake Co, Wis; reactions of pigment cells to chemical stimuli; parasitic copepod of the brook trout; chromatophores of the brook trout; rate of growth of fresh water fishes.
- Lowell, Dr. Frances E(rma)**, 500 Delaware St, S. E, Minneapolis, Minn. *Psychology*. Minneapolis, Oct. 12, 86. A.B, Minnesota, 15, A.M, 17, Ph.D, 19. Teacher, rural and pub. schools, Minn, 04-09, 15-16; research asst, State Sch. for Feeble-Minded, 17-18; *instr. psychol*, Minnesota, 18- Psychopathologist, Fergus Falls Insane Asylum, summer, 15. Psychol. Ass. Intelligence tests; illusions and mental associations of children.
- Lowenstein, Dr. A(braham) G(abriel)**, Columbia University, New York, N. Y. *Biological chemistry*. Russia, April 5, 89. B.S, Columbia, 14, Ph.D, 18. Asst. instr. biochem, Columbia, 17-18; chemist, bur. chem, U. S. Dept. Agr, 18-19; *assoc. biochem*, Columbia, 19- Chem. Soc. Pharmaceutical chemistry; saliva; blood; uric acid; saccharin.
- Lowenstein, A(rthur)**, Wilson and Co, 41st and Ashland Ave, Chicago, Ill. *Chemistry*. Philadelphia, Pa, Sept. 17, 82. A.B, Cincinnati, 03. Chemist, cement lab, B. and O. R. R, 03; chief chemist, Morris and Co, 04-14, tech. director, 14-16; consulting chemical engineer, 16-18; *v. pres*, Wilson and Co, 18- A.A.; Chem. Soc. (treas, Chicago sect, 08-10, chairman, 12, counselor, 11, 12, 16, 17); Chem. Eng; N. Y. Chemists Club. Analytical methods; fats and oils; fertilizers; foods; anhydrous ammonia; packing house by-products; glue machinery.
- Lowie, Dr. Robert H(arry)**, 448 St. Nicholas Ave, New York, N. Y. *Anthropology*. Vienna, Austria, June 12, 83. A.B, Col. City of N. Y., 01; Ph.D, Columbia, 08. Asst, *dept. anthrop*, Am. Museum Nat. Hist, 08-09, asst. curator, 09-13, *assoc. curator*, 13- Assoc. prof. anthrop, California, 17-18; expeditions to plains Indians, Lake Athabaska and southwestern U. S. Assoc. ed, 'Am. Anthropologist.' A.A.; Anthrop. Ass; Ethnol. Soc. (sec'y, 10-19); Folk-lore Soc. (pres, 16); N. Y. Acad. Plains Indians ethnography; kinship terminology; social organization and mythology of primitive tribes.
- Lowrey, Dr. Lawson G(entry)**, Psychopathic Hospital, Iowa City, Iowa. *Anatomy, Neuropathology*. Centralia, Mo, Dec. 23, 90. A.M, Missouri, 09, A.M, 10; M.D, Harvard, 15. Asst. anat, Missouri, 09-10; prof. anat. and histol, Utah, 10-11; asst. prof. anat, Missouri, 11-12; teaching fellow histol. and embryol, Harvard Med. Sch, 12-14, asst. neuropath, 15-18, instr. neuropath. and psychiat, 18-20; *asst. director, Psychopath. Hosp. and asst. prof. psychiat*, Iowa, 20- Pathologist, Danvers State Hosp, 14-17; chief med. officer, psychopath. dept, Boston State Hosp, 17-20. A.A.; Ass. Anat; Ass. Path. and Bact; Am. Med. Ass; Medico-Psychol. Ass; Boston Soc. Psychiat. and Neur. Growth; psychiatry; pathology of mental diseases.

- Lowsley, Dr. Oswald Swinney**, The Wyoming, Seventh Ave. and 55th St, New York, N. Y. *Surgery*. Santa Barbara, Calif, Sept. 4, 84. A.B, Stanford; 05; M.D, Hopkins, 12. *Director, Brady Foundation for Urol.* N. Y. *Hosp*, 17—Asst. visiting urologist, Bellevue Hosp, 17—; consulting urologist, Ruptured and Crippled Hosp, 17—; instr. urol, Univ. and Bellevue Hosp. Med. Col. Am. Med. Ass; Urol. Ass; Col. Surg; N. Y. Acad. Med. Anatomy; urological surgery; arthritis.
- Loy, Dr. S(ylvester) K(line)**, Midwest Refining Co, Casper, Wyo. *Chemistry*. Hamburg, Pa, Aug. 18, 79. A.B, Franklin and Marshall, 05; Ph.D, Hopkins, 10. Instr. chem, Simmons, 10—11; prof. research chem, Wyoming, 11—18; *chief petroleum chemist, Midwest Refining Co*, 18—Research chemist, Colgate and Co, 11. Chem. Soc. Petroleum and its products; poisonous plants of the Wyoming range.
- Lubs, Dr. Herbert A(ugust)**, Marlboro Apartments, Wilmington, Del. *Chemistry*. Savannah, Ga, Dec. 20, 91. A.B, Newberry, 10; Ph.D, Hopkins, 14. Org. chemist, U. S. Dept. Agr, 14—19; *research chemist, E. I. duPont de Nemours and Co*, 19— Chem. Soc. Tautomerism; bacterial metabolism; indicators; coal-tar dyes and intermediates.
- Lucas, Capt. A(nthony) F(rancis)**, 2300 Wyoming Ave, Washington, D. C. *Mining engineering*. Trieste, Austria, Sept. 9, 55. Graz Polytech, 74—77. A.A; Min. Eng; Franklin Inst; Wash. Acad. Petroleum resources in the coastal plain of Texas, Louisiana and Mexico; rock salt of Louisiana; origin of petroleum.
- Lucas, Dr. Frederic A(ugustus)**, American Museum of Natural History, New York, N. Y. **Zoology*. Plymouth, Mass, March 25, 52. High sch; hon. Sc.D, Pittsburgh, 09. Osteology, U. S. Nat. Museum, 82—87, asst. curator, 87—93, curator, div. comp. anat, 93—04, acting curator vert. fossils, 01—04; curator-in-chief, museums, Brooklyn Inst, 04—11; *director, Am. Museum Nat. Hist*, 11— Mem. commission to investigate condition of fur seal herd of Pribilof Islands, 96, 97. Prize, museum, Brooklyn Inst, 08; life mem. Am. Museum Nat. Hist. Soc. Nat; fel. Ornith. Union; Mus. Ass. (v. pres, 07, pres, 09); Nat. Ass. Audubon Societies; hon. mem. Calif. Acad; life mem. N. Y. Zool. Soc; N. Y. Acad; Wash. Biol. Soc; Gt. Britain Mus. Ass; cor. mem. London Zool. Soc. Osteology and divisions of birds; museum administration.
- Lucas, Prof. Howard J**, California Institute of Technology, Pasadena, Calif. *Chemistry*. Marietta, Ohio, 85. Fellow, Chicago, 09—10. Asst. chem, Ohio State, 07—09; U. S. Dept. Agr, 10—12; Govt. of P. R, 12—13; instr. chem, Calif. Inst. Tech, 13—15, *assoc. prof*, 15— A.A; Chem. Soc. Organic chemistry; halogenated phenols; oxidation of hydrocarbons; univalent oxygen.
- Lucas, Prof. J(ames) B(urleigh)**, Blacksburg, Va. *Chemistry*. Riner, Va, March 30, 88. B.S, Va. Polytech, 10, M.S, 13; Illinois, 14—15. Asst. chem, Va. Polytech, 11—14; Illinois, 14—15; prof. inorg. chem. and physics, Davis and Elkins, 15—16; instr. chem, Va. Polytech, 16—19, *assoc. prof*, 19— A.A; Chem. Soc. Rare earths; concentration of silicious iron ores.
- Luck, Prof. J(ohn) J(enning)**, University of Virginia, University, Va. *Mathematics*. Roanoke, Va, Dec. 24, 83. A.B, Virginia, 02, A.M, 03, Ph.D, 08. Asst. math, Virginia, 05—06, instr, 06—09; Vanderbilt, 09—13, asst. prof, 16; *adj. prof, Virginia*, 16—19, *assoc. prof*, 19— The normal structure forms of non-integrable groups of seven parameters; space curves on cylinders and cones.
- Lucke, Dr. Balduin**, University of Pennsylvania, Philadelphia, Pa. *Pathology*. Hesse, Germany, Nov. 3, 89. M.D, Medico-Chirurg. Col, Phila, 12; D.P.H, Pennsylvania, 16. Asst. instr. path, Pennsylvania, 14—19, instr, 19— Asst. pathologist, Univ. and Phila. Hospitals, 14—; research worker comp. path, Phila. Zool. Soc. 16— Ass. Path. and Bact. Pathological anatomy.
- Lucke, Prof. Charles E(dward)**, 544 W. 142d St, New York, N. Y. *Mechanical engineering*. New York, June 20, 76. B.S, Col. City of N. Y, 95; M.S, N. Y. Univ, 98; Ph.D, Columbia, 01; Cornell, 01. *Prof. mech. eng, Columbia*. Mech. Eng; Soc. Refrig. Eng; Eng. Educ; Automotive Eng; Consulting Eng; Marine Eng. and Naval Archit; Franklin Inst. Fuels; thermodynamics; refrigeration; power generation; combustion of explosive gaseous mixtures and of oils and coal; gas engines; gasoline and oil engines; gas producers; heat transmission and equipment for gas producers.
- Luckey, Dr. Bertha M(usson)**, Board of Education Building, Cleveland, Ohio. *Psychology*. Ontario, Calif, Jan. 2, 90. A.B, Nebraska, 10, fellow, 11—12, A.M, 12, Ph.D, 16; Göttingen, 12—14. Asst. org. chem, Nebraska, 09—10; *clin. psychologist, pub. schools, Cleveland*. A.A; Psychol. Ass. Some motor differences due to sex and school training; brightness of colors; education.
- Luckey, Dr. G(eorge) W(ashington) A(ndrew)**, 1439 R St, Lincoln, Nebr. *Psychology, Education*. Decatur, Ind, Feb. 11, 55. A.B, Stanford, 94; A.M, Clark, 95; Ph.D, Columbia, 00. Supt. schools, Adams Co, Ind, 78—82; city supt, Decatur, Ind, 82—87; Ontario, Calif, 88—92; prof. educ, Nebraska, 95—06, head prof, 06—18; dean, grad. sch. educ, 14—18. Ed. child study dept, 'Northwestern Monthly,' 96—99. A.A; Psychol. Ass; Anthropol. Ass; Nat. Educ. Ass. (sec'y, child study dept, 98, pres. 02; v. pres, 09); Nat. Council Educ; Soc. Sci. Educ; Physical Educ. Ass; Sch. Hygiene Ass; West. Philos. Ass; Nebr. Acad; Calif. State Teachers' Ass. (v. pres, 91); Nebr. State Ass. Child Study (chairman, exec. committee, 96—05). Psychology and education; professional training of secondary teachers in the United States; child study; history of education.
- Luckhardt, Prof. Arno B(enedict)**, University of Chicago, Chicago, Ill. *Physiology*. Chicago, Aug. 26, 85. B.S, Chicago, 06, fellow, 07—08, M.S, 08, Ph.D, 11; M.D, Rush Med. Col, 12. Asst. bacter, Chicago, 08—09, *physiol*, 09—11, assoc, 11—12, instr, 12—14, *asst. prof*, 14— Acting chairman *physiol*, Chicago, 18—20. A.A; Physiol. Soc; Soc. Exp. Biol; Am. Med. Ass; Chicago Internal Med. Soc; Chicago Inst. Med. Physiology of stomach; gastrin and gastrin bodies.

- Luckiesh, M.** Nela Research Laboratories, Cleveland, Ohio. **Physics*. Maquoketa, Iowa, Sept. 14, 83. B.S.(E.E.), Purdue, 09; M.S., Iowa, 11; E.E., Iowa State, 12. Instr. physics, Iowa, 09-10; research physicist, Nela Research Lab, 10-; director, applied science, 20- Chairman, committee on camouflage, Nat. Research Council. Longstreth medal, Franklin Inst. Physical Soc; Optical Soc; Elec. Eng; Illum. Eng. Soc; Meteorol. Soc; Nat. Elec. Light Ass. Heterochromatic photometry; color; visual acuity in lights of different spectral character; artificial daylight; phosphorescence.
- Ludlow, Dr. C(lara) S(outhmayd)**, Army Medical Museum, Seventh and B Streets, S. W., Washington, D. C. *Preventive medicine*. Easton, Pa, Dec. 26, 52. B.S., Miss. Agr. Col, 00, M.S., 01; Ph.D., George Washington, 08. Demonstrator histol. and embryol, George Washington, 07-09, instr, 09-11; anatomist, *Army Med. Museum*, 16-20, *entomologist*, 20- Lecturer mosquitoes and disease, Army Med. Sch, Washington, 04-10. A.A.; Soc. Trop. Med; Wash. Biol. Soc. Preventive medicine; disease bearing mosquitoes of North and Central America, West Indies and Philippine Islands; transmission of disease by mosquitoes in army camps.
- Ludlow, J(acob) L(ott)**, 434 Summit St, Winston-Salem, N. C. *Engineering, Sanitation*. Spring Lake, N. J, Dec. 20, 62. C.E., Lafayette, 85, M.S., 88. *Practising munic, sanit. and hydraul. engineer*, 88- Sanit. expert; mem. N. C. State Board of Health. A.A.; Civil Eng; Pub. Health Ass; Am. Water Works Ass; Eng. Ass. of the South; New Eng. Water Works Ass. Municipal engineering; sewerage of cities and towns; public water supplies; means of promoting and preserving public health; sanitation in cities, towns, schools and homes.
- Ludwig, Dr. C(linton) A(lbert)**, Clemson College, S. C. *Botany*. Windfall, Ind, Oct. 20, 86. B.S.A., Purdue, 12, M.S.A., 14; Cole fellow, Michigan, 16-17, Ph.D, 17. Asst. bot, Illinois, 12-13; Ind. Exp. Sta, 13-15; Michigan, 15-16; instr, Lawrence, 17-18; asst. pathologist, bur. plant indust, U. S. Dept. Agr, 19-20; *assoc. botanist and plant pathologist*, S. C. Exp. Sta, 20- With U.S.A., 18. A.A.; Bot. Soc; Phytopath. Soc; Ind. Acad. Plant rusts; effect of illuminating gas on bacteria and fungi.
- Ludy, Prof. L(ewellyn) V.** Purdue University, La Fayette, Ind. *Mechanical engineering*. Millgrove, Ind, Jan. 26, 75. B.S., Purdue, 98, M.E., 00. Instr, eng. lab, *Purdue*, 99-02, applied mech, 02-04, asst. prof. *mech. eng*, 04-05, *prof*, 06- With Carnegie Steel Co, Homestead, Pa; expert, Bur. of Forestry. A.A.; Mech. Eng; Eng. Educ; Ind. Eng. Soc; Ind. Acad. Physical characteristics of cast iron and cement; wind pressure on certain geometrical solids; strength of glued joints; automobiles, gas engines and railway appliances.
- Luginbill, Philip**, 1420 Pendleton St, Columbia, S. C. *Entomology*. Columbus Grove, Ohio, Oct. 16, 84. B.S.A., Ohio State, 10; M.A., South Carolina, 17. Asst. *div. cereal and forage insects*, bur. entom, U. S. Dept. Agr, 10-, in charge, *field sta*, Columbia, S. C., 10- A.A.; Entom. Soc; Ass. Econ. Entom; Ohio Acad.
- Lukens, Dr. Herman T(yson)**, 330 Webster Ave, Chicago, Ill. *Pedagogy*. Philadelphia, Pa, Jan. 29, 65. A.B., Pennsylvania, 85, A.M., 88; Berlin, Halle, Leipzig, Paris and Jena, 88-91; Ph.D., Jena, 91. Teacher biol, N. W. Div. High Sch, Chicago, 91-94; fellow and docent, Clark, 94-96; docent pedag, 96-98; head training teacher, State Nor. Sch, California, Pa, 98-07; *teacher geog*, Francis W. Parker Sch, Chicago, 07- Lecturer, summer sch, Clark, and Barnard Club, Providence, R. I, 95; educ, Bryn Mawr, 96-97. A.A.; Soc. Sci. Educ. Children's drawings; early language development; course of study; sense impression.
- Lukens, Prof. Hiram S(tanhope)**, University of Pennsylvania, Philadelphia, Pa. *Chemistry*. Philadelphia, Sept. 30, 85. B.S., Pennsylvania, 07, Ph.D, 13. Instr. *chem*, Pennsylvania, 07-13, *asst. prof*, 13- Chem. Soc; Electrochem. Soc; hon. mem. Electro-Platers Ass. Inorganic and electro-chemistry.
- Lull, Prof. Richard S(wann)**, Yale University, New Haven, Conn. **Paleontology, Zoology*. Annapolis, Md, Nov. 6, 67. B.S., Rutgers, 93, M.S., 96, hon. Sc.D, 18; Ph.D, Columbia, 03; hon. A.M., Yale, 11. Asst. prof. zool, Mass. Col, 94-02, *assoc. prof*, 02-06; *asst. prof. vert. paleont*, Yale, 06-11, *prof*, 11- With div. entom, U. S. Dept. Agr, 93; mem. field parties, Am. Museum Nat. Hist, 99, 02; prof. org. evolution, summer sch, Auburn Theol. Sem, 15-18; *assoc. curator*, Peabody Mus, 06-20, *curator*, 20- Life mem. Am. Museum Nat. Hist. Soc. Nat; Ecol. Soc; Paleont. Soc. (treas, 11-); Geol. Soc; Am. Acad; Conn. Acad. Vertebrate paleontology; organic evolution; Dinosauria; evolution.
- Lumholtz, Carl (Sophus)**, Norwegian Consulate General, New York, N. Y. *Ethnology*. Near Lillehammer, Norway, April 23, 51. A.M., Christiania, 76. Zool. collector for Univ. of Christiania in Australia, 80-84; chief. anthrop. exped. to explore northwestern Mex. for Am. Museum Nat. Hist. and Am. Geog. Soc, 90-91; for Am. Museum Nat. Hist, 92-93, 94-97, 98, asst, dept. anthrop, 97-99. Knight of St. Olaf, of Vasa and of Dannebrog; Chevalier Légion d'honneur; Officier d'Acad; gold medal, Norwegian Geog. Soc. Anthropol. Ass; fel. Ethnol. Soc; cor. mem. Am. Geog. Soc; *assoc. Soc. d'Anthrop. de Paris*; cor. mem. Paris Soc. Americanists; cor. mem. Swedish Soc. Anthropol. and Geog; cor. mem. Royal Danish Geog. Soc; Christiania Sci. Soc. Symbolism; decorative art; religions.
- Lund, Dr. E(imer) J(ulius)**, University of Minnesota, Minneapolis, Minn. *Zoology*. Springfield, Minn, Dec. 13, 84. Ph.B., Hamline, 10; Bruce fellow, Hopkins, 11-14, Ph.D, 14. A.A.; Soc. Zool. Production of light by living organisms; relations of protozoa to food; general physiology of the protozoa.
- Lundell, Dr. Gustav E. F.** Bureau of Standards, Washington, D. C. *Chemistry*. Brooklyn, N. Y., Jan. 11, 81. A.B., Cornell, 03, Ph.D, 09. Instr. chem, Northwestern, 03-06; instr. and asst. prof, Cornell, 06-17; *chemist*, Bur. Standards, 17- Chem. Soc; Soc. Test. Mat. Analytical chemistry; volumetric standards; analysis of rocks, ores and metallurgical products.

- Lundteigen, A(ndreas)**, Union City, Mich. *Chemistry*. Norway, 62. B.S, Christiania, 85; Mil. Acad, Christiania, 86. Asst. chemist, D. Fisher, Milwaukee, Wis, 87-89; chief chemist, Western Portland Cement Co, 89-99; chief chemist and supt, *Peerless Portland Cement Co*, 99-10, supt, 10-; managing engineer, *Ash Grove Lime and Portland Cement Co*, 10- Chem. Soc; Soc. Chem. Indust; Chem. Eng; Soc. Test. Mat. Portland cement concrete.
- Lunn, Dr. A(rthur) C(onstant)**, University of Chicago, Chicago, Ill. **Mathematical physics*. Racine, Wis, Feb. 19, 77. A.B, Lawrence, 98; fellow, Chicago, 99-01, A.M, 00, Ph.D, 04. Instr. math. and astron, Wesleyan, 01-02; assoc. *applied math*, Chicago, 02-03, instr, 03-10, asst. prof, 10-17, *assoc. prof*, 17- A.A; Physical Soc. (assoc. ed, 'Rev,' 18-20); Math. Ass; Astron. Soc; Math. Soc; Circolo Mat. di Palermo. Differential equations of dynamics; mathematical physics; thermodynamics; electromagnetic theory; theory of relativity; geophysical theory; theory of optical instruments.
- Lupton, Charles T(homas)**, 617 Gilpin St, Denver, Colo. *Geology*. Mt. Pleasant, Ohio, Feb. 28, 78. A.B, Oberlin; LL.B, National Univ, LL.M. Geologist, U. S. Geol. Surv, 07-16; Cosden Oil and Gas Co, 16-19; *chief geologist*, *Frantz Corp*, 19- A.A; Geol. Soc; Min. Cong; Min. and Metal. Eng; Wash. Geol. Soc. Coal, oil and gas deposits; gypsum deposits; general geology of the western states.
- Luquer, Prof. Lea McIlvaine**, Mt. Kisco, N. Y. *Mineralogy*. Brooklyn, N. Y, Sept. 4, 64. C.E, Columbia, 87, Ph.D, 94. Tutor and later *assoc. prof. miner*, Columbia, 87- Sec'y, auxiliary committee of Teachers Col, Columbia, 94-95. A.A. The relative effects of frost and the sulphate of soda tests on building stones; simplified scheme for the optical recognition of minerals in thin rock sections; area and nature of the 'augen-gneiss,' etc, at Bedford, N. Y; fusion of minerals with oxy-gas blowpipe.
- Lusk, Prof. Graham**, 535 Park Ave, New York, N. Y. **Physiology*. Bridgeport, Conn, Feb. 15, 66. Ph.B, Columbia, 87; Ph.D, Munich, 91; hon. A.M, Yale, 97, Sc.D, 08. Instr, asst. prof. and *prof. physiol*, med. sch, Yale, 91-98; Univ. and Bellevue Hosp. Med. Col, 98-09; *med. col*, Cornell, 09- Scientific director, Russell Sage Inst. Path; mem. Inter-Allied Food Commission, 18. Nat. Acad; A.A; Soc. Nat; Physiol. Soc; Soc. Biol. Chem. (pres, 14); Soc. Exp. Biol. (pres, 14); Harvey Soc. (pres, 05-07); fel. Royal Soc. Edinburgh; assoc. mem. Soc. Royale des Sci. Med. et Nat. Bruxelles; cor. mem. Vienna Imp. Med. Soc. Animal and clinical calorimetry; carbohydrates in the body; diabetes; phlorhizin diabetes; hippuric acid; metabolism in diabetes; dietetic value of skim-milk; the science of nutrition.
- Luther, D(aniel) D(ana)**, Naples, N. Y. *Geology*. Naples, Sept. 24, 40. Canandaigua (N. Y.) Acad. Asst. econ. geol, N. Y. State Dept. Educ, 90-98; field geologist, N. Y. State Museum, 98-14. Paleont. Soc. Geology of Livonia salt shaft; salt beds of New York; field geology and stratigraphy of western New York.
- Luther, Dr. Flavel S(weeten)**, Jr, Pasadena, Calif. *Mathematics, Mechanics*. Brooklyn, Conn, March 26, 50. A.B, Trinity (Conn), 70, A.M, 73, Ph.D, 96, LL.D, 04. Teacher in various schools; prof. math, Racine, 76-81; Kenyon, 82-83; Trinity (Conn), 83-04, pres, 04-19. Consulting engineer, Pope Mfg. Co, 96-99. Mech. Eng. Strength of materials; coefficient of expansion of various steels at high temperatures.
- Lutman, Prof. B(enjamin) F(ranklin)**, 111 N. Prospect St, Burlington, Vt. *Plant pathology*. Joplin, Mo, Sept. 26, 79. A.B, Missouri, 06; A.M, Wisconsin, 07, Ph.D, 09. *Asst. plant path*, Vt. Exp. Sta, 09-, acting prof. bot, Vermont, 10, *prof. plant path*, 10- A.A; Bot. Soc; Phytopath. Soc. Cytology of smuts and Closterium; Bordeaux mixture; potato diseases.
- Lutz, Dr. Brenton R(eid)**, 688 Boylston St, Boston, Mass. *Physiology*. Woodlawn, N. S, June 2, 90. B.S, Boston, 13, A.M, 14, fellow, 14-15, Ph.D, 17; Harvard, 14-16. Teaching fellow physiol, Harvard, 15-17; *instr. biol*, Boston, 14-, *exp. physiol*, 19- Physiologist, Sanit. C, U.S.A, 18-19. Blood pressure; reflex thresholds; interrelation of thyroid and adrenals; effects of low oxygen tension.
- Lutz, Dr. Frank E(ugene)**, American Museum of Natural History, New York, N. Y. **Zoology*. Bloomsburg, Pa, Sept. 15, 79. A.B, Haverford, 00; A.M, Chicago, 02, Ph.D, 07. Res. investigator, sta. for exp. evolution, Carnegie Institution, 04-09; asst. curator, *Am. Museum Nat. Hist*, 09-16, *assoc. curator*, 16- Ed, 'Bul.' and 'Memoirs,' Am. Museum Nat. Hist, 17- A.A; Soc. Nat; Soc. Zool; fel. Entom. Soc. (mem. exec. committee and ed. board, 18-); N. Y. Acad. Variation, heredity and assortive mating; geographic distribution; evolution and entomology; economic work against mosquitoes.
- Lyall, Dr. Harold W(illiam)**, 2851 Bedford Ave, Pittsburgh, Pa. *Bacteriology*. Lawrence, Mass, March 23, 88. A.B, Brown, 08, A.M, 09, Ph.D, 14. Bacteriologist, R. I. State Board of Health, 08-10; assoc. Hoagland Lab, Brooklyn, 10-13, asst. director, 13-14; bacteriologist, research lab, Dept. of Health, N. Y. City, 14-18; Sanit. C, 18-19; N. Y. State Dept. Health, 19-20; *director, lab, Tuber. League*, 20- Bacteriologist, R. I. Shellfish Commission, 09; L. I. Col. Hosp, 10-14; research, N. Y. State Hosp. for Incipient Tuberculosis, summers, 12-14. Soc. Bact; Pub. Health Ass. Blood cultures in pneumonia; typhoid meningitis; secondary infection in tuberculosis; streptococci; chronic non-tuberculous lung infections; epidemiology of influenza.
- Lyford, C(hauncey) A(han)**, East Aurora, N. Y. *Chemistry*. Worcester, Mass, May 1, 80. B.S, Worcester, 03; fellow, Clark, 03-08, A.M, 06. Instr. chem, Clark, 08-11; asst. prof. geol, Middlebury Col, 11-16; chem, St. Lawrence, 16-17; Case, 17-18; *chem. engineer*, Nat. Aniline and Chem. Co, 18- Interaction of aldehyde and peroxides.
- Lylo, Prof. William T(homas)**, Rice Institute, Houston, Tex. *Engineering*. Utica, N. Y, Jan. 10, 75. C.E, Princeton, 96. With Essex Co. Park Commission, 97-00; munic. contracting, 00-02; instr. and later asst. prof. eng, Pennsylvania, 02-07; asst. prof. and later prof, Lafayette

- ette, 07-18; *lecturer*, Rice, 19- A.A.; assoc. Civil Eng; Eng. Educ. Hydraulics; municipal engineering.
- Lyman, Prof. E(Immer) A(delbert)**, State Normal College, Ypsilanti, Mich. *Mathematics, Astronomy*. Manchester, Vt, July 27, 61. A.B, Michigan, 86, 92-95; L.L.D, Berea, 18. Principal, high sch, Paola, Kans, 86-87; Troy, Ohio, 87-90; instr. *math*, Michigan, 90-98; *prof*, Mich. *State Nor. Col.*, 98-, principal, 99-02. Trustee, Berea. A.A.; Math. Soc. Plane and spherical trigonometry; computation tables; advanced arithmetic; plane and solid geometry; elementary algebra.
- Lyman, Prof. Geo(rge) R(ichard)**, U. S. Department of Agriculture, Washington, D. C. **Botany*. Lee Center, Ill, Dec. 1, 71. A.B, Beloit, 94; A.B, Harvard, 97, A.M, 99, Ph.D, 06. Supt. city schools, Amboy, Ill, 94-96; asst. crypt. bot, Harvard, 98-01, instr. bot, Radcliffe, 00; Dartmouth, 01-04, asst. prof, 04-15, path. inspector, fed. hort. board, U. S. Dept. Agr, 15-17, *pathologist in charge plant disease surv, bur. plant indust*, 17- Lecturer crypt. bot, Harvard, 12-13; instr. bot, Woods Hole, 07-14; mem. div. biol. and agr, Nat. Research Council, 19- A.A.; Soc. Nat; Phytopath. Soc. (sec'y-treas, 19-); Bot. Soc; Am. Acad; Wash. Acad; Wash. Bot. Soc. Life histories of fungi; polymorphism of Basidiomycetes; life histories of fungi; distribution of plant diseases; plant disease geography.
- Lyman, Dr. Henry**, 109 Commonwealth Ave, Boston, Mass. *Biological chemistry*. Brookline, Mass, Nov. 7, 78. A.B, Harvard, 01, M.D, 12. Teaching fellow physiol, *Harvard Med. Sch*, 13, *research fellow biol. chem*, 14-15, *cancer commission*, 15-
- Lyman, Prof. James A(lexander)**, Claremont, Calif. *Chemistry*. Lee Center, Ill, Oct. 17, 66. A.B, Beloit, 88, A.M, 91; Ph.D, Hopkins, 92. Docent, Chicago, 92-93; instr. *chem*, Portland Acad, 93-09; *prof*, *Pomona*, 09- A.A.; Chem. Soc. Sulphon-phthaleins; ethers and esters of p-nitrobenzyl alcohol.
- Lyman, Prof. J(ohn) F(ranklin)**, 143 Brighton Road, Columbus, Ohio. *Chemistry*. Mesopotamia, Ohio, 81. B.S, Mass. Col, 05; Ph.D, Yale, 09. Assoc. prof. *agr. chem*, *Ohio State*, 09-15, *prof*, 15- A.A.; Chem. Soc. Agricultural and biological chemistry; animal nutrition; metabolism of fats and purins.
- Lyman, Dr. Richard R(oswell)**, 47 E. South Temple St, Salt Lake City, Utah. *Hydraulic engineering*. Fillmore, Utah, Nov. 23, 70. B.S. (C.E), Michigan, 95, M.C.E, 03; Ph.D, Cornell, 05. *Consulting civil engineer*, 95-; instr. *civil eng*, Utah, 95-03, *prof*, 03- Chief engineer, Oasis Land and Irrig. Co, Melville Irrig. Co. and Utah Co. Light and Power Co. Croes medal, Civil Eng, 15; v. pres, Int. Farm Cong. Assoc. Civil Eng; Eng. Educ; Utah Soc. Eng. Flow of water over weirs; the design of wood stave pipe.
- Lyman, Dr. Theodore**, Brookline, Mass. **Physics*. Boston, Mass, Nov. 23, 74. A.B, Harvard, 97, A.M, 99, Ph.D, 00. Asst. *physics*, *Harvard*, 97-93, 99-01, instr, 02-07, asst. prof, 07-17, *prof*, 17- Nat. Acad; A.A.; Physical Soc; Philos. Soc; Am. Acad; fel. Royal Geog. Soc. Phenomena connected with diffraction gratings; wave-lengths of extreme ultra-violet light discovered by Schumann; properties of light of extremely short wave length.
- Lynch, Prof. Frank W(orthington)**, University of California Hospital, San Francisco, Calif. *Medicine*. Cleveland, Ohio, Nov. 5, 72. A.B, Western Reserve, 95; M.D, Hopkins, 99. Instr. and assoc. *med*, Hopkins, 00-04; instr. and asst. prof, Rush Med. Col, 05-15; *prof*, *California*, 15- Gynec. Soc; Chicago Gynec. Soc. (ed, 08-11, v. pres, 12, pres, 13). Toxemias; pelvic anatomy and physiology of pregnancy.
- Lynch, Prof. Kenneth M(errill)**, Medical College of the State of South Carolina, Charleston, S. C. *Pathology*. Hamilton, Tex, Nov. 27, 87. M.D, Texas, 10. Res. pathologist, Phila. Gen. Hosp, 11; instr. path, Pennsylvania, 12-13; *prof*, *Med. Col. State of S. C.*, 13-15, *path. and research med*, 15- Pathologist, various hospitals. Sec'y, med. sect, Pan-Am. Med. Cong, 15. Ass. Path. and Bact; Soc. Bact; Ass. Cancer Research; Pub. Health Ass; Am. Med. Ass. Intestinal diseases; splenomegaly; pellagra; leprosy; bacteriology of conjunctiva; syphilis.
- Lynch, Mrs. Vernon (Dr. Ruth J. Stocking)**, Johns Hopkins University, Baltimore, Md. *Zoology*. Elyria, Ohio, March 31, 87. A.B, Goucher, 10; fellow, Bryn Mawr, 11-12; Hopkins, 12-13, 14-15, Ph.D, 15; fellow, Wellesley, 13-14. Prof. biol, Agnes Scott Col, 15-16; acting prof, Wells, 16-17; asst. prof, Carnegie Inst. Tech, 17-18; instr. protozool, sch. hygiene and pub. health, *Hopkins*, 18-19, independent research, 19-20, asst. *zool*, 20- With statist. dept, Fuel Ad, 18. A.A; Soc. Zool. Protozoology; cytology; animal behavior.
- Lynde, Prof. Carleton J(ohn)**, Macdonald College, Quebec, Can. *Physics*. Mitchell, Ont, Sept. 1, 72. B.A, Toronto, 95; Ph.D, Chicago, 05. Science master, high sch, Auburn, N. Y, 96-99; instr. *physics*, Univ. High Sch, Chicago, 99-06; *prof*, Washington and Jefferson, 06-07; *Macdonald*, 07- Physical Soc; Ecol. Soc; Soc. Agron. Capillarity; osmosis in soils.
- Lynn, Dr. E(ldin) V(erne)**, University of Washington, Seattle, Wash. *Pharmaceutical chemistry*. Hawarden, Iowa, Feb. 8, 86. A.B, Washington (Seattle), 09; A.M, Wisconsin, 10, Ph.D, 18. Instr. physics, Adelphia, 07-09; asst. chem, Wisconsin, 10-11, instr, 11-13; research chemist, Wyo. Exp. Sta, 13-14; instr. chem, Illinois, 14-15; asst. prof, Okla. Col, 15-17; pharmaceut. chemist, bur. chem, U. S. Dept. Agr, 17; Wis. Pharmaceut. Exp. Sta, 17-18; research chemist, Parke, Davis and Co, 18-19; chemist, Consol. Chem. Products Co, 19-20; *asst. prof*, *Washington (Seattle)*, 20- Chem. Soc. Organic and pharmaceutical chemistry.
- Lyle, Prof. William T(homas)**, Rice Institute, Vernon, N. Y. *Psychology*. New York, N. Y, May 17, 87. A.M, Columbia, 08, M.D, 13, fellow, 07-08, 11-12, Ph.D, 14. Scientific research, North. Africa, 14-17. Commission to Poland, Red Cross, 18-19, med. director, Vienna relief Unit, 20-21. A.A; Vienna Verein für Individ. Psychol. Neurology; sociology.

- Lyon, D(orsey) A(lfred)**, U. S. Bureau of Mines, Washington, D. C. *Metallurgy*. Bureau Co, Ill, July 17, 71. A.B. Stanford, 98; A.M. Harvard, 02. Prof. mining and metal, Washington (Seattle), 98-01; asst. state geologist, Wash. Geol. Surv, 00-01; U. S. Smelting Co, 02-03; instr. and asst. prof. metal, Stanford, 03-08; manager, Noble Elec. Steel Co, 08-11; consulting metallurgist, Electro-Metals Co, London, Eng, 11-12; metallurgist, *U. S. Bur. Mines*, 12-17, supervisor, *Exp. Stations*, 17-, chief metallurgist, 19- Min. Cong; Min. and Metal. Soc; Chem. Soc; Min. and Metal. Eng; Electrochem. Soc; British Iron and Steel Inst. Electro-metallurgy; the mineral deposits of the state of Washington; use of the electric furnace in the smelting of ores; smelting iron ores; crude petroleum as an agent in reducing iron ores.
- Lyon, Prof. E(lias) P(otter)**, University of Minnesota, Minneapolis, Minn. **Physiology*. Cambria, Mich, Oct. 20, 67. B.S., Hillsdale, 91, A.B, 92; Ph.D, Chicago, 97; hon. M.D, St. Louis, 10, LL.D, 20. Instr. biol, Bradley Inst, Peoria, Ill, 97-00; asst. prof. physiol, Rush Med. Col, 00-04; Chicago, 01-04; prof, St. Louis, 04-13, dean, med. dept, 07-13; dean, med. dept. and director, dept. physiol, *Minnesota*, 13- Instr, Woods Hole, 97-09; dean in med. work, Chicago, 01-04. A.A.; Soc. Nat; Physiol. Soc; Soc. Exp. Biol; Ass. Med. Col. (pres, 13-14). Compensatory motions; equilibrium in animals; effect of lack of oxygen; the tropisms; enzymes of the egg before and after fertilization; physiology of shock; humidity as a physiological factor; medical education.
- Lyon, Dr. Harold L(loyd)**, Experiment Station, Hawaiian Sugar Planters' Association, Honolulu, Hawaii. *Botany*. Hastings, Minn, Oct. 14, 79. B.S, Minnesota, 00, M.S, 01, Ph.D, 03. Instr. bot, Minnesota, 00-05, asst. prof, 05-07; asst. pathologist, *Exp. Sta, Hawaiian Sugar Planters' Ass, Honolulu*, 07-09, pathologist, 09-18, in charge, dept. bot. and forestry, 18- A.A. Plant morphology, embryology and phylogeny; plant pathology; plant breeding; tropical botany, forestry and agriculture.
- Lyon, Dr. Irving Phillips**, 531 Franklin St, Buffalo, N. Y. *Medicine*. Hartford, Conn, Jan. 12, 70. A.B, Yale, 93; M.D, Hopkins, 97. Instr. med, Buffalo, 99-07, lecturer, 07-14, asst. prof, 14- Chief, med. service, dispensary, Buffalo, 01-03, librarian, med. dept, 05-17; clin. assoc, N. Y. State Path. Lab, 00-03; asst. attending physician, Buffalo Gen. Hosp, 10-16, attending physician, 16-; Buffalo City Hosp, 18-; chief, med. service base hosp, Camp Upton, U. S. A, 18-19. Ass. Path. and Baet. Internal medicine; pathology.
- Lyon, Dr. M(arcus) W(ard), Jr**, 214 LaPorte Ave, South Bend, Ind. *Zoology, Pathology*. Rock Island Arsenal, Ill, Feb. 5, 75. Ph.B, Brown, 97; M.S, George Washington, 00, M.D, 02, Ph.D, 13. Instr. bacter, N. C. Med. Col, 97-98; asst. prof. physiol, Howard, 03-04, 07-09, prof. bacter, 09-15; path. and bacter, George Washington, 15-17, vet. zool. and parasitol, 17-18; lieut, M. R. C, 17, capt, 18-19, major, 19; pathologist, *The Clinic*, 19- Aid, div. mammals, U. S. Nat. Museum, 98-06, asst. curator, 07-12; chief special agent for Smithsonian Inst, La. Purchase and Portland expositions; pathologist, Walter Reed Gen. Hosp, 17-19. A.A.; Ass. Path. and Baet; Soc. Baet; Soc. Mammal. (councilor, 19-); Chem. Soc; Am. Med. Ass; Wash. Acad; Wash. Biol. Soc. (cor. sec'y, 04, rec. sec'y, 15-19); Wash. Biol. Field Club; Wash. Helminth. Soc. Classification and geographic distribution of mammals; parasitology.
- Lyon, Prof. T(homas) Lyttleton**, Cornell University, Ithaca, N. Y. *Agronomy*. Pittsburgh, Pa, Feb. 17, 69. B.S.A, Cornell, 91, Ph.D, 04; Göttingen, 94. Instr. chem, Nebraska, 91-93; chemist, Nebr. Exp. Sta, 95; prof. agr, Nebraska, 95-06; exp. agron, Cornell, 06- Assoc. director, Nebr. Exp. Sta, 99-06; Potts medal, Franklin Inst, 11. A.A.; Soc. Agron. (sec'y, 08, pres, 18); Chem. Soc. The effect of environment on the composition of certain plants; increasing the nitrogen and gluten content of winter wheat; influence of higher plants on bacterial processes in soils; lysimeter investigations.
- Lyon-Norton, Dr. Florence (May), (Mrs. Strong Vincent Norton)**, Birmingham, Mich. *Botany*. Gilbertsville, N. Y, March 6, 60. Michigan, 79-82, 86-87; B.S, Chicago, 97, fellow, 98-99, Ph.D, 01. Principal, high sch, Owosso, Mich, 82-83; teacher science, high sch, Detroit, 83-86, 87-96; instr. bot, Smith, 00-01; Chicago, 01. Plant morphology; relation of selaginellas to seed plants.
- Lyons, Dr. A(lbert) B(rown)**, 102 Alger Ave, Detroit, Mich. *Chemistry, Botany*. Waimea, Hawaii, April 1, 41. A.B, Williams, 65; M.D, Michigan, 68. Prof. chem, Detroit Med. Col, 68-80; consulting chemist, Parke, Davis and Co, 81-87; prof. chem, Oahu Col, 88-95; consulting chemist, *Nelson Baker and Co*, 97- Ed, 'Pharmaceut. Era,' 87-88; govt. chemist, Hawaii, 88-95; mem. committee of revision, U. S. Pharmacopœia, 90- A.A.; Chem. Soc; Bot. Soc; Am. Med. Ass; Pharmaceut. Ass; fel. London Chem. Soc. Methods of valuation of drugs and medicinal preparations; decomposition by weathering of volcanic rocks; certain reactions of morphin with reference to their use as qualitative tests.
- Lyons, Dr. Edward**, Parke, Davis and Co, Detroit, Mich. *Chemistry*. Russia, Oct. 24, 90. B.S, Washington and Lee, 12; Ph.D, Hopkins, 17. Washington and Lee, 14-15; with U. S. Civil Service, 17-18; chemist, Hercules Powder Co, 18; Bogalusa Paper Co, 19; Parke, Davis and Co, 19- Organic chemistry.
- Lyons, Prof. Robert E(dward)**, Bloomington, Ind. *Chemistry, Bacteriology*. Bloomfield, Ind, Oct. 24, 69. A.B, Indiana, 89, A.M, 90; Ph.D, Heidelberg, 94; Fresenius's Lab, Wiesbaden, Munich, Berlin and Joergensen's Inst, Copenhagen, 92-95. Instr. chem, Indiana, 89-91, assoc. prof, 91-92; asst. to Prof. Kraftt, Heidelberg, 95; prof. chem. and head of dept, Indiana, 95- Chemist, State Dept. Geol. and Nat. Resources, Ind, 98-; director, biol. sta, Indiana, 00; prof. chem, Col. Physicians and Surg, Indianapolis, 03-04; chem. and toxicol, Med. Col. of Ind, 04- A.A.; Chem. Soc. (pres, Ind. sect, 07); Public Health Ass; fel. Ind. Acad; Chem.

Gesell. Organic compounds of sulphur, selenium and tellurium; germicides and disinfectants; pathogenic yeasts; organic selenhydrides; condensation of ketones with chloroform and iodoform; method for quantitative estimation of selenium in organic compounds; mercury with organic radicals; substituted salols; composition and valuation of peats; measurement of the specific volume of baked bread; platinum recovery from black sand concentrate; reducing losses in gold dredging; amalgamating platinum and rusty gold; recovery of used soap from laundry suds; cause and prevention of discoloration in canned hominy and sweet corn; coloring oolitic lime stone; oxidation of drying oils.

Lythgoe, Herman C(harles), Room 540, State House, Boston, Mass. *Chemistry*. Boston, May 21, 74. B.S. Mass. Inst. Tech, 96. Asst. chemist, Revere Rubber Co, Chelsea, Mass, 96-97; asst. analyst, *Mass. State Board of Health*, 97-07, *analyst*, 07-, *director, food and drug div*, 14- A.A; Chem. Soc. (treas, N. E. sect, 06-); Agr. Chem. (pres, 20). Chemical composition of pure and adulterated foods.

Lytle, Prof. Ernest B(arnes), University of Illinois, Urbana, Ill. *Mathematics*. Decatur, Ill, March 23, 75. B.S. Illinois, 01, A.M, 04; Yale, 06-08, Ph.D, 08. Teacher, Ill. pub. schools, 95-97; instr. math. acad, Illinois, 01-03, acting principal, 03-04; instr. math, *Illinois*, 04-06, 08-10, assoc, 10-20, *asst. prof. teaching of math*, 20-Math. Soc. Double limits; conditions under which functions may be represented by infinite series; iterated integrals; teaching of mathematics.

M

van Maanen, Dr. A(driaan), Pasadena, Calif. *Astronomy*. Sneek, Holland, March 31, 84. Groningen, 08-10; Ph.D, Utrecht, 11. Vol. asst, Yerkes Observatory, 11-12; *astronomer*, *Mt. Wilson Observatory*, 12- Astron. Soc; Pacific Astron. Soc; Soc. astron. de France; Wiskundig Genootschap. Proper motions and parallaxes of stars and nebulae; magnetic field on the sun.

Mabee, Dr. Oliver Raymond, 419 Bloor St, Toronto, Ont, Can. *Surgery*. Vittoria, Ont, May 25, 80. M.D, McGill, 06. Asst. pathologist, Boston City Hosp, 07-09; pathologist, Toronto Gen. Hosp, 09-14; *mem. surg. staff*, *Toronto, and Toronto Gen. Hosp*, 14- Ass. Path. and Bact; Can. Med. Ass; Toronto Acad. Med. Pathology; typhoid fever; splenomegaly; carcinoma.

Mabery, Prof. C(harles) F(rederic), Case School of Applied Science, Cleveland, Ohio. *Chemistry*. Gorham, Maine, Jan. 13, 50. B.S. Harvard, 76, Sc.D, 81. Asst. chem, Harvard, 75-83; instr, *Case*, 83-84, *prof*, 84- A.A. (sec'y, C, 87, v. pres, 06); Chem. Soc; Philos. Soc; Am. Acad. Petroleum; electric smelting; organic chemistry; lubricants and lubrication.

McAdam, Dr. D(unlap) J(amison), Jr, U. S. Naval Experiment Station, Annapolis, Md. *Metallurgy*. Washington, Pa, Aug. 11, 77. A.B. Washington and Jefferson, 97, A.M, 00; M.S, Pennsylvania, 06, Ph.D, 08. Asst. chem, Harvard and Radcliffe, 00-01; teacher, high sch, Washington, Pa, 01-03; instr. chem, Washington and Jefferson, 03-05; asst, Pennsylvania,

05-07; Lehigh, 07-08, instr. physical chem, 08-10; asst. prof. chem, Clemson, 10-11; scientist soil lab. investigations, bur. soils, U. S. Dept. Agr, 11-13; *metallurgist*, *U. S. N. Exp. Sta*, 13- A.A; Electrochem. Soc; Chem. Soc; Min. and Metal. Eng; Soc. Test. Mat; Steel Treat. Soc; assoc. mem. Naval Eng; Faraday Soc; British Iron and Steel Inst; British Inst. Metals. Phase relations of the system, sodium carbonate and water; the atomic weights of vanadium and fluorine; annealing temperatures and grain growth of metals; impact and endurance tests of metals; an alternating torsion testing machine; iron and steel.

McAdams, Prof. William H(enry), Massachusetts Institute of Technology, Cambridge, Mass. *Chemical engineering*. Cynthiana, Ky, March 15, 92. B.S. Kentucky, 13, M.S. Mass. Inst. Tech, 17. Asst. food chemist, Ky. Exp. Sta, 13; asst. anal. chem, Mass. Inst. Tech, 13-14; chem. engineer, Goodyear Tire and Rubber Co, 17; *asst. prof. chem. eng*, *Mass. Inst. Tech*, 19- With C.W.S, U.S.A, 18-19. Chem. Soc. Drying; flow of heat; flow of viscous liquids; absorption.

McAdie, Prof. Alexander (George), Blue Hill Observatory, Readville, Mass. *Meteorology, Climatology*. New York, N. Y, Aug. 4, 63. Col. City of N. Y, 76-81, A.M, 84; A.M, Harvard, 85; fellow, Clark, 90-91; hon. M.S, Santa Clara, 09. Prof. meteorol, U. S. Weather Bur, 03-13; *Rotch prof*, *Harvard*, 13- Hon. lecturer meteorol, California; lieut. commander, U.S.N.R.F. Hodgkin medal, Smithsonian Inst, 95. A.A; Seismol. Soc. (v. pres, 07, pres, 10); Ass. Geog; Ecol. Soc; Am. Acad; Pacific Astron. Soc. (pres, 12); Wash. Acad; fel. Royal Meteor. Soc. Aerography; atmospheric electricity.

McAfee, Dr. A(Immer) M(cDuffie), Gulf Refining Co, Port Arthur, Tex. *Chemistry*. Corsicana, Tex, Sept. 24, 86. A.B, Texas, 08; fellow, Columbia, 10-11, Ph.D, 11. Tutor chem, Texas, 08-10; chemist, Tex. Co, 11-13; *chief research chemist*, *Gulf Refining Co*, 13- A.A; Chem. Soc; Soc. Chem. Indust; Chem. Eng. Petroleum oils; manufacture of gasoline; aluminum chlorid.

McAlister, Prof. Edward H(iram), 334 Pearl St, Eugene, Oregon. *Physics*. Oregon, Dec. 26, 66. A.B, Oregon, 90, A.M, 93. Instr. civil eng, *Oregon*, 91-93, asst. prof, 93-96, *prof*, 96-14, *applied science*, 14- Applied science; theory of elasticity; astronomy.

McAllister, Dr. A(ddams) S(tratton), 32 W. 40th St, New York, N. Y. *Illuminating engineering*. Covington, Va, Feb. 24, 75. B.S. Pa. State, 98, E.E, 01; M.M.E, Cornell, 01, Ph.D, 05. Asst. and instr. physics, Cornell, 01-04, acting asst. prof. elec. eng, 04-05; assoc. ed, 'Elec. World,' 05-12, ed, 12-15. Professorial lecturer, Pa. State, 09-14; sec'y, board army ordnance officers, 18. A.A; Elec. Eng. (manager, 14, v. pres, 17-18); Mech. Eng; Electrochem. Soc; Eng. Educ; Illum. Eng. Soc. (pres, 14); Army Ordnance Ass. Application of the law of conservation in illumination calculations; concepts of relations and methods applied and simplified in electromagnetic calculations.

McAllister, Dr. Cloyd N(orth), Berea, Ky. *Psychology*. St. Joseph, Mo, Dec. 18, 70. A.B,

- Yale, 92, Ph.D. 00. Instr. math, high sch, St. Joseph, Mo, 92-97; asst, psychol. lab, Yale, 00-03, instr. psychol, 03-06; prof, State Nor. Sch, Warrensburg, Mo, 06-12, *prof. educ. and dean nor. sch, Berea, 13-* A.A.; Psychol. Ass; Philos. Ass. Movements used in writing; eye movements by photography.
- McAllister, Prof. Frederick**, University of Texas, Austin, Tex. *Botany*. Davison, Mich, Sept. 28, 76. A.B. Albion, 03; A.M. Beloit, 08; Ph.D. Wisconsin, 10. Instr. biol, Beloit, 04-09; asst. bot, Wisconsin, 09-10; instr, Cornell, 10-12; Texas, 12-14, *assoc. prof, 14-* A.A.; Bot. Soc; Wis. Acad. Cytology and embryology of the angiosperms; cytology and morphology of the Hepaticae.
- Macallum, Dr. (Archibald) Bruce**, 243 College St, Toronto, Can. *Biological chemistry*. Cornwall, Ont, July 8, 85. B.A. Toronto, 07, M.B. 09, M.D. 10, fellow, 15-16, Ph.D. 19; Beit Mem. fellow, London, 13-14. Austin teaching fellow, Harvard Med. Sch, 09-12; lecturer biochem, Toronto, 14-15; *research chemist, Synthetic Drug Co, 16-* Chem. Soc; Soc. Biol. Chem; fel. London Chem. Soc; London Soc. Biol. Chem; London Soc. Chem. Indust; fel. Can. Inst. Chem. Industrial chemistry; urine analysis; relation of vitamins to growth.
- Macallum, Prof. A(rchibald) B(yron)**, McGill University, Montreal, Can. *Physiological chemistry*. Belmont, Ont, 59. B.A. Toronto, 80, fellow, 84-97, M.B. 89, M.A. 00; Ph.D. Hopkins, 88; LL.D. Aberdeen, 06; Sc.D. Yale, 07; Dublin, 08. Lecturer physiol, Toronto, 87-91, prof, 91-06, biochem, 06-17; administrative chairman, Advisory Council for Scientific and Industrial Research, Canada, 16-21; *prof. biochem, McGill, 20-* Physiol. Soc; Soc. Exp. Biol; Soc. Biol. Chem; Am. Physicians; fel. Phila. Col. Physicians; fel. Royal Soc. Can; Can. Inst. (pres, 95-98); British Ass. (local sec'y, 97, pres, physiol. sect, 10); London Physiol. Soc; fel. Royal Soc; hon. mem. Royal Philos. Soc. Glasgow. The chemistry of animal and vegetable cells; localization of phosphorus, iron, potassium and calcium in the cell; the salts of Medusae in relation to those of sea water; the distribution of chlorids in the cell and in the tissues; the oxydases in the cell; the composition of cellular and tissue fluids in the animal body; the inorganic composition of the secretions and excretions; the physical and chemical factors in heredity; the physical forces concerned in excretion, secretion and muscular contraction in cellular life.
- MacArthur, C(harles) G(eorge)**, 1525 Seenic Way, Berkeley, Calif. *Biochemistry*. Buffalo, N. Y, May 3, 83. Oberlin; Pennsylvania; Chicago; Heidelberg. Instr. chem, Illinois, 12-15; prof. bio-chem, Southern California, 15-16. A.A.; Chem. Soc. Chemistry of the brain.
- MacArthur, John W(ood)**, University of Toronto, Toronto, Can. *Biology*. Buffalo, N. Y. Sept. 2, 89. A.B. Oberlin, 10; A.M. Wabash, 12; fellow, Chicago, 13-14. Instr. geol. and zool, Wabash, 11-12; asst. zool, Chicago, 15, assoc. 15-16; instr. anat. col. med, Illinois, 17-18; *lecturer exp. biol, Toronto, 19-* A.A. Genetics of the Solanums; rhythmic phenomena in the Cladoceera.
- McArthur, Dr. Lewis L**, 4724 Drexel Boulevard, Chicago, Ill. *Medicine*. Boston, Mass, Jan. 23, 58. B.S. Santa Clara; M.D. Rush Med. Col, 80; Heidelberg, 81; Vienna, 82. *Prof. clin. surg, Post-Grad. Med. Sch; Rush Med. Col.* Attending surgeon, St. Luke's and Michael Reese Hospitals, Chicago, 87- Mem. Int. Surg. Cong, Brussels. Surg. Ass; Clin. Surg. Soc; Am. Med. Ass; Chicago Med. Soc. (past pres). Opsonins; tuberculosis; thyroid gland.
- McAtee, W(aldo) L(ee)**, U. S. Department of Agriculture, Washington, D. C. *Ornithology*. Jalapa, Ind, Jan. 21, 83. A.B. Indiana, 04, A.M. 06. Curator, museum, Indiana, 01-04; *asst. biologist, U. S. Biol. Surv, 04-*, in charge econ. ornith, 16- A.A.; fel. Ornith. Union; Cooper Ornith. Club; Wilson Ornith. Club; Entom. Soc; New Eng. Bot. Club; Wash. Biol. Soc. (cor. sec'y, 14-); Wash. Entom. Soc; Wash. Biol. Field Club (sec'y, 09-11, v. pres, 11-). Ichthyology; local natural history; life histories of Urodela; food habits and methods of attracting birds; classification of Hemiptera; local names of birds and plants; selection theories.
- McBerty, F(rank) R(obert)**, Galion, Ohio. *Electrical engineering*. Sharon, Pa, Feb. 14, 68. High sch. Engineer, West. Elec. Co, 87-17; v. pres, North Elec. Mfg. Co, 17-; tech. director, Coventry Automatic Telephones, Ltd, 20- Medal, Int. Expos, Paris, 00; diploma, Lyons, 14; Fahie premium, 17. Fel. Elec. Eng; Electrochem. Soc; British Inst. Elec. Eng. Telephony.
- McBride, Dr. J(ames) H(arvey)**, Pasadena, Calif. *Medicine*. LaFayette, Oregon, Jan. 23, 49. McMinville, 59-62; M.D. Bellevue Hosp. Med. Col, 73. Physician, various hospitals, 72-95; founder, South. Calif. Sanit. for Nervous Diseases, 05. A.A.; Am. Acad. Med. (pres, 09); Medico-Psychol. Ass. (pres, 18-19); Neur. Ass; hon. mem. Climat. Ass; Am. Med. Ass; Am. Geog. Soc. Physiology of the nervous system; therapeutics; action of nitrite of amyl on the cerebral circulation; localization of brain functions in the dog; epilepsy; vascular mechanism of the cerebellum.
- McBride, R(ussell) S(mith)**, McGraw-Hill Co, Washington, D. C. *Engineering*. Minneapolis, Minn, May 5, 87. B.S. Minnesota, 08; A.M. Wisconsin, 09. Asst. chemist, Bur. Standards, 09-14, assoc. chemist, 14-18, eng. chemist, 18-20; *eng. representative, McGraw-Hill Co, 20-* Dept. ed, 'Jour. Indust. and Eng. Chem'; 'Gas Recor'd.' A.A.; Chem. Soc; Am. Gas. Ass; Nat. Gas Ass; Fire Protection Ass; Wash. Acad; Int. Acetylene Ass. Gas chemistry and engineering; public utilities; standards for chemical analysis; fuels.
- Macbride, Pres. Thomas H(uston)**, Iowa City, Iowa. **Botany*. Rogersville, Tenn, July 31, 48. A.B. Monmouth, 69, A.M. 72, LL.D. 12; hon. Ph.D. Lenox, 91; LL.D. Coe. 14. Prof. math. and modern languages, Lenox, 70-78; asst. prof. nat. sciences, Iowa, 78-84, prof. bot, 84-14, pres, 14-16, *emer. pres, 16-* Chairman, Iowa Forestry Commission; mem. Iowa State Conservation Commission; mem. staff,

- Iowa State Geol. Surv; trustee, Iowa State Hist. Soc. A.A. (v. pres, G); Geol. Soc; Paleont. Soc; Iowa Acad; St. Louis Acad. Microscopical botany; fungi; diatoms; Pleistocene geology; Myxomycetes.
- McBryde, Dr. Charles N(eil)**, U. S. Department of Agriculture, Washington, D. C. *Bacteriology*. Albemarle Co, Va, Feb. 2, 72. B.S. South Carolina, 91; M.S. Va. Polytech, 92; M.D. Hopkins, 97; Ph.D. George Washington, 11. Res. house physician, Hopkins Hosp, 97; bacteriologist, U. S. Dept. Agr, 01-10, senior bacteriologist, 10- A.A.; Soc. Bact; Pub. Health Ass; Wash. Acad; Wash. Biol. Soc; Wash. Anthropol. Soc. Etiology and prevention of swine cholera; curing and canning of meats; bacteriology of meats in cold storage.
- McBryde, Prof. J(ames) B(olton)**, Blacksburg, Va. *Chemistry*. Buckingham Co, Va, Sept. 2, 66. A.B. Clemson, 86; C.E. South Carolina, 88. Asst. chemist, S. C. Exp. Sta, 88-91; Tenn. Exp. Sta, 91-94, chemist, 94-01; asst. prof. chem, Va. Polytech, 05-07, prof, 07-, head, dept. chem. and chem. eng, 16- A.A.; Chem. Soc. Organic and analytical chemistry.
- McCaffery, Prof. Richard S(tanislaus)**, University of Wisconsin, Madison, Wis. *Metallurgy*. New York, N. Y, June 2, 74. E.M. Columbia, 96. Practising engineer, 96-09; prof. metal, Idaho, 09-14; Wisconsin, 14- Min. Eng; Inst. Metals; Foundrymen's Ass; Can. Min. Inst. Iron and steel metallurgy; slags.
- McCain, Dr. Gertrude Iona**, Oxford College, Oxford, Ohio. *Mathematics*. Three Rivers, Mich, July 15, 79. A.B. Indiana, 08, A.M. 11, Ph.D. 18. Prof. math, Oxford (Ohio), 15- Math. Soc; Math. Ass. Series; function theory; space conception.
- McCall, Dr. A(rthur) G(illett)**, Maryland Experiment Station, College Park, Md. *Agriculture*. McGaw, Ohio, Nov. 11, 74. B.S.(Agr), Ohio State, 00; fellow by courtesy, Hopkins, 14-15, Ph.D. 16. Scientist, bur. soils, U. S. Dept. Agr, 01-04; head, dept. agron, Ohio State, 04-16; in charge soil investigations, Md. Exp. Sta, 16- Head, dept. agron, A.E.F. Univ, Beaune, 19. A.A.; Soc. Agron; Soc. Prom. Agr. Sci; Ecol. Soc. Physical properties of soils; broom corn culture; soil management; potassium of soils and green sands; adsorptive properties of soils; fertilizer requirements of soil types.
- McCall, Prof. W(illiam) A(nderson)**, Teachers College, New York, N. Y. *Psychology*. Wells-ville, Tenn, Jan. 9, 91. B.S. Cumberland, 11; A.B. Lincoln Mem. Univ, 13; A.M. Columbia, 14, Ph.D. 16. Instr. psychol, Lincoln Mem. Univ, 11-13; lecturer educ. psychol, Teachers Col, Columbia, 16-17, instr. exp. educ, 17-18, asst. prof, 19- Instr. educ. psychol, summer sch, North Carolina; summer sch, Peabody Col. Teachers; psychol. investigator, N. Y. State Commission on Ventilation; contrib. ed, 'Jour. Educ. Research.' A.A.; Psychol. Ass; Nat. Directors Educ. Research. Experimental education; educational and psychological measurements; mental effects of ventilation and open-air schools.
- McCallie, Dr. J(ames) P(ark)**, Highland Park Station, Chattanooga, Tenn. *Astronomy, Math-*
- ematics*. James Co, Tenn, Aug. 9, 79. A.B. A.M. Virginia, 00, Ph.D. 03. Asst. astron, Virginia, 01-02; instr. math, Culver Mil. Acad, 03-05; headmaster, McCallie Sch, 05- Instr. Tenn. State Inst, 03. A.A. Perturbations of Jupiter and Saturn.
- McCallie, Dr. Joseph Madison**, 822 Berkeley Ave, Trenton, N. J. *Psychology*. Knoxville, Tenn, A.B. Tennessee, 87; Chicago, 95-96, summers, 96-98; Columbia, 99-00; Harvard, summer, 02; Ph.D. Pennsylvania, 12. Supt. schools, North Knoxville, Tenn, 90-94; Mt. Carroll, Ill, 95-97; Boonton, N. J, 01-02; principal, Franklin Sch, Trenton, N. J, 03-19; first asst. director educ. and parole, dept. institutions and agencies, N. J, 19-20; director, exten. educ, Trenton, N. J, 20- A.A.; Ass. Study Feeble-Minded. Acuteness of hearing and vision.
- McCallie, Samuel Washington**, Department of Geology, Atlanta, Ga. *Geology*. Near Knoxville, Tenn, Aug. 2, 56. Ph.B. Tenn. Wesleyan, 84; Hopkins, 89-92. Inst. geol. Tennessee, 92-94; asst. state geologist, Ga, 94-07, geologist, 07- A.A.; Geol. Soc; Min. Eng. Economic geology of Georgia; brown iron ores; mineral waters; marbles; gold phosphates; marls; road-building materials; coal.
- MacCallum, Prof. W(illiam) G(eorge)**, Johns Hopkins University, Baltimore, Md. **Pathology*. Dunnville, Ont, April 18, 74. B.A. Toronto, 94; M.D. Hopkins, 97. Res. house officer, Hopkins Hosp, 97-98, asst. res. pathologist, 99-00, res. pathologist, 01-09, asst. path, Hopkins, 99-00, assoc. prof, 02-08, prof. path. physiol, and lecturer forensic med, 08-09; prof. path, Columbia, 09-17; path. and bacter, Hopkins, 17- Pathologist, Presb. Hosp, N. Y. City, 10-17. A.A.; Soc. Exp. Path; Physiol. Soc; Am. Physicians; Ass. Path. and Bact; Soc. Exp. Biol; Am. Med. Ass; Harvey Soc; Md. Med. and Chirurg. Faculty; N. Y. Acad. Med; Int. Ass. Med. Mus. (v. pres, 08); Path. Gesell; hon. mem. Soc. Med. Sverana Stockholm. Trematode parasites; malaria; pathological anatomy and bacteriology; anatomy of lymphatics; physiology of the thyroid and parathyroid; tetany; pancreas; diabetes; pathological physiology of the circulatory and respiratory systems; correlation of the organs of internal secretion; pneumonia.
- McCampbell, Prof. C(harles) W(ilbur)**, Kansas State Agricultural College, Manhattan, Kans. *Animal husbandry*. Frankfort, Kans, Feb. 1, 82. B.S. Kansas State, 06, D.V.M. 10, B.S.A. 18. Asst. animal husbandry, Kansas State, 10-12, asst. prof, 12-16, assoc. prof, 16-18, prof, 18- A.A.; Soc. Animal Production. Animal production.
- McCampbell, Prof. Eugene F(ranklin)**, Ohio State University, Columbus, Ohio. *Pathology, Bacteriology*. Marysville, Ohio, April 15, 82. B.S. Chicago, 04, Ph.D. 09, M.D. Rush Med. Col, 12. Asst. bacter, Wisconsin, 05-06; pathologist, Minnequa Hosp, Pueblo, Colo, 06; prof. bacter, Ohio State, 06-12; exec. officer, Ohio State Dept. Health, 12-16; prof. prev. med. and dean, col. med, Ohio State, 16- Ass. Path. and Bact. Immunology; the ophthalmotuberculin reaction in cattle; quinin in tetanus; the toxicity of *Bacterium welchii*; general paralysis of the insane;

- metabolism in dementia praecox; the transformation of tissues; preventive medicine; typhus fever; infantile paralysis; bronchial asthma.
- McCann, Dr. Gertrude F(isher)**, 1273 Lexington Ave, New York, N. Y. *Pathology*. Tewksbury, Mass, Feb. 8, 89. A.B. Wellesley, 09; M.D. Cornell, 15. Fellow, Rockefeller Inst, 16-17; pathologist, N. Y. City Board of Health, 17-18; contract surgeon, U.S.A., 18-19. A.A.; Ass. Path. and Bact; Am. Med. Ass; Mass. Med. Soc. Biological chemistry; nutritional diseases.
- McCann, Dr. William S(harp)**, 1271 Lexington Ave, New York, N. Y. *Medicine*. Cadiz, Ohio, July 6, 89. A.B. Ohio State, 11; M.D. Cornell, 15. Cabot fellow in charge lab. surg. research, Harvard Med. Sch, 16-17; capt, M.C, 17-19; *instr. med. col. med. Cornell*, 19- Research fellow, Russell Sage Inst. of Path, 19-; adj. asst. visiting physician, Bellevue Hosp, 19- Soc. Exp. Biol; Harvey Soc. Disorders of metabolism; metabolism in tuberculosis, hyperthyroidism, Hodgkin's disease and Paget's disease; experimental tetany.
- McCarthy, Dr. J(ohn) G(eorge)**, 112 St. Mark St, Montreal, Can. *Anatomy*. Sorel, Que, March 23, 62. Ottawa, 82; M.D. C.M. McGill, 88. Asst. demonstrator anat, McGill, 92-95, demonstrator, 95-98, senior demonstrator, 98-00, lecturer, 00-03, asst. prof, 03-09, applied anat, 09-10. Ass. Anat; Montreal Medico-Chirurg. Soc. The brain.
- MacCarty, Dr. W(illiam) m Carpenter**, 820 Third St, S.W, Rochester, Minn. *Pathology*. Louisville, Ky, June 10, 80. B.S. Kentucky, 00, M.S. 09; M.D. Hopkins, 04. Asst. pathologist, Königin Augusta Hosp, Berlin, 04-06; *surg. pathologist and assoc. director of laboratories, Mayo Clinic and assoc. prof. path. Mayo Foundation, Minnesota*, 07- Ass. Path. and Bact; Ass. Cancer Research; Am. Med. Ass. Surgical pathology; histogenesis of neoplasmata; clinicopathologic standardization; new terminology and classification of neoplasia and neoplasmata.
- McCaskey, H(iram) D(ryer)**, Bora Da Orchards, Central Point, Oregon. *Geology*. Fort Totten, N. Dak, April 10, 71. B.S. Lehigh, 93, M.S. 07. Chemist and assayer, B. and M. Con. C. and S. Mining Co, Great Falls, Mont, 93-95; instr. and head master, St. Thomas Hall, Miss, 95-98; instr. math, St. Matthew's Sch, Calif, 98-99; mining engineer and geologist, Mining Bur, Manila, 00-03, chief, 03-06; asst. geologist, U. S. Geol. Surv., 07-10, *geologist*, 10-, chief, sect. metal resources, 12-19, in charge div. mineral resources, 15-19. Philippine delegate, Int. Geol. Cong, Mexico City, 06 (v. pres). A.A.; Geol. Soc; Min. Eng; Wash. Geol. Soc. Geology and mineral resources of the Philippines; mining geology and mineral resources of gold, silver, copper, lead, zinc and quicksilver deposits in United States.
- McCaskill, Prof. V(irgil) E(verett)**, Superior, Wis. *Zoology*. Knox Co, Ill, May 3, 66. A.B. Ohio Wesleyan, 93, A.M. 94; Ph.D. Chicago, 01. Instr. math, Ohio Wesleyan, 93-94; prof. biol, State Nor. Sch, Stevens Point, Wis, 96-02; prof. biol. and institute conductor, *State Nor. Sch, Superior, Wis*, 02-07, *pres*, 07- Wis. Acad. The nervous system of annelids; metamerism of leeches; the anatomy of the nervous system of various Wisconsin leeches, with special reference to metameric features.
- MacCaughy, Prof. Vaughan**, Honolulu, Hawaii. *Botany, Ecology*. Huron, S. Dak, July 7, 87. B.S.A. Cornell, 08. Asst. entom, Cornell, 05-08; head, dept. nat. science, Territorial Nor. Sch, Hawaii, 08-10; prof. bot, Col. of Hawaii, 10-19; *supt. pub. instruction, Hawaii*, 19- Lecturer, teachers' institutes, N. Y., 07-08; instr. nature study and biol, Lake Chautauqua Summer Sch, 06-18. A.A.; Bot. Soc; Ecol. Soc. Hawaiian ecology and botany; agricultural education; school administration.
- McCaughy, Prof. William J(ohn)**, Ohio State University, Columbus, Ohio. *Mineralogy*. Philadelphia, Pa, June 21, 82. B.S. Pennsylvania, 06; Ph.D. George Washington, 12. Assayer, Bur. of Mint, Washington, 06-08; scientist, soil lab, bur. of soils, U. S. Dept. Agr, 08-11; asst. prof. miner, *Ohio State*, 11-16, *prof*, 16- U. S. Assay Commission, 09. A.A.; Chem. Soc; Min. Eng; Miner. Soc. Microscopical determination of soil-forming minerals; chemical crystallography.
- McCauley, Dr. Geo(rge) V(est)**, Corning Glass Works, Corning, N. Y. *Physics*. Perryville, Mo, Nov. 5, 82. B.S. Northwestern, 08; Wisconsin, 08-09, A.M. 09, fellow, 09-11, Ph.D. 11. Instr. physics, Northwestern, 11-17; asst. physicist, Bur. Standards, 17-18; *with Corning Glass Works*, 18- A.A.; Physical Soc; Ceramic Soc; Ill. Acad. Distribution of energy in the spectra of incandescence metals as a function of absolute temperature.
- McCaustland, Prof. E(lmer) J(ames)**, University of Missouri, Columbia, Mo. *Civil and mining engineering*. Quincy, Wis, Jan. 9, 64. B.C.E. Cornell (Iowa), 92; M.C.E. Cornell, 97. Practising civil and mining engineer, Calif, Oregon, and Mont, 88-96; instr. civil eng, Cornell, 97-00; principal asst. engineer in construction of clearing yards, Chicago, 00-01; prof. civil eng, sch. mines and metal, Missouri, 01-02; asst. prof. mining and surv, Cornell, 02-08; prof. munic. eng, Washington (Seattle), 08-14; sanitary engineer, State Board of Health, 09-14; *dean eng. faculty and director, eng. exp. sta, Missouri*, 14- A.A.; Civil Eng; Min. Eng; Eng. Educ. Properties of reinforced concrete; elastic properties of specially treated steel; effect of low temperature on overstressed steel; tensile strength of reinforced concrete; effect of drifting punched and drilled holes in soft steel plates; economic design of wood stave conduits; treatment of sewage.
- McCay, Prof. L(eRoy) W(iley)**, Princeton, N. J. **Chemistry*. Rome, Ga, Aug. 9, 57. A.B. Princeton, 78, A.M. 81, Sc.D. 83; Freiberg, 78-81; Heidelberg, 82. Asst. anal. chem, *Princeton*, 83-86, instr. 86-89, asst. prof, 89-92, *prof. inorg. chem*, 92- A.A.; Chem. Soc; Min. Eng; Philos. Soc; London Chem. Soc. Methods for determining arsenic; the sulpho and sulphy compounds of arsenic; the salts of trisulphoxy-arsenic acid; separation of tin and antimony; the use of hydrofluoric acid in ordinary and in electrochemical analysis.

- McClellan, Dr. W(illia)m**, University of Pennsylvania, Philadelphia, Pa. *Physics*. Philadelphia, Nov. 5, 72. B.S., Pennsylvania, 00, Ph.D. Asst. eng. Swarthmore, 90-91; *instr. math.* Boys' High Sch., Reading, Pa., 91-98; *physics*, Pennsylvania, 00- Physical Soc.; Elec. Eng.; Mech. Eng.; Franklin Inst.; Pa. Forestry Ass.
- McClelland, Prof. J(ames) F(arley)**, Liberty National Bank, New York, N. Y. *Mining engineering*. Poughkeepsie, N. Y., March 3, 78. E.M., Columbia, 00; A.M., Yale, 10. Instr. geol. and mining, Wyoming, 00-01; mining, Columbia, 02-05; asst. prof., Stanford, 08, prof., 09-10; mining eng., Yale, 10-17; ed-in-chief, specification sect., Sig. C, 17-18; chief, production, bur. aircraft production, 18-19; *consulting engineer*, Liberty Nat. Bank, 19- Lecturer mining eng., Yale, 09. Min. Eng.; Conn. Acad.
- McClenahan, Prof. Francis M(itchell)**, 620 California Ave., Oakmont, Pa. *Chemistry*. Winterset, Iowa, Jan. 27, 76. A.B., Tarkio, 96; Yale, 00, A.M., 01, 01-03, 05-06; Chicago, summers, 97, 05. Instr. science, high sch., Pittsburgh, Pa., 96-99; asst. chem., Yale, 01-03; instr., Kansas State, 03-05; prof., Maryville, 06-10; Tarkio, 10-11; Maryville, 11-17; fellow, Mellon Inst., 16-18; *consulting chemist*, United Chem. Co., 19- Asst. chem., Chicago, summer, 05. A.A.; Chem. Soc. Structural formulae of aluminum, barium, magnesium and thallium chlorides; development of fat in black walnut; Chilhowee iron ore deposits of Blount County, Tennessee.
- McClenahan, Prof. Howard**, Joseph Henry House, Princeton, N. J. *Physics*, *Electrical engineering*. Port Deposit, Md., Oct. 19, 72. E.E., Princeton, 95, M.S., 97. Instr. physics, Princeton, 97-99, instr. physics and asst. elec. eng., 99-02, asst. prof. physics, 02-06, prof., 06-; dean of col., 12- Officer Order of the Crown, Belgium. Physical Soc.; Electrochem. Soc. Diffraction of electric waves.
- McClenahan, W(illiam) S(tanley)**, Dominion Observatory, Ottawa, Can. *Astronomy*. Appleby, Ont., July 14, 92. B.A., Toronto, 14. Asst. astronomer, Dominion Observatory, 14- Demonstrator, physical lab., Toronto, 14. Royal Astron. Soc. Can. Meridian circle; fundamental stars.
- McClendon, Prof. J(esse) F(rancis)**, University of Minnesota, Minneapolis, Minn. **Physiology*, *Biochemistry*. Lanette, Ala., Dec. 21, 80. B.S., Texas, 03, fellow, 03-04, M.S., 04; fellow, Pennsylvania, 04-06, Ph.D., 06. Asst. zool., Texas, 00-03; prof. biol., Randolph-Macon, 06-07; instr. zool., Missouri, 07-09; asst. histol., med. col., Cornell, 09-11, instr. anat., 11-14; physiol., Minnesota, 14-16, asst. prof., 16-17, assoc. prof., 17-20, prof. physiol. chem., 20- Asst., Woods Hole, 06, 08; res. naturalist, San Diego Biol. Ass., 07; capt., R.C. A.A.; Soc. Biol. Chem.; Physiol. Soc. Experimental zoology and physiology; cytology; embryology; taxonomy; life history; animal behavior; hydrogen-ion concentration; alkaline reserve; metabolism; vitamins.
- McClendon, Prof. R(aymond) B(enedict)**, Grinnell, Iowa. *Mathematics*. Yankton, S. Dak., Aug. 4, 83. A.B., Yankton, 02; Ph.D., Yale, 05; Munich, 10; Columbia, 18. Instr. math., Grinnell, 05-07, asst. prof., 07-10, assoc. prof., 10-18, prof., 18- Exten. instr. math., Columbia, 18;
- assoc. ed., 'Am. Math. Monthly,' 19- A.A.; Math. Soc.; Math. Ass. History of mathematics; Leonardo of Pisa's works; elementary functions.
- McClintock, Dr. Cha(rlie)s T(homas)**, Asheville, N. C. *Bacteriology*. Bourbon Co., Ky., March 16, 60. A.B., Ky. Wesleyan, 81; Ph.D., Michigan, 92, M.D., 94. Director, bacter. and serum laboratories, Parke, Davis and Co., 94-10. Asst., Michigan, 91-95; lecturer bacter., Detroit Col. Med., 96- A.A.; Soc. Bact.; Am. Med. Ass.; fel. Am. Acad. Med.; Pub. Health Ass. Etiology of hog cholera; etiology of vaccinia and smallpox; serum therapy.
- McClintock, J(ames) A(lbertine)**, Experiment, Ga. *Plant pathology*. Chicago, Ill., Oct. 31, 89. B.S., Mich. Agr. Col., 13; M.S., Wisconsin, 14. Agent, bur. plant indust., U. S. Dept. Agr., 13-14; plant pathologist, Va. Truck Exp. Sta., 15-18; *botanist and plant pathologist*, Ga. Exp. Sta., 18- Path. inspector, fed. hort. board, U. S. Dept. Agr., summer, 15; exten. pathologist, Georgia, 18. A.A.; Phytopath. Soc.; Soc. Hort. Sci. Diseases of fruits, vegetables and drug plants.
- McClintock, Prof. Jno. (John) T(homas)**, 230 Fairchild St., Iowa City, Iowa. *Psychology*. Burlington, Iowa, June 7, 73. A.B., Parsons, 94; M.D., Iowa, 98; Leipzig; Berlin. Demonstrator anat. and path., Iowa, 98-01, prof. physiol., 02- A.A.; Am. Med. Ass. Bio-physics; graphic recording of heart action; intestinal obstruction.
- McClung, Prof. C(larence) E(rwin)**, University of Pennsylvania, Philadelphia, Pa. **Zoology*. Clayton, Calif., April 5, 70. Ph.G., Kansas, 92, A.B., 96, A.M., 98, Ph.D., 03. Asst. prof. zool., Kansas, 97-00, assoc. prof., 00-06, prof., 06-12, head, dept. zool. and curator vert. paleont. collections, 02-12; prof. zool. and director of lab., Pennsylvania, 12- Acting dean, sch. of med., Kansas, 02-06; mem. embryol. staff, Woods Hole, 03, 12-, trustee; mem. advisory board, Wistar Inst.; managing ed., 'Jour. Morphol.'; chairman, div. biol. and agr. Nat. Research Council, 19- Nat. Acad.; A.A.; Soc. Nat.; Soc. Zool. (sec'y-treas., pres., cent. sect., 10, pres., 14); Ass. Anat.; Philos. Soc.; Phila. Acad.; Wash. Acad.; Kans. Acad. Sex determination from a study of the germ cells of insects; spermatogenesis in insects; osteology of upper Cretaceous fish of Kansas; correlation between body characters and cell organization; upper Cretaceous fish of Kansas; phylogeny of chromosomes; variation in chromosome numbers; specific behavior of chromosomes.
- McClung, Prof. R(obert) K(enning)**, University of Manitoba, Winnipeg, Man., Can. *Physics*. Elmira, Ont., Feb. 2, 74. B.A., McGill, 99, M.A., 01, D.Sc., 06; B.A., Cambridge, England, 03. Demonstrator physics, McGill, 99-01, senior demonstrator, 04-07; prof., Mt. Allison, 07-09; lecturer, Manitoba, 09-12, asst. prof., 12- A.A.; Physical Soc.; fel. Royal Soc. Can. Energy required to produce ions; recombination of ions; ionization by X-rays; ionization from radium C; conduction of electricity through gases; radio-activity.
- McClure, Prof. C(harles) F(reeman) W(illiams)**, Princeton, N. J. **Comparative anatomy*. Cambridge, Mass., March 6, 65. A.B., Princeton, 88,

fellow, 89, A.M., 92; Columbia, 90-01, hon. Sc.D., 08; Berlin, 93; Kiel, 95; Würzburg, 97. Instr. biol., *Princeton*, 91-95, asst. prof., 95-01, *prof. comp. anat.*, 01- Mem. Peary relief exped, 99. A.A.; Soc. Nat.; Soc. Zool.; Ass. Anat. (v. pres, 10, pres, 20); Philos. Soc. Primitive vertebrate brain; nerve cells of mollusca; anatomy and development of blood vascular and lymphatic systems; edema.

McClure, Dr. C(harles) W(alter), 483 Beacon St., Boston, Mass. *Medicine*. Mitchell, Ind., Feb. 10, 85. A.B., Ohio State, 06, M.D., 10. *Assoc. med.*, *Peter Bent Brigham Hosp.*, Boston. Soc. Clin. Invest. Internal medicine; metabolism; diseases of the gastro-intestinal tract.

McCollum, Burton, 4208 Chesapeake St., Washington, D. C. *Electrical engineering*. Redfield, Kans., June 1, 80. B.S., Kansas, 03. Test. engineer, Gen. Elec. Co., 04; operating engineer, Pacific Elec. Ry. Co., 05-06; Seattle Elec. Co., 06-07; asst. prof. elec. eng., Kansas, 07-09; *elec. engineer*, *Bur. Standards*, 09- Elec. Eng.; Physical Soc.; Wash. Acad.; Wash. Philos. Soc. Electrolytic corrosion; alternating current machinery; absolute measurements in electricity.

McCollum, Prof. E(lmer) V(erner), Johns Hopkins School of Hygiene and Public Health, Baltimore, Md. **Nutrition*. Redfield, Kans., March 3, 79. A.B., Kansas, 03, A.M., 04; Loomis fellow, Yale, 05-06, Ph.D., 06; Sc.D., Cincinnati, 20. Asst. chem., Kansas, 03-04; Yale, 06-07; instr. agr. chem., Wisconsin, 07-08, asst. prof., 08-10, assoc. prof., 10-13, prof., 13-17; *prof. and head, dept. chem. hygiene, sch. hygiene and pub. health*, Hopkins, 17- Cutter lecturer hygiene and prev. med., Harvard, 17-18; mem. committee on alimentation, Food Ad., 17-19; committee on food and nutrition, Nat. Research Council, 19- Nat. Acad.; Chem. Soc.; Soc. Biol. Chem.; Pub. Health Ass.; hon. mem. Harvey Soc.; hon. mem. Dietetic Ass.; Life Exten. Inst.; Acad. Polit. and Social Sci.; hon. mem. Home Econ. Soc.; Soc. de chim. biol.; cor. mem. Acad. Royale de Méd. de Belg. Nutrition of animals with isolated and purified food substances; deficiency diseases; faulty diets.

McComas, Prof. H(enry) C(lay), 109 Broadmead, Princeton, N. J. *Psychology*. Baltimore, Md., Dec. 21, 75. A.B., Hopkins, 97; A.M., Columbia, 98; Ph.D., Harvard, 10. Demonstrator *psychol.*, *Princeton*, 09-12, *asst. prof.*, 12- Capt. Sanit. C., 18-19. A.A.; Psychol. Ass. Applied psychology; types of attention; perception time; psychology of religion; physical condition and mental efficiency.

McConnell, Dr. Guthrie, 8803 Euclid Ave., Cleveland, Ohio. *Pathology*. Erie, Pa., Oct. 1, 75. M.D., Pennsylvania, 96; Medico-Chirurg. Col., Phila., 05. Asst. demonstrator histol., Pennsylvania, 00-02; demonstrator path., Medico-Chirurg. Col., Phila., 03-05; bacteriologist, Mo. State Board of Health, 06-10; asst. prof. path., St. Louis, 10; prof. path. and bacter., Temple, 10-14; capt. and major, M.C., 17-19; *pathologist*, *City Hosp.*, *Cleveland*, 20- A.A.; Am. Med. Ass.; Ass. Path. and Bact.; Soc. Bact.; Ass. Cancer Research; Soc. Trop. Med.; Phila. Col. Physicians; Phila. Path. Soc. Bacteriology.

McConnell, Ira Welch, 61 Broadway, New York, N. Y. *Civil engineering*. Schell City, Mo., Oct. 17, 71. C.E., Cornell, 97. Instr. civil eng., Cornell, 98-00; contractor's supt., 00-02; prof. civil eng., Mo. Sch. Mines, 02-03; U. S. Reclamation Service, 03-09; v. pres. and gen. manager, Idaho Irrig. Co., 09-12; consultant, Stone and Webster, 12-17; asst. gen. manager, Am. Int. Shipbuilding Corp., 18-19; v. pres., *Dwight P. Robinson and Co., Inc.*, 19- Civil Eng.; Naval Architect.

McConnell, R(ichard) G(eorge), Geological Survey of Canada, Ottawa, Can. *Geology*. Chatham, Que., March 26, 57. B.A., McGill, 79. Geologist, *Can. Geol. Surv.*, 80-14, *deputy minister, dept. mines*, 14- Fel. Royal Soc. Can. (pres, sect. IV, 18). Geology of western Canada; geology of the Yukon territory.

McCormack, Prof. Harry, Armour Institute of Technology, Chicago, Ill. *Chemistry*. Spencer, Iowa, Sept. 7, 76. B.S., Drake, 96; M.S., Illinois, 99. Instr. chem., Drake, 94-96; high sch., Springfield, Mo., 00-04; instr. chem. eng., *Armour Inst.*, 04-07, *prof.*, 07- Chem. Soc.; Soc. Test. Mat.; Electrochem. Soc. Industrial chemistry; synthetic phenol and resorcinol; manganates and permanganates; metallic nitrides.

McCormack, Thomas J(oseph), La Salle, Ill. *Philosophy of science*. Brooklyn, N. Y., May 28, 65. A.B., Princeton, 84, A.M., 87, hon. M.S., 20; Leipzig, 84-85; Tübingen, 85; Columbia, 87; LL.B., Chicago Col. of Law, 90. Co-editor, 'Open Court' and 'Monist,' 88-03; *principal*, *La Salle-Peru Township High Sch.*, 03- Math. Soc.; Philos. Soc. Philosophy and history of science; history and theory of mechanics; philosophy of education.

McCotter, Prof. Rollo E(ugene), 1043 Ferndow Road, Ann Arbor, Mich. *Anatomy*. Vermontville, Mich., Jan. 23, 78. M.D., Michigan, 10. Instr. anat., Michigan, 09-13; *prof.*, *Vanderbilt*, 13-14; *Michigan*, 14- Ass. Anat. Comparative anatomy.

McCourt, Prof. W(alter) E(dward), Washington University, St. Louis, Mo. *Geology*. Brooklyn, N. Y., Feb. 2, 84. A.B., Cornell, 04, fellow, 04-05, A.M., 05. Asst. geol., Cornell, 02-04, instr., 05-06; *Washington (St. Louis)*, 06-07, asst. prof., 07-12, assoc. prof., 12-15, *prof.*, 15-, *dean*, *sch. eng. and archit.*, 20- Geologist, N. Y. State Exp. Sta., 03; asst. geologist, N. Y. State Museum, 04; N. J. Geol. Surv., 04, 05; geologist, Mo. Geol. Surv., 10-12; in charge geol. and geog. summer sch., Colorado, 13- A.A.; Min. Eng. Building stone; peat; clay; the Rocky Mountains; environmental influences.

McCoy, Alex(ander) W(atts), Bartlesville, Okla. *Geology*. Independence, Mo., Feb. 6, 89. C.E., Missouri, 12, A.M., 14. Research asst., eng. exp. sta., Missouri, 12-13; instr. geol., Oklahoma, 14-16; field geologist, Mex. Eagle Oil Co., 16; *geologist*, *Marland Oil Co.*, 16-; research geologist, Empire Gas and Fuel Co., 17-20; *consulting geologist*, 20- A.A.; Min. Eng.; Ass. Petrol. Geol.; Petrol. Inst. Artesian waters of Missouri; effects of capillarity on oil accumulation; oil-water emulsions; relation of former shore lines to present oil fields.

McCoy, Dr. G(eorge) W(alter), Hygienic Laboratory, Washington, D. C. **Medicine*. Cumber-

- land Valley, Pa, June 4, 76. M.D, Pennsylvania, 98. Res. med. officer, City Hosp, Newark, N. J, 98-00; asst. surgeon, U. S. Pub. Health Service, 00-05, passed asst. surgeon, 05-12, surgeon, 12-, director, U. S. Plague Lab, San Francisco, Calif, 08-11, U. S. Leprosy Investigation Sta, Hawaii, 11-15, U. S. Hygienic Lab, Washington, D. C, 15- Cutter lecturer prev. med, Harvard, 16. Ass. Path. and Bact; Am. Med. Ass. (chairman, sect. pharmacol. and therapeut, 19); Ass. Immunol; Pub. Health Ass. (chairman, lab. sect, 18); Soc. Trop. Med. Prophylactic and curative serums and vaccines; plague; leprosy; influenza.
- McCoy, Dr. Herbert N(ewby)**, 161 E. Grand Ave, Chicago, Ill. *Chemistry. Richmond, Ind, June 29, 70. B.S, Purdue, 92, M.S, 93; fellow, Chicago, 96-98, Ph.D, 98. Tech. chemist, Chicago, 93-94; prof. chem. and physics, Fargo, 94-96; asst. chem, Chicago, 98-99; asst. prof, Utah, 99-01; instr, Chicago, 01-03, asst. prof, 03-08, assoc. prof, 08-11, prof, 11-17; v. pres, *Lindsay Light Co*, 17- Chem. Soc; Electrochem. Soc; Physical Soc; Radium Soc. Quinazolin derivatives; molecular weight apparatus; equilibrium in carbonate solutions; secondary ionization constants; affinity constants of indicators; rare earths; organic amalgams; radio-activity.
- McCracken, Dr. (Mary) Isabel**, Stanford University, Calif. *Entomology*. Alameda Co, Calif. A.B, Stanford, 04, A.M, 05, Ph.D, 08; Paris, 13-14. Teacher, pub. schools, Oakland, 90-00; asst. physiol. and entom, *Stanford*, 03-04, instr, dept. entom. and binomics, 04-09, asst. prof. entom. and binomics, 09- Asst. nature study, Stanford, 01-04; asst, Hopkins Biol. Lab, Pacific Grove, Calif, summer, 02; Calif. asst. to U. S. entomologist in mosquito investigations, summer, 03. A.A. Mosquitoes in California; inheritance in beetles and silkworms; reflexes in silkworms; binomics; heredity.
- McCrae, Prof. Thomas**, Jefferson Medical College, Philadelphia, Pa. *Medicine*. Guelph, Ont, Dec. 16, 70. B.A, Toronto, 91, fellow, 92-94, M.B, 95, M.D, 03; Göttingen, 99. Instr. med, Hopkins, 99-01, assoc, 01-06, assoc. prof, 06-12; prof, *Jefferson Med. Col*, 12- Res. physician, Hopkins Hosp, 01-04. Am. Physicians (sec'y, 17-); Am. Med. Ass; Philos. Soc; British Med. Ass; fel. Royal Col. Physicians.
- McCreedy, Dr. E(dwin) Bosworth**, 905 Keenan Building, Pittsburgh, Pa. *Psychology*. Allegheny, Pa, June 6, 80. Lafayette; M.D, Medico-Chirurg. Col, Phila, 03. *Paedologist*, South-Side Hosp; *juvenile court*, Allegheny Co. A.A; Am. Med. Ass; Col. Physicians; Cong. Physicians. Mental and physical defects of development in children.
- McCreath, Andrew S**, 236-242 Liberty St, Harrisburg, Pa. *Chemistry*. Ayr, Scotland, March 8, 49. Glasgow, 65-69; Göttingen, 69. Chief chemist, Pa. Steel Co, 70-74; Pa. Geol. Surv, 74-84; *practising anal. chemist*, 84- Commissioner, Topog. Geol. Surv. of Pa. A.A; Min. Eng; Min. and Metal. Soc; Philos. Soc; British Iron and Steel Inst. Coal and iron resources of the southwest, Virginia and Kentucky.
- McCrory, S(amuel) H(enry)**, U. S. Department of Agriculture, Washington, D. C. *Civil engineering*. Iowa City, Iowa, May 5, 79. B.S,
- Iowa, 04, C.E, 08. Practising engineer, 04-06; chief drainage investigations, bur. pub. roads, U. S. Dept. Agr, 07- Civil Eng; Soc. Test. Mat; Agr. Eng; Wash. Soc. Civil Eng.
- McCrosky, Prof. Carl R(aymond)**, Syracuse University, Syracuse, N. Y. *Chemistry*. Rosewood, Ohio, March 16, 90. A.B, Ohio Wesleyan, 12; fellow, Ohio State, 13-15, A.M, 15, Ph.D, 18. Instr. chem. and physics, high sch, Meadville, Pa, 12-13; asst. instr. chem, Ohio State, 15-17; instr, Oregon Col, 17-18; Col. City of N. Y, 18-19; prof. qual. anal, *Syracuse*, 19- Chem. Soc. Analytical chemistry; oxidizing action of potassium dichromate.
- McCrudden, Prof. Francis H(enry)**, Robert Brigham Hospital, Boston, Mass. *Biological chemistry*. Boston, Jan. 5, 79. B.S, Mass. Inst. Tech, 00; M.D, Harvard, 08; Würzburg, 08-10; Munich, 13. Asst. biochem, Harvard Med. Sch, 06-08; pharmacol, Würzburg, 09-10; chief, chem. lab, Rockefeller Inst. Hosp, 10-13; director of laboratories, *Robert Brigham Hosp*, 13-; asst. prof. applied therapeut, Tufts, 14-18, prof, 18- Capt, M. C, 19. A.A; Soc. Exp. Biol; Soc. Biol. Chem; Ass. Study Int. Secretions; Harvey Soc; Therapeut. Soc; Am. Med. Ass; Cong. Int. Med. Pharmacology; metabolism in chronic diseases; effect of treatment on metabolism; metabolism in infantilism.
- McCubbin, W(alter) A(lex)**, Pennsylvania Bureau of Plant Industry, Harrisburg, Pa. *Botany*. Ont, Can. B.A, Toronto, 08, M.A, 09; Harvard, 10-11. Asst. bot, Toronto, 08-10; lecturer, Ont. Agr. Col, 11-12; asst. to Dominion botanist, in charge plant path. field lab, 12-19; dept. director, bur. plant indust, Pa, 19- A.A; Phytopath. Soc; Soc. de mycol. de France; Verein für angewandte Bot. Development of the Helvellaceæ.
- McCue, Dean C(harles) A(ndrew)**, Newark, Del. *Horticulture*. Cass City, Mich, May 29, 79. B.S, Mich. Agr. Col, 01, 03-04; Pennsylvania, 10-11, 12-13. Instr. hort, Mich. Agr. Col. and asst. horticulturist, Exp. Sta, 03-07; prof. hort, Del. Col, 07-20, dean, agr, 20-, horticulturist, Exp. Sta, 07-20, director, 20-, agr. extension, Del, 20- A.A; Soc. Hort. Sci. (past pres); Pomol. Soc. Pomology; role of plant food elements in orchard fruits; inheritance in peaches.
- McCulloch, Dr. Irene A(gnes)**, Newcomb College, New Orleans, La. *Zoology*. Frankfort, Kans, Sept. 13, 86. A.B, A.M, Kansas, 13; Ph.D, California, 16. Asst. zool, California, 13-16; acting prof, Occidental, 16-17; biol, *Newcomb, Tulane*, 17- A.A; Micros. Soc; Pacific Biol. Soc. Protozoology.
- McCulloch, Miss Lucia**, 1326 Euclid St, N. W, Washington, D. C. *Plant pathology*. Cincinnati, Ohio, Feb. 26, 74. B.S, Florida, 02. Asst. biol, Florida, 01-03; teacher, Fla. State Nor. Sch, 03-05; asst, sub-tropical lab, Miami, Fla, 05-06; teacher science, high sch, Tampa, 06-07; scientific asst, lab. plant path, bur. plant indust, U. S. Dept. Agr, 07-09, asst. pathologist, 09- A.A; Phytopath. Soc. Bacterial diseases of plants.
- McCurdy, Arthur W(illiams)**, 320 Pemberton Building, Victoria, B. C. *Photography*. Truro, N. S, April 13, 56. Grad, Whitby Collegiate

- Inst. John Scott Legacy medal, Franklin Inst, 03. A.A.; Can. Min. Inst.; Royal Astron. Soc. Can. (past pres); Victoria Nat. Hist. Soc. (past pres). Photography.
- MacCurdy, Prof. George Grant**, Yale University Museum, New Haven, Conn. *Anthropology*. Warrensburg, Mo, April 17, 63. A.B, Harvard, 93, A.M, 94; Vienna, 95-96; Paris, 96-97; Berlin, 97-98; Ph.D, Yale, 05. Principal, pub. schools, Tipton, Mo, 87-89; Pleasant Hill, Mo, 89-91; instr. prehistoric anthrop, Yale, 98-00, lecturer anthrop, 02-10, *asst. prof.*, 10-, *curator anthrop. collection*, 02- Delegate from Paris Anthropol. Soc, Int. Cong. Americanists, N. Y. 02; delegate from Yale, City of Mex, 10. A.A. (sec'y, H, 01, v. pres, 05, sec'y, 09-16); Anthropol. Ass. (sec'y, 03-16); Archeol. Inst; fel. Ethnol. Soc; Conn. Acad; Wash. Anthropol. Soc; Mo. Hist. Soc; Berlin Anthropol. Gesell; Soc. d'Anthropol. de Paris; cor. Ecole d'Anthropol. de Paris; cor. mem. Portuguese Inst. Coimbra. Prehistoric archeology; physical anthropology; colithic problem; cranial characters of inhabitants of New Pomerania; Chiriquian antiquities; antiquity of man in Europe.
- MacCurdy, Prof. H(ansford) (M)**, Alma College, Alma, Mich. *Biology*. Warrensburg, Mo, Oct. 3, 67. A.B, Ohio Wesleyan, 95; A.M, Harvard, 05, Ph.D, 06. Supt. pub. schools, Mt. Vernon, Mo, 95-99; instr. *biol.*, Manual Training High Sch, Kansas City, Mo, 99-04; *prof.*, Alma, 06-A.A.; Soc. Zool; Mich. Acad. (v. pres, 09-). Heredity; degeneration of the nerve cells in Cambarus; development of neurofibrillae and first movements in amphibian embryo; fauna and flora of the Alma (Mich) area; effects of sunlight on the starfish *Asterias forbesi*; a case of sex-linked inheritance in man; nuclear reorganization and conjugation in *Areella vulgaris*; mastodon remains in Gratiot Co, Michigan.
- McCutcheon, Prof. Thomas P(otter), Jr**, University of Pennsylvania, Philadelphia, Pa. *Chemistry*. Philadelphia, Pa, July 27, 81. A.B, Pennsylvania, 03, Ph.D, 07. Instr. qual. anal, *Pennsylvania*, 04-07, inorg. chem, 07-10, *asst. prof. chem.*, 10-18, *assoc. prof.*, 18- A.A; Chem. Soc. Electro-analysis; preparation of colloidal solutions by electrolysis with Hg-kathode; Pt metals; preparation of optically active cobalt compounds.
- McDaniel, Prof. A(llen) B(oyer)**, Camp Dix, N. J. *Civil engineering*. Exeter, N. H, Sept. 5, 79. B.S, Mass. Inst. Tech, 01. Instr. civil eng, Case, 06-07; *prof.*, South Dakota, 07-12; *asst. prof.*, Illinois, 12-16; head, dept. gen. eng, Union, 16-18; *acting prof. civil eng.*, George Washington, 18-; expediting engineer, *construction div.*, U. S. A., 18-19, principal engineer, 19-20, *development expert*, 20- Structural engineer, Purdy and Henderson, 02-03; Fort Pitt Bridge Works, 03-05; *asst. engineer*, East River div, Pa. Tunnels, 05-06; pres, Mo. Valley Eng. Co, 09-11. Wason medal, Am. Concrete Inst, 16. A.A; Civil Eng; Eng. Educ; S. Dak. Eng. Soc. (v. pres, 11-13). Excavation; excavating machinery; properties of concrete; reinforced concrete construction.
- McDaniel, Dr. A(lonzo) S(impson)**, 35 Nassau St, New York, N. Y. *Chemistry*. White Lick, Ind, May 27, 82. A.B, Wabash, 04; fellow, Wisconsin, 04-05, A.M, 05, Ph.D, 09. Asst, Wabash, 02-04; *asst. prof. chem.*, Bellevue, 05-06; instr, Wisconsin, 06-09; *asst. chemist*, Bur. Standards, 09-13; research chemist, Eastman Kodak Co, Rochester, 13-18; tech. director operations, exp. plant, development div, C.W.S., 18-19; *patent chemist*, Pennie, Davis, Marvin, and Edwards, 19- Electrochemistry; absorption of hydrocarbon gases in organic liquids; the silver voltmeter; potentials of peroxid electrodes; electrolytic assays of silver; thermodynamics of active osmotic diaphragms; electrolytic manufacture of p-aminophenol and ammonium persulphate.
- MacDaniels, Dr. L(aurence) H(owland)**, 245 Gilman Ave, Cincinnati, Ohio. *Botany*. Fremont, Ohio, Oct. 21, 88. A.B, Oberlin, 12; Ph.D, Cornell, 17. Asst. dendrol, Oberlin, 10-12; farm course and bot, Cornell, 12-13, instr. bot, 13-17; bot. raw products committee, 17; bureau of aircraft production, 18; *asst. prof. pomol.*, Cornell, 20- With relief exped. to Armenia and Syria. A.A; Bot. Soc. Plant histology and anatomy; phloem development in ontogeny of woody angiosperms.
- McDermott, F(rank) Alex(ander)**, 703 Nottingham Road, Wilmington, Del. *Chemistry*. Washington, D. C, Aug. 3, 85. B.S, Pittsburgh, 13, M.S, 14. In chem. div, hygienic lab, U. S. Pub. Health Service, Washington, 06-11; indust. fellow, Mellon Inst, 11-15; research chemist, Corby Co, 15-18; *chemist*, E. I. duPont de Nemours and Co, 18- A.A; Chem. Soc; Soc. Chem. Indust. Utilization of eul citrus fruits; biophotogenesis; yeast and fermentation.
- McDiarmid, Dr. R(ichard) J(ohn)**, Dominion Observatory, Ottawa, Can. *Astronomy*. Fingal, Ont, Sept. 13, 85. B.A, Toronto, 10; fellow, Pittsburgh, 10-11, M.S, 11; fellow, Princeton, 12-15, Ph.D, 15. *Astronomer*, Dominion Observatory, 11-12, 15- Gold medal, Royal Astron. Soc. Can, 10. Astron. Soc; Royal Astron. Soc. Variable stars of algol type; meridian circle observations.
- McDole, Prof. G(uy) R(aymond)**, University of Idaho, Moscow, Idaho. *Chemistry*. Evanston, Ill, April 16, 86. B.S, A.M, Nebraska, 11. Research asst. agr. chem, Nebr. Exp. Sta, 11-13; div. soils, Minn. Exp. Sta, 16-17, *asst. soils chemist*, 19-20, *asst. prof. soil chem.*, Minnesota, 19-20; *assoc. prof. agron.*, Idaho, and *soil technologist*, Exp. Sta, 20- With U.S.A., 17-19. Soil physics and chemistry; glutaric acids; soil moisture.
- MacDonald, Arthur**, The Congressional, Washington, D. C. *Psychology*. Caledonia, N. Y, July 4, 56. A.B, Rochester, 79; Union Theol. Sem, 83; Harvard, 83-85; Berlin, Paris, Zürich and Leipzig, 85-89. Docent criminol, Clark, 89-91; specialist, U. S. Bur. Educ, 92-03. Psychol. Ass; Soc. d'Hypnot. et Psychol. de Paris; Cong. del' Antrop. Crim; cor. Antwerp. Paedolog. Schooliest. Psychological and anthropological study of children; modern man; mentality of nations; legislative ability; abnormal man; psychophysical in connection with pathosocial studies.

MacDonald, Dr. Carlos F (rederick), 15 E. 48th St., New York, N. Y. *Psychiatry*. Niles, Ohio, Aug. 29, 45. Iron City Col, 65-66; M.D., Bellevue Hosp. Med. Col, 69; hon. A.M., Union, 94; LL.D., N. Y. Univ., 17. Asst. physician, Kings Co. Hosp., 69-70; Kings Co. Asylum, 70-73, supt., 73-75; Auburn State Hosp., 76-80, 81-89; Binghamton State Hosp., 80-81; prof. mental diseases, *Univ. and Bellevue Hosp. Med. Col.*, 87-98, *mental diseases and med. juris*, 98-05, *emer. prof.*, 05- Pres., N. Y. Lunacy Commission, 89-06; lecturer insanity, Albany Med. Col., 91-92; consulting physician, Manhattan State Hosp.; consulting alienist, Hackensack Hosp. Medico-Psychol. Ass. (pres., 14); Am. Med. Ass.; N. Y. Acad. Med.; N. Y. Psychiat. Soc. Mental disease.

Macdonald, Charles, 812 Riverside Avenue, Trenton, N. J. *Civil engineering*. Gananoque, Can., Jan. 26, 37. C.E., Rensselaer, 57; Queen's (Can.), 80, LL.D., 94. Asst. engineer, Grand Trunk Ry., and in charge surveys and construction, Phila. and Reading R. R., 63-68; engaged in bridge construction, 70-00; mem. Union Bridge Co., 84-00. Trustee, Rensselaer. Civil Eng. (pres., 08-09). Bridge design.

MacDonald, Dr. D (onald) F (rancis), Sinclair Exploration Co., Liberty Tower Building, New York, N. Y. *Geology, Engineering*. Pietou Co., N. S., Oct. 4, 75. B.S., Washington (Seattle), 05; M.S., George Washington, 06; fellow, Chicago, 07-08; LL.D., St. Johns, 13. Junior geologist, U. S. Geol. Surv., 08; asst. geol., Chicago, 08-09; instr. geol. and chem., Tulane, 09-10; asst. geologist, U. S. Geol. Surv., 10-14, geologist, 14-17; min. eng., bur. mines, 17; in charge explorations in Panama and Costa Rica, *Sinclair Cent. Am. Oil Corp.*, 17-19, *oil geology*, 19- Geologist, Isthmian Canal Commission, 11-13. A.A.; Geol. Soc.; fel. Geol. Soc.; Wash. Geol. Soc.; Wash. Acad. The geology of the Snoqualmie, Coeur d'Alene and Philipsburg quadrangles; economic features of northern Idaho and northwestern Montana; the Bohemia mining district, Oregon; the Weaverville-Trinity Center gold gravels; the Coffee Creek-Trinity Center quartz mines; engineering problems of the Panama Canal; the slides in Culebra Cut, Panama; earthquakes and the Panama Canal.

McDonald, Dr. Ellice, 174 W. 58th St., New York, N. Y. *Surgery*. Fort Ellice, Can., Oct. 27, 76. B.A., McGill, 97, M.D., C.M., 01. *Instr. surg.*, N. Y. *Post-Grad. Med. Sch. and Hosp.*, 07- A.A.; Ass. Path. and Bact.; Am. Med. Ass. Diseases of women; kidney diseases of women.

MacDonald, Dr. Margaret B (axter), State College, Pa. *Chemistry*. Charlottesville, Va., Feb. 21, 70. Pa. State, 93-95; B.S., Mt. Holyoke, 98; Pennsylvania, 99-00; Ph.D., Bryn Mawr, 02. Asst. chem., Mt. Holyoke, 95-97; instr. chem. and physics, Asheville Col., 01-02; chem., State Normal, Trenton, N. J., 02-04; substitute, Vassar, 04-05; chemist, Exp. Sta., Newark, Del., 05-07; asst. prof. agr. chem. and later *prof. food and nutrition*, Pa. State, 07- A.A.; Chem. Soc. Organic chemistry; biochemistry; nutrition.

McDonnell, C (urtis) C (riss), Bureau of Chemistry, Washington, D. C. *Chemistry*. Florence, Pa., Feb. 25, 75. B.S., Md. Col., 95, Sc.D., 20.

Asst. chemist, Clemson, 96-07; *bur. chem.*, U. S. *Dept. Agr.*, 07-11, *chief, insecticide and fungicide lab.*, 11- A.A.; Chem. Soc. Manufacture of starch from sweet potatoes; rice plant and products; insecticides, arsenates of lead and calcium; hydrocyanic acid.

McDonnell, Dr. H (enry) B (arnett), College Park, Md. *Chemistry*. Florence, Pa., Oct. 31, 63. B.S., Pa. State, 86, M.S., 09; M.D., Col. Physicians and Surg., Baltimore, 88; Hopkins, 91-92. Asst. chem., Pa. State, 84-85; Md. Col. Pharmacy, 85-86; Col. Physicians and Surg., Baltimore, 87-88; asst. chemist, Pa. Exp. Sta., 88-91; *prof. agr. chem.*, Maryland, 91-92, *chem.*, 92-, *dean, sch. chem.*, 19-; *state chemist*, Md., 92- A.A.; Agr. Chem.; Chem. Soc.; Am. Med. Ass.; Feed Control Off. (pres., 14). Composition and analysis of fertilizers and feeding stuffs; foods and nutrition.

McDonnell, Dr. M (ilton) E (arle), Pennsylvania System Laboratories, Altoona, Pa. *Bacteriology*. Florence, Pa., Feb. 26, 73. B.S., Pa. State, 93, M.S., 96; Ph.D., Kiel, 99. Asst. chemist and bacteriologist, Pa. Exp. Sta., 93-98; bacteriologist, Pa. R. R. Co., 99-15, asst. chief chemist, Pa. System, 15-21, *chief chemist*, 21- Special agent, Pa. Dept. Agr., 97, 98; mem. U. S. Tech. Committee Standardization of Petrol, 18- A.A.; Chem. Soc.; Soc. Test. Mat.; Pub. Health Ass. Water examination and purification; disinfection; pathology; sanitation and chemistry applied to transportation.

McDonough, Dr. Eduard J (oseph), 51 Deering St., Portland, Maine. *Histology*. Portland, Aug. 10, 67. A.B., Holy Cross, 89; M.D., Med. Sch. of Maine, 92. *Pathologist*, Maine *Gen. Hosp.*, 96-, *visiting physician*, 02-; instr. histol., *Med. Sch. of Maine*, 97-04, *prof. obstet.*, 04- Ass. Anat.; Am. Med. Ass.; Am. Acad. Med.

McDonough, F (rank) L (awrence), Niagara Sprayer Co., Middleport, N. Y. *Entomology*. Millis, Mass., June 11, 88. B.S., Conn. Col., 11. Scientific asst., bur. entom., U. S. Dept. Agr., 13; *crop pest specialist*, Niagara Sprayer Co. A.A.; Entom. Soc.; Ass. Econ. Entom. Insects affecting southern field crops.

MacDougal, Dr. D (aniel) T (rembly), Desert Laboratory, Tucson, Ariz. **Botany*. Liberty, Ind., March 16, 65. B.S., De Pauw, 90, A.M., 93, LL.D., 10; M.S., Purdue, 91, Ph.D., 97; Leipzig and Tübingen, 95-96. *Instr. biol.*, Purdue, 90-93; bot., Minnesota, 93-95, asst. prof., 95-99; first asst. and director, laboratories, N. Y. Bot. Garden, 99-04, asst. director, 04-05; *director, dept. bot. research*, Carnegie Institution, 05- Special agent, U. S. Dept. Agr. bot. explorations, Ariz., 91; Idaho, 92; mem. commission for establishing bot. lab. in American tropics, 96-98; ed., 'Jour. N. Y. Bot. Garden,' 95-05; mem. advisory board, desert bot. lab., Carnegie Institution, 02-05. A.A. (see'y, G., 00, gen. sec'y, 02, v. pres., 06, v. pres. Pacific div., 16); Soc. Nat. (pres., 10); Bot. Soc. (see'y, 01); Soc. Exp. Biol.; Torrey Bot. Club (assoc. ed., 'Bul,' 99-06); Ecol. Soc.; Calif. Acad.; Wash. Acad.; cor. mem. Phila. Acad.; Soc. d'Acclim. de France; for. mem. Hollandsche Matschappe d. Wetenschappen. Irritability and general motor reactions of plants; curvatures and movements;

symbiosis; nutrition and growth; influence of various gases on plants; relation of light and darkness to growth and development; influence of temperature upon plants; relation of plants to climate; vegetation of American and African deserts; heredity and organic evolution; re-vegetation of Salton Basin; inductive influence of physical factors on plants; alterations in heredity induced by ovarian treatment of seed-plants; water balance in succulents; Xeno-parasitism; the fundamental physical factors in growth; hydration and growth; reactions of biocolloids; origin of xerophytism and of succulence.

MacDougall, Prof. Robert, 223 Midland Ave, Montclair, N. J. **Psychology*. Dewittville, Que, June 12, 66. B.A. McGill, 90; A.M. Harvard, 93, Ph.D. 95; Berlin and Paris, 95-96. Instr. philos. Western Reserve, 96-97, assoc. prof. pedag. 97-98; instr. philos. Harvard, 98-01; *prof. anal. psychol.*, N. Y. Univ, 01- A.A.; Soc. Nat; Psychol. Ass; Philos. Ass; Ass. Prof; fel. N. Y. Acad. (v. pres, sect. anthrop. and psychol, 06, 07). Social psychology; sensory perception; attention; reaction; psychological esthetics; rhythms of common metres; number habit; time-sense; speech; reading; spelling.

McDougall, Prof. W(alter) B(yron), Urbana, Ill. *Botany*. Ypsilanti, Mich, Dec. 10, 83. A.B. Michigan, 11, Ph.D. 13. Instr. bot. Illinois, 13-17, assoc. 17-18, *asst. prof.*, 18- A.A.; Bot. Soc; Ecol. Soc; Ill. Acad. Mycorrhizas; root growth of trees; mushrooms; symbiosis; ecology of forests.

McDougall, Prof. William, Harvard University, Cambridge, Mass. *Psychology*. Lancashire, Eng. 71. M.Sc. Manchester; St. Thomas Hosp. London; M.B. Cambridge; M.A. Oxford; Göttingen. Fellow, St. John's Col, Cambridge, 98; reader, Univ. Col, London; reader mental philos. and fellow, Corpus Christi Col, Oxford; *prof. psychol.*, Harvard, 19- Major, R.A.M.C, 15. Royal Soc. Social psychology; physiological psychology; behavior; body and mind; pagan tribes of Borneo.

MacDowell, Dr. E(dwin), Carleton, Cold Spring Harbor, N. Y. *Zoology*. New York, N. Y, Sept. 8, 87. A.B. Swarthmore, 09; M.S. Harvard, 11, Sc.D. 12. Instr. zool. Dartmouth, 12-13; biol. Yale, 13-14; *res. investigator, sta. for exp. evolution*, Carnegie Institution, 14- Soc. Nat; Soc. Zool; Soc. Exp. Biol. Comparative myology of apes; size inheritance in rabbits; bristle inheritance in *Drosophila*; alcoholism in rats.

MacDowell, Prof. Louise S(herwood), 6 Norfolk Terrace, Wellesley, Mass. *Physics*. Wayne, N. Y, Sept. 29, 76. A.B. Wellesley, 98; A.M. Cornell, 07, fellow, 08-09, Ph.D. 09. Teacher science and English, Northfield Sem, 98-01; physics and math, high sch. Warren, Ohio, 01-06; *instr. physics*, Wellesley, 09-10, assoc. prof. 10-13, *prof. and head of dept.*, 13- Asst. and assoc. physicist, Bur. Standards, 18-19. A.A.; Physical Soc. Electrical properties of selenium; fluorescence; crystal detectors; 3-electrode vacuum tubes.

McElfresh, Dr. W(illiam) E(dward), Williamstown, Mass. *Physics*. Griggsville, Ill, Oct. 5,

67. A.B. Illinois Col, 88; A.B. Harvard, 95, A.M. 96, Ph.D. 00. Asst. *physics*, Harvard, 96-01, Austin teaching fellow, 01-02, instr. Radcliffe, 97-01; *Williams*, 01-03, asst. prof. 03-05, *Thomas T. Read prof.*, 05- Research, Cavenish lab, Cambridge, 14. A.A.; Physical Soc. Occlusion of hydrogen by palladium.

McEvoy, James, 77 Toronto Arcade, Yonge St, Toronto, Ont, Can. *Geology*. Carleton Col, Ont, Feb. 2, 62. B.A.Sc. McGill, 83. With Can. Geol. Surv. 85-00; geologist, land commissioner and chief engineer, Crow's Nest Pass Coal Co. and gen. supt. M. F. and M. Ry, 01-07; *consulting mining engineer*, 08- Can. Min. Inst; London Inst. Min. and Metal. Development of coal properties.

McEwan, Dr. Eula D(avis), Simpson College, Indianola, Iowa. *Geology*. Milford, Ill. A.B. Indiana, 13, A.M. 14, Ph.D. 18; Columbia, 16-17. Paleobotanist, Smithsonian Inst, 17-18; *instr. geol.*, Northwestern, 18-19; *head of dept.*, Simpson, 20- Paleont. Soc; Ind. Acad. Brachipoda.

McEwen, Dr. G(eorge) F(rancis), La Jolla, Calif. *Physics*, *Mathematics*. Manchester, Iowa, June 16, 82. A.B. Stanford, 08, Ph.D. 11. Asst. physics, Stanford, 07-10, applied math, 08-10, instr. 10-11; math, Illinois, 11-12; *oceanographer*, Scripps Inst, California, 12-, *asst. prof.*, California, 19- Physicist, Marine Biol. Sta, San Diego, 08-11; mem. committee on Pacific exploration, Nat. Research Council, 19. Physical Soc; Math. Soc; Am. Geog. Soc; Geophys. Union. Applied mathematics; oceanography; biology; statistical methods; measurement of viscosity; temperature, salinity and circulation in the North Pacific Ocean.

McEwen, Prof. R(obert) S(tanley), Oberlin College, Oberlin, Ohio. *Zoology*. Cleveland, Ohio, Jan. 6, 88. A.B. Western Reserve, 11, A.M. 12; Ph.D. Columbia, 17. Asst. *zool.*, Columbia, 16-17; *instr. Oberlin*, 17, *asst. prof.*, 19- With Hosp. C, U.S.N.R.F, 17-18. Light and gravity reactions of *Drosophila*.

McFarland, Prof. David F(ord), Pennsylvania State College, State College, Pa. *Chemistry*. Mansfield, Ohio, Aug. 1, 78. A.B. Kansas, 00, A. M. 01; fellow, Yale, 02-03, M.S. 03, Ph.D. 09. Instr. chem. Kansas, 00-03, asst. prof. 03-10; Illinois, 10-16, assoc. prof. applied chem, 16-20; *prof. metal. and head of dept.*, Pa. State, 20- Asst. chem. Yale, 08-09. A.A.; Chem. Soc; Min. and Met. Eng; Steel Treat. Soc. Reactions of organic acid esters and chlorides in liquid ammonia solutions; pyrimidines and amidines; composition of natural gas; helium in natural gas; alloys of chromium, copper and nickel; steel and various non-ferrous alloys.

McFarland, Prof. F(rank) M(ace), 2 Cabrillo Ave, Stanford University, Calif. **Histology*. Centralia, Ill. June 10, 69. Ph.B. DePauw, 89; A.M. Stanford, 93; Würzburg and Zürich, 94-96, Ph.D. Würzburg, 96. Prof. biol. Olivet, 89-92; *instr. histol.*, Stanford, 92-94, asst. prof. 94-97, assoc. prof. 97-09, *prof.*, 09-, director, marine biol. lab, 10-18. A.A.; Ass. Anat; Calif. Acad. Cytology; opisthobranch Mollusca; invertebrate zoology; vertebrate spermatogenesis; neurocy-

- tology of Mollusca; Pacific coast Opisthobranchiata.
- McFarland, Prof. Frank T (heodore)**, University of Kentucky, Lexington, Ky. *Botany*. Sunbury, Ohio, May 12, 86. B.S.A, Ohio State, 12; M.S., Michigan, 16. Instr. bot, Kentucky, 12-13, asst. prof, 13- Asst. bot, Michigan, summer, 14, instr, 15. A.A.; Bot. Soc.; Phytopath. Soc.; Ecol. Soc.; Fern Soc.; Ass. Prof.; Ky. Acad.; Wash. Biol. Soc. Fungi.
- McFarland, Prof. Joseph**, 442 W. Stafford St, Germantown, Philadelphia, Pa. *Pathology, Bacteriology*. Philadelphia, Pa, Feb. 9, 68. M.D, Pennsylvania, 89; hon. M.D, Medico-Chirurg. Col, Phila, 98; Sc.D, Ursinus, 14. Demonstrator path. histol. and lecturer bacter, Pennsylvania, 92-96; prof. path. and bacter, Medico-Chirurg. Col, Phila, 96-16; Pennsylvania, 16- Prof. path. Woman's Med. Col, Pa, 12-15; major, M. C, 17-20. Ass. Path. and Bact; Soc. Bact; Am. Med. Ass; Soc. Trop. Med; Pub. Health Ass; fel. Phila. Col. Physicians; Phila. Path. Soc. (pres, 08); Phila. Acad. Medical pathology and bacteriology; pathogenic bacteria and protozoa; general and medical biology; anomalies, diseases and treatment of the breast.
- McFarland, W(alter) M(martin)**, 85 Liberty St, New York, N. Y. *Marine and mechanical engineering*. Washington, D. C, Aug. 5, 59. Grad, U. S. Naval Acad, 79. Asst. prof. mech. eng, Cornell, 83-85; asst. and later principal asst. to engineer-in-chief, U. S. N, 89-94, 97-98, chief engineer, 98, lieut, 99, resigned, 99; v. pres, Westinghouse Elec. and Mfg. Co, 99-10; manager, marine dept, Babcock and Wilcox Co, 10- Lecturer marine eng, U. S. Naval War Col, 94; mem. personnel board, U. S. N, 97; lecturer, Sibley Col, Cornell, 00-04; eng. econ, Columbia; Stevens. Int. Eng. Cong, Chicago, 93 (sec'y, div. marine eng); delegate from U. S. N. to Int. Cong. Naval Archit. and Marine Eng, London, 97, 11. Naval Eng. (ed, 'Jour'); Mech. Eng. (past v. pres); Naval Archit. and Marine Eng. (v. pres). Growth of economy in commercial side of engineering; factory management; economics of production.
- Macfarlane, Prof. J(ohn) M(uirhead)**, Botanical Department, University of Pennsylvania, Philadelphia, Pa. **Botany*. Kirkcaldy, Scotland, Sept. 28, 55. B.S., Edinburgh, 80, D.Sc, 83; LL.D, Pennsylvania, 20. Asst. bot, Edinburgh, 80; lecturer, St. George's Col. and Royal Vet. Col, 81-89; first asst, Edinburgh, 88; prof. biol, Pennsylvania, 92-93, bot, 93-20; emer. prof, 20-, director, bot. garden, 96- Curator, herbarium, Edinburgh, 84-88; acting ed, 'Trans. Edinburgh Bot. Soc,' 85-90; univ. exten. lecturer, Phila, 91-92; ed, 'Bot. Contrib,' Pennsylvania, 94- A.A.; Soc. Nat; Bot. Soc; Philos. Soc; Pa. Bot. Soc. (founder, 97, curator, 97-); Phila. Acad; British Ass; Edinburgh Royal Soc; Edinburgh Bot. Soc. (acting sec'y, 85-90). Cell structure; insectivorous plants; plant hybrids; sensitive-plants; general histology; sensitive-plant movements; principles of evolution; hybrid rhododendrons; synchronism in plant structures; Nepenthaceae; Sarracenaceae; Cephalotaceae.
- Macfarlane, Dr. Wallace**, P. O. Box 342, Honolulu, Hawaii. *Agronomy*. Silver Reef, Utah, Dec. 18, 86. B.S, Utah, 10; fellow, Illinois, 12-15, M.S, 13, Ph.D, 15. Asst. chemist, Utah Col, 10-12; asst. prof. agron, Okla. Col, 16-17; agronomist, Arizona, 17; chemist, Hawaii Exp. Sta, 19- Chem. Soc; Soc. Agron; Okla. Acad; Hawaiian Chem. Ass. Soil fertility; pineapple wilt; papain.
- McGee, Dr. Anita Newcomb**, 1620 P St, Washington, D. C. *Medicine*. Washington, Nov. 4, 64. Geneva and Berlin, 82-85; M.D, George Washington, 92. Acting asst. surgeon, U. S. A, in charge, army nurse corps, 98-00; supervisor of nurses, with officer's rank, Japanese Army, 04. Imp. Order of Sacred Crown, Japan. Ass. Mil. Surg. Heredity in man.
- McGhee, Prof. J(oseph) L(ewellyn)**, Emory University, Ga. *Chemistry*. Philadelphia, Tenn, Sept. 6, 73. A.B, Emory and Henry, 03; fellow, Hopkins, 10-11, Ph.D, 11. Prof. chem. and head of dept, Emory and Henry, 08-13; Southwestern (Tex), 13-17; Florida, 17-20; Emory, 20- Osmotic pressure; osmosis.
- McGill, A(nthony)**, 317 Queen St, Ottawa, Can. *Chemistry*. Rothesay, Scotland, April 18, 47. B.A, Toronto, 82; B.S, Cobourg, 83; LL.D, Ottawa, 10. Asst. to prof. chem, Toronto, 80-85; science master, Collegiate Inst, Ottawa, 85-87; asst. analyst, Inland Revenue Service, Can, 87-07, chief analyst, 07- Fel. Royal Soc. Can. Industrial chemistry; food analysis; food standardization.
- McGill, Dr. Caroline**, 52 W. Quartz St, Butte, Mont. *Anatomy*. Mansfield, Ohio, 79. A.B, Missouri, 04, A.M, 05, fellow, 05-06, Ph.D, 08, Sarah Berliner fellow, 09; M.D, Hopkins, 14. Instr. anat, Missouri, 06-11; practising physician. Ass. Anat. Zoology; histogenesis and histology of smooth and striated muscle.
- McGill, Prof. J(ohn) T(homas)**, Vanderbilt University, Nashville, Tenn. *Chemistry*. Monroe Co, Tenn, Oct. 13, 51. B.S, Vanderbilt, 79, fellow, 79-81, Ph.D, 81, Ph.G, 82; Berlin, 85-86. Instr. chem, Vanderbilt, 81-86, adj. prof, 86-00, prof. org. chem. and dean, dept. pharmacy, 00-19, emer. prof, 19- Am. Conf. Pharmaceut. Faculties (pres, 07). A.A.; Chem. Soc.
- MacGillivray, Dr. Alex(ander) D(yer)**, University of Illinois, Urbana, Ill. *Zoology, Entomology*. Inverness, Ohio, July 15, 68. Wooster, 87-89; Cornell, 89-91, Ph.B, 00, Ph.D, 04. Asst. entom, Cornell, 90-00, instr, 00-06, asst. prof, 06-08, entom. and invert. zool, 08-11; syst. entom, Illinois, 11-13, assoc. prof, 13-17, prof, 17- Specialist, Maine Exp. Sta, summer, 13. A.A.; Soc. Zool; Entom. Soc. (v. pres. and sec'y-treas, 11); Ass. Econ. Entom; Ecol. Soc; Micros. Soc; Ill. Acad; Boston Soc. Nat. Hist. External morphology of adult and immature insects; morphology and classification of Coccidae; classification of Thysanura; Tenthredinoidea; respiration and larval structure of Donacia; embryology of Corydalis cornutis; wing venation and phylogeny of the Tenthredinoidea; insects of northeastern United States.
- McGinnis, Prof. C(laude) S(tonecliffe)**, 1942 S. 65th St, Philadelphia, Pa. *Physics*. In-

- dianapolis, Ind. Oct. 12, 81. B.S. Mass. Inst. Tech, 06; Ph.D. Pennsylvania, 11. Asst. physics, Mass. Inst. Tech, 06-08; instr. Pennsylvania, 08-11; *prof. physics and elec. eng.* New Brunswick, 11-20; *physics*, Temple, 20- Sound.
- McGinty, Prof. R(uPERT) A(lonzo)**, Colorado Packing Corporation, Canon City, Colo. *Plant physiology*. West Point, Ga, May 2, 86. B.S. Ala. Polytech, 13; Lackland fellow, Mo. Bot. Garden, 18-19, A.M. Washington (St. Louis), 19. Instr. hort. Colo. Agr. Col, 13-14, asst. prof, 14-16, assoc. prof, 16-20; *field manager*, Colo. Packing Corp, 20- A.A.; Soc. Hort. Sci. Diastase activity in potato tubers.
- McGlone, Prof. Bartgis**, 613 N. Calhoun St, Baltimore, Md. *Biology*. Baltimore, Md, Oct. 19, 81. A.B. Hopkins, 02, Ph.D, 07. Student asst, U. S. Weather Bur, 01-03; instr. biol. and geol, Ill. Wesleyan, 03-04, prof, 04-05; student asst, Hopkins, 05-06; prof. biol, St. John's (Md), 07-12; physiologist, Col. Physicians and Surgeons, Baltimore, 12-15; *prof. physiol. and director*, *physiol. lab. sch. med.* Maryland, 15- Scientific asst, U. S. Fish Commission, 07-08. A.A. Mollusca; Echinodermata; physiology.
- McGougan, Dr. A(lexander) G(raham)**, University of Saskatchewan, Saskatoon, Sask, Can. *Physics*. Glencoe, Ont, Dec. 4, 81. A.B. McGill, 09; Ph.D, Yale, 12. Instr. *physics*, Sheffield Sci. Sch, Yale, 12-17; prof, Del. Col, 17-19; *prof. and head of dept*, Saskatchewan, 19- Assoc. Physical Soc. Emission of Delta rays from metals under the influence of Alpha rays.
- McGrath, Prof. Bernard Francis**, University Club, Milwaukee, Wis. *Surgery*. Amesbury, Mass, 69. A.B. Georgetown, 94, M.D, 95; Harvard, 06. Visiting surgeon, Beverly Hosp, Mass, 99-09; director exp. surg, supervisor autopsies and asst. pathologist, Mayo Clinic, 09-15; *prof. surg. principles and director*, *surg. lab*, Marquette, 16- A.M. Med. Ass; Col. Surg; Mass. Med. Soc. Surgery; pathology; medical education; hospital standardization.
- McGregor, E(rnest) A(lexander)**, El Centro, Calif. *Entomology*. Everett, Mass, Dec. 1, 80. A.B. Stanford, 08, A.M, 09. Asst. to curator of herbarium, Stanford, 06-09; *asst. entom.*, *bur. entom.*, U. S. Dept. Agr, 10- Field asst. to sec'y, Calif. State Board of Health. A.A; Entom. Soc; Ass. Econ. Entom; Wash. Entom. Soc. Polyelads; Sierra spermatophytes; South Carolina plants; pests of the cotton plant; Mallophaga; Tetranychids.
- McGregor, Prof. J(ames) H(oward)**, Columbia University, New York, N. Y. *Zoology*. Belaire, Ohio, July 23, 72. B.S. Ohio State, 94; fellow, Columbia, 95-97, A.M, 96, Ph.D, 99. Asst. zool, Ohio State, 94-95; Columbia, 97-99, tutor, 99-04, lecturer, 04-06, instr, 06-07, adj. prof, 07-14, *assoc. prof*, 14- Instr. zool, Woods Hole, 99-06; assoc. anthrop, Am. Mus. Nat. Hist, 16- A.A; Soc. Nat; Soc. Zool; Anthropol. Ass; Galton Soc; Paleont. Soc. Vertebrate morphology; spermatogenesis; vertebrate paleontology; morphology and relationships of the Phytosauria; South American Proganosauria; evolution of vertebrates; Pleistocene races of man.
- McGregor, Richard C(rittenden)**, Bureau of Science, Manila, P. I. *Ornithology*. Sydney, Australia, Feb. 24, 71. A.B. Stanford, 98. Recorder and deck officer, U. S. Str. 'Pathfinder,' 99-01; *ornithologist*, *Bur. Science*, P. I, 01-; *assoc. ed*, 'Philippine Jour. Science,' 19-; *lecturer Univ. Philippines*, 19- Hopkins exped. to Panama, 96; Anthony exped. to Lower California, 97. Fel. Ornith. Union; Cooper Ornith. Club; Nat. Ass. Audubon Societies; Soc. Mammal; Wilson Ornith. Club; Wash. Biol. Soc; Austral. Ornith. Union. Fishes and birds; distribution of Philippine birds.
- McGregory, Prof. J(oseph) F(rank)**, Hamilton, N. Y. *Chemistry*, *Mineralogy*. Wilbraham, Mass, April 11, 55. A.B. Amherst, 80, A.M, 83, hon. Sc.D, 05; Göttingen, 80-81, 83-84; Heidelberg, 90-91, 96. Instr. chem, Amherst, 81-83; *prof. chem. and miner*, Colgate, 84-09, chem, 09- A.A; Chem. Soc; fel. London Chem. Soc; Chem. Gesell.
- McGuigan, Prof. Hugh**, University of Illinois, College of Medicine, Chicago, Ill. *Pharmacology*, *Physiology*. Lisburn, Ireland, March 29, 74. B.S. N. Dak. Col, 98; Michigan, 00-01; fellow, Chicago, 02-05, Ph.D, 05, M.D, 08; Heidelberg, 08-09. Asst. prof. chem, N. Dak. Col, 98-02; asst. biochem. and pharmacol, Chicago, 02-05; asst. prof. pharmacol, Washington (St. Louis), 06-08, acting prof. physiologist and pharmacol, 09-10; *prof. pharmacol*, Northwestern, 10-17; *pharmacol. and therapeut. med. dept*, Illinois, 17- Aid, bur. chem, U. S. Dept. Agr, 00- A.A; Soc. Pharmacol; Soc. Biol. Chem; Physiol. Soc; Chem. Soc; Am. Med. Ass; Chicago Inst. Med. Experimental pharmacology; biochemistry; blood sugar; strychnine action; glycosuria.
- McGuire, Dr. Edgar R(obinson)**, 622 Delaware Ave, Buffalo, N. Y. *Surgery*. Mt. Forest, Ont, Aug. 13, 77. *Prof. surg.*, Buffalo. Surgeon, Buffalo Gen. Hosp; surgeon-in-chief, Buffalo City Hosp; consulting surgeon, J. M. Adam Mem. Hosp. A.A; Col. Surg; Am. Med. Ass. Abdominal and cranial surgery.
- McGuire, Grace M(ary)**, Roosevelt Hospital, New York, N. Y. *Chemistry*. Brooklyn, N. Y, Dec. 8, 93. B.S. Syracuse, 15. *Chemist*, *Harriman Research Lab*, *Roosevelt Hosp*, 15- Chemist, path. lab, Roosevelt Hosp, 16-17. A.A; Chem. Soc. Creatinin; enzymes; meat spoilage.
- McGuire, Dr. Stuart**, 513 E. Grace St, Richmond, Va. *Surgery*. Staunton, Va, Sept. 16, 67. M.D. Virginia, 91; LL.D, Richmond, 16. *Pres. Med. Col. of Va.* Surgeon, St. Luke's and other Hospitals. Lieut. col, M.C, 17-19. Surg. Ass; South. Med. Ass. (past pres). Principles of surgery.
- McHargue, Prof. J(ames) S(pencer)**, 411 Transylvania Park, Lexington, Ky. *Chemistry*. Boring, Ky, Jan. 29, 78. B.S. Kentucky, 06, M.S, 14; George Washington, 07-08. Teacher, pub. schools, Laurel Co, Ky, 98-02; asst. chemist, Ky. Exp. Sta, 06; Bur. Standards, 06; hygienic lab. U. S. Pub. Health Service, 06-07; chemist, Ky. Geol. Surv, 08-12; *research chemist*, Ky. Exp. Sta, 12- A.A; Chem. Soc. (sec'y-treas, Lexington sect, 17, pres, 19); Agr. Chem; Ky. Acad.

- Agricultural chemistry; effect of manganese on plant growth; enzymes in seeds.
- McHatton, Prof. T(homas) H(ubbard)**, University of Georgia, Athens, Ga. *Horticulture*. Brooklyn, N. Y., Nov. 12, 83. B.S., Spring Hill, 03, Sc.D., 07; B.S., Mich. Agr. Col., 07; Iowa, 10; Cornell, summer, 07. *Prof. hort., Georgia, and horticulturist, Exp. Sta., 08-11*. A.A.; Soc. Hort. Sei.; Ga. Hort. Soc. (treas., 11, sec'y, 12). Truck crops; canning; soils.
- Macht, Dr. David I(srael)**, 3420 Anchenoroly Terrace, Baltimore, Md. *Pharmacology*. Moscow, Russia, Feb. 14, 82. A.B., Hopkins, 02, M.D., 06; LL.B., Hamilton, 15; Harvard; Berlin, Munich and Vienna, 06-07. Instr. med. and asst. pharmacol., *Hopkins*, 08-18, *lecturer pharmacol. and therapeut.*, 18-20. Am. Med. Ass.; Chem. Soc.; Physiol. Soc.; Soc. Pharmacol.; Psychol. Ass.; Am. Physicians; Soc. Exp. Biol.; Oriental Soc. Experimental therapeutics; carbolic acid poisoning; alkaloids; benzyl benzoate; benzyl alcohol; absorption of drugs; food poisons; psychopharmacology; pharmacology of the ureter, corpus luteum and ovaries; prostate internal secretion.
- McIlhiney, Dr. Parker C(airns)**, 50 E. 41st St., New York, N. Y. *Chemistry*. Jersey City, N. J., Oct. 9, 70. Ph.B., Columbia, 92, A.M., 93, Ph.D., 94. Hon. asst. assaying, Columbia, 93-94, asst. metal, 94-00; *consulting chemist*, 98-100. With Louis C. Tiffany, N. Y. City, 94-100. Silver and bronze medals, Paris Expos., 00. Chem. Soc.; Soc. Chem. Indust.; Chem. Eng.; N. Y. Chemists Club. Glass; pottery enamels; oils; fats; varnishes; constitution of glass and enamel; patents.
- McIndoo, Dr. N(orman) E(ugene)**, Bureau of Entomology, Washington, D. C. *Entomology*. Lyons, Ind., April 11, 81. A.B., Indiana, 06, fellow, 08-09, A.M., 09; fellow, Pennsylvania, 09-11, Ph.D., 11. Asst., Indiana, 05-06; teacher biol., high sch., Fond du Lac, Wis., 06-08; *insect physiologist, bur. entom., U. S. Dept. Agr.*, 11-15. Collector fish in Cuba, Indiana, 05. A.A.; Entom. Soc.; Soc. Zool.; Wash. Entom. Soc. Insect behavior; sense organs and histology of insects; physiological effects of insecticides.
- MacInnes, Prof. Duncan A(rthur)**, Massachusetts Institute of Technology, Cambridge, Mass. *Chemistry*. Salt Lake City, Utah, March 31, 85. B.S., Utah, 07; M.S., Illinois, 09, Ph.D., 11. Instr. chem., Illinois, 11-14, assoc., 14-17; *asst. prof. physical chem., Mass. Inst. Tech.*, 17-20. Chem. Soc.; Electrochem. Soc.; Physical Soc. Solutions of electrolytes; hydrogen overvoltage; calorimetry; X-ray reflections.
- MacInnes, Miss F(rances) Jean**, 10 Dana St., Cambridge, Mass. *Plant pathology*. Salt Lake City, Utah, April 3, 92. B.S., Illinois, 16; M.S., Minnesota, 19; Mass. Inst. Tech., 20-21. Asst. florist, Illinois, 16-17; *mycologist and instr. plant path., Minnesota*, 17-20. Phytopath. Soc. Diseases of apples and wheat.
- McInnes, William**, Geological Survey, Ottawa, Can. *Geology*. Fredericton, N. B., Jan. 1, 58. A.B., New Brunswick, 79. Geologist, *Can. Geol. Surv.*, 82-90, *director*, 90-91. Geol. Soc.; fel. Royal Soc. Can.
- MacIntire, Dr. W(alter) H(oge)**, Agriculture Experiment Station, Knoxville, Tenn. *Chemistry*. Wilmington, N. C., May 19, 85. B.S., N. C. Col., 05; M.S., Pa. State, 09; Ph.D., Cornell, 16. Chemist, N. C. State Board of Health, 05-07; asst. chemist, inst. animal nutrition, Pa. State, 07-08, asst. and assoc. agron., 08-12; *soil chemist, Tenn. Exp. Sta.*, 12-15. Chem. Soc.; Soc. Agron.; Agr. Chem. (referee, 11-13, 15-17). Soil chemistry; soil constituents and their conservation.
- McIntosh, Prof. Douglas**, University of British Columbia, Vancouver, B. C. *Chemistry*. New Glasgow, N. S., March 9, 75. B.A., Dalhousie, 96; A.M., Cornell, 98; D.Sc., McGill, 05. Demonstrator chem., McGill, 00-05, lecturer, 05-07, asst. prof., 07-08, assoc. prof., 08-14, *prof.*, 14; *British Columbia*. Chem. Soc.; Electrochem. Soc.; fel. Royal Soc. Can. Physical chemistry; properties of substances at low temperatures.
- McIntosh, W(illiam)**, 72 Union St., St. John, N. B., Can. *Entomology, Archeology*. Edinburgh, Scotland, May 12, 69. Grammar sch.; col. sch., Rothesay, N. B. *Curator, Nat. Hist. Museum, St. John, N. B.*, 07-10. N. B. Fruit Growers' Ass. Archeology of Acadia; economic entomology; archeology and ethnology of New Brunswick.
- McIntyre, Rev. R(oderick) K(ennedy)**, St. Francis Xavier's College, Antigonish, N. S., Can. Catholic Univ., 09, 10, 12, 13. *Chemistry*. Heatherton, N. S., June 17, 79. A.B., St. Francis Xavier, 04; B.S., Catholic Univ., 10, A.M., 19. *Prof. chem., St. Francis Xavier*, 10-15. Can. Inst. Chem. Organic chemistry.
- McJunkin, Prof. F(rank) A(dam)**, Euclid Ave. and Kingshighway, St. Louis, Mo. *Pathology*. Jan. 20, 82. M.D., Michigan, 06, A.M., 12. Instr. bacter., Michigan, 08-09; prof., Utah, 09-11; asst. path. lab., Boston City Hosp., 12-14; *prof. path., Marquette*, 14-20; *assoc. prof., Washington (St. Louis)*, 20-21. Ass. Path. and Bact.; Ass. Anat. Clinical microscopy and chemistry; local action of lead; effect of ethyl alcohol on the liver; origin of phagocytic mononuclear leucocytes; technical pathological methods.
- Mack, Dr. E(dward) L(awrence)**, Morse Hall, Ithaca, N. Y. *Chemistry*. Vergennes, Vt., Aug. 27, 90. B.S., Union, 12; Ph.D., Cornell, 16. Asst. chem., Cornell, 12-16; *asst. alloy chemist, Bur. Mines*, 16-17. Chem. Soc.; Electrochem. Soc. Electrochemistry; electrometallurgy.
- MacKay, Dr. A(lexander) H(oward)**, 163 Queen St., Dartmouth, Halifax Co., N. S. *Biology, Education*. Mount Dalhousie, N. S., May 19, 48. B.A., Dalhousie, 73, LL.D., 92; B.S., Halifax, 80; LL.D., St. Francis Xavier, 05. Principal, Pietou Acad., 73-89; Halifax Acad., 89-91; *supt. educ., N. S.*, 91-92. Lecturer bot. and zool., Dalhousie, 91-10; pres., Summer Sch. Sci., Atlantic provinces, Can., 87; governor, Dalhousie, 88-90; ed., 'Educ. Rev.' (St. John, N. B.), 87-91. A.A.; Phytopath. Soc.; Bot. Soc.; Acad. Polit. and Social Sci.; Religious Educ. Ass. (v. pres., 08); Can. Educ. Ass. (pres., 95-98); Royal Soc. Can. (pres., biol. sect., 00); Can. Bot. Club (sec'y, 91-11); N. S. Educ. Ass. (pres., 74-76); N. S. Inst. (pres., 00); British Ass.; Int. Ass. Bot. The flora of Nova Scotia; Diatomaceae; freshwater sponges; seasonal phenomena in flora and fauna of Canada;

- phenology of Canada; the simplification of English spelling, weights and measures.
- MacKay, Dr. Bertram R(eid)**, Geological Survey, Ottawa, Can. *Geology*. Cornwall, Ont. B.S. Queen's (Can), 08; Ph.D, Chicago, 20. Asst. miner, Queen's (Can), 09-10; topographer, Can. Geol. Surv, 10-15, geologist, 15-20. Lecturer geol, Chicago, 17; geologist, Whitehall Petrol. Corp, 20- Can. Min. Inst. Physiography; classification of topographic forms; placer gold deposits; Blanche River landslides.
- MacKay, G(eorge) M(oir) Johnstone**, Research Laboratory, General Electric Company, Schenectady, N. Y. *Physics*. Pietou, N. S, July 29, 83. B.A. Dalhousie, 05, A.M, 06, 1851 Exhibition scholar, 06-08; M.S. Mass. Inst. Tech, 08. Instr. chem, Dalhousie, 08-09; chemist, Sydney Cement Co, 09-10; *research engineer, Gen. Elec. Co*, 10-A.A.; Physical Soc; Chem. Soc; Illum. Eng. Soc; N. S. Inst. Chemistry; theory of solution; luminous materials.
- McKay, Prof. M(arion) B(ertice)**, 2723 Jackson St, Corvallis, Oregon. *Plant pathology*. Humphreys, Mo, July 14, 87. B.S, Okla. Col, 11; M.S, Wisconsin, 15. Scientific asst, bur. plant indust, U. S. Dept. Agr, 12-16; asst. plant pathologist, *Oregon Exp. Sta*, 16-18, *assoc. plant pathologist*, 18- A.A.; Bot. Soc; Phytopath. Soc. Diseases of sugar beets, potatoes and tomatoes.
- McKay, Mrs. Venus Pool**, 2723 Jackson St, Corvallis, Oregon. *Botany*. Table Rock, Nebr, May 8, 82. B.S, Nebraska, 04, M.S, 08. Research asst. agr. bot, Nebr. Exp. Sta, 06-11; asst. plant path, bur. plant indust, U. S. Dept. Agr, 11-16. A.A.; Phytopath. Soc. Nebraska and Colorado potato diseases; leaf spot of the sugar beet.
- McKeag, Prof. Anna Jane**, Wellesley College, Wellesley, Mass. *Education*. West Finley, Pa, March 13, 64. A.B, Wilson, 95; Ph.D, Pennsylvania, 00; hon. fellow, Clark, 03-04; LL.D, Lafayette, 12. Teacher, pub. and private schools, 81-92; instr. philos, Wilson, 92-94, prof, 94-02; instr. educ, Wellesley, 02-03, *assoc. prof*, 03-09, prof, 09-12; pres, Wilson, 12-15; *prof. hist. and principles of educ, Wellesley*, 15- A.A.; Psychol. Ass; Soc. Col. Teachers Educ; New Eng. Ass. Col. Teachers Educ. (pres, 11). The sensation of pain and the theory of the specific sense energies.
- McKee, Prof. Ralph H(arper)**, Columbia University, New York, N. Y. **Chemistry*. Clinton, Mo, June 20, 74. A.B, Wooster, 95, A.M, 97; fellow, Chicago, 99, Ph.D, 01. Asst. chem, Wooster, 94-95; prof. chem. and math, Carthage, 95-98; instr. chem, Lake Forest, 00-01, prof, 01-09; Maine, 09-16; *assoc. chem. eng, Columbia*, 17-18, *prof*, 18- Director, U. S. Ordnance Sch. of Explosives Mfg, 18-19. Mem. Perkin Medal committee, 06, 07, 20, 21. A.A.; Chem. Soc. (councilor and chairman, N. Y. sect, 20); Eng. Educ; Ass. Pulp and Paper Indust; Chem. Eng; Soc. de Chim. indust. Oxygen ethers of ureas; the primeval atmosphere; sulphur dioxid; synthetic electrolytic process; paper pulp; shale oil.
- McKee, Dr. S(amuel) Hanford**, 153 Crescent St, Montreal, Can. *Pathology, Bacteriology*. Fred-
- erickton, N. B, Oct. 11, 74. B.A, New Brunswick, 96; M.D, C.M, McGill, 00. House surgeon, Royal Victoria Hosp, Montreal, 00-02; voluntary clin. asst. to Prof. Axenfeld, Freiburg, 03-05; asst. and later *assoc. oculist, Montreal Gen. Hosp*, 06- Oculist, Montreal Maternity Hosp, 06-14; demonstrator and later lecturer, ophthalm. and bacter, McGill, 09-; military service in Europe, 14-19; decorated with C.M.G. Ass. Path. and Bact; Montreal Medico-Chirurg. Soc. (sec'y, 08-). Bacteriology of the conjunctiva.
- McKeehan, Prof. L(ouis) W(illiams)**, 1840 Vernon St, N. W, Washington, D. C. *Physics*. Minneapolis, March 31, 87. U. S. Naval Acad, 03-05; B.S, Minnesota, 08, M.S, 09; Ph.D, 11; Cambridge, England, 11-12. Instr. *physics, Minnesota*, 09-15, *asst. prof*, 15-18, *assoc. prof*, 18-19; asst. physicist, Bur. Standards, 17-18; *technician, bur. ordnance, U.S.N.*, 19- Lieut, U.S.N.R.F, 18- A.A.; Physical Soc. Slow motion of spheres in gases; scattering of cathode and beta rays; actinium emanation; submarine mines.
- McKellar, Peter**, Fort William, Ont, Can. *Mineralogy, Geology*. Middlesex Co, Ont, April 27, 38. Pub. schools. Mines explorer; in charge party under Dr. R. Bell, Can. Geol. Surv, 69-70; supt, Huronian Gold Mine, 82-84; supt. exploration and development works, Toronto and Western Mines Development Co, Seine River and Lake of the Woods district, 97-98. A.A.; Geol. Soc; fel. London Geol. Soc; London Soc. Arts. Correlation of the Animikie and Huronian rocks of Lake Superior; pot holes on the north shore of Lake Superior; gold bearing veins of Bag Bay, Lake of the Woods.
- McKelvey, Prof. J(oseph) V(ance)**, Station A, Ames, Iowa. *Mathematics*. Dover, Wis, July 23, 80. Ph.D, Cornell, 09. Instr. *math*, Cornell, 09-17; asst prof, *Iowa State*, 19-20, *assoc. prof*, 20- Second lieut. to capt, U.S.A, 17-19. Math. Soc; Math. Ass. Algebraic curves.
- McKenna, Dr. Charles F(rancis)**, 155 W. 91st St, New York, N. Y. *Chemistry*. New York, June 4, 61. A.B, St. Francis Xavier, 79, A.M, 80; Ph.B, Columbia, 83, Ph.D, 94. Chemist, various companies, 85-93; director, Lab. of Physical Test, 93-95; chemist, Passaic Zinc Co, 95-97; *consulting chemist*, 97- Chemist mem. Munic. Explosives Commission, N. Y. City, 02-04. Chem. Eng. (v. pres, 09, pres, 10); Chem. Soc. (past chairman, N. Y. sect); Soc. Chem. Indust. (chairman, N. Y. sect, 10); N. Y. Chemists Club (pres, 14); Int. Ass. Test. Mat. Metallurgy; history of bronze; properties of Portland cement.
- McKenney, Prof. R(andolph) E(vans) B(ender)**, Cosmos Club, Washington, D. C. *Bacteriology*. Philadelphia, Pa, June 7, 78. B.S, Pennsylvania, 98, M.S, 99; Ph.D, Basel, 01. Asst. vert. morph, Pennsylvania, 96-97, bot, 97-99; prof. biol, high sch, Santa Ana, Calif, 99-00; expert path. and physiol, U. S. Dept. Agr, 01-04; asst. prof. bot, George Washington, 02-04; expert, United Fruit Co, 04-08; expert path. and physiol, *U. S. Dept. Agr*, 09-19, *pathologist*, 19- Military service, 17-19. A.A.; Soc. Bact; Phytopath. Soc; Chem. Soc; Acad. Polit. and Social Sci; Wash. Biol. Soc; Phila. Acad; Bot.

- Gesell. Development of the embryo-sac; California ecology; luminous bacteria; plant nutrition; nature and properties of oxidases; physiology of *Saccharomyces niger* Marp; tobacco diseases; physiology and pathology of banana.
- Mackenzie, Prof. A(rthur) Stanley**, Dalhousie University, Halifax, N. S., Can. **Physics*. Pictou, N. S., Sept. 20, 65. B.A., Dalhousie, 85; fellow, Hopkins, 90, Ph.D., 94; hon. D.C.L., Kings Col., Can., 12; LL.D., Queen's (Can.). Tutor math, Dalhousie, 87-89; lecturer physics, Bryn Mawr, 91, assoc., 92-94, assoc. prof., 94-97, prof., 97-05; Dalhousie, 05-10; Stevens, 10-11; *pres*, Dalhousie, 11- Mem. Council for Sci. and Indust. Research. A.A.; Physical Soc; Philos. Soc; fel. Royal Soc. Can. Attraction of crystals; vibration of rods in liquids; heat conduction; spectrum analysis; alpha rays; secondary radiations; effect of Becquerel rays on chemical reactions.
- MacKenzie, Dr. Donald**, 112 Riverside Drive, New York, N. Y. *Physics*. Deatherford, Tex., Dec. 20, 87. A.B., Hopkins, 08, A.M., 11, Ph.D., 14. Asst. astron., Hopkins, 14-17; assoc. physicist, Bur. Standards, 18-20; *research engineer*, West. Elec. Co., 20- Ensign, Nat. Naval Vols, 17-18. Physical Soc; Automotive Eng. Engineering physics; internal combustion engines; velocity of flame propagation in gas engine cylinders.
- Mackenzie, Dr. George M(iner)**, 220 E. 62d St, New York, N. Y. *Medicine*. Lawrenceville, N. J., Aug. 15, 85. A.B., Columbia, 07, M.D., 13. Assoc. path, Columbia, 16-17, *instr. med.*, 19- Lieut. M.C. U.S.N.R.F., 17-19. A.A.; Ass. Path. and Bact; Am. Med. Ass; Harvey Soc. Experimental medicine; anaphylaxis; immunity; protein sensitization.
- Mackenzie, Dr. J(ohn) D(avid)**, Pacific Building, Vancouver, B. C., Can. *Geology*. Baddeck, Cape Breton, N. S., June 1, 88. B.S., Mass. Inst. Tech., 11, Ph.D., 16. Instr. econ. geol., Cornell, 11-12; geol., Mass. Inst. Tech., 12-16; asst. geologist, Can. Geol. Surv., 12-15; with C.E.F., 16-20; *assoc. geologist, in charge B. C. office, Can. Geol. Surv.*, 20- Economic geology; petrography.
- Mackenzie, Kenneth G(erard)**, Texas Co., 17 Battery Place, New York, N. Y. *Chemistry*. New York, N. Y., Feb. 4, 87. Ph.B., Yale, 07, M.S., 09. Asst. instr. chem., Yale, 07-08; research chemist, N. Y. Test. Lab., 08-10; chemist, Nairn Linoleum Co., Kearney, N. J., 10-11; *consulting chemist, Texas Co.*, 11- Chemist, Conn. Exp. Sta., 08. A.A.; Chem. Soc. (mem. council, mem. executive committee, N. Y. sect); Soc. Chem. Indust; Civil Eng; Elec. Eng; Mech. Eng; Soc. Test. Mat; Min. Eng; Automotive Eng; Petrol. Tech; Am. Gas. Inst; Nat. Fire Protection Ass. (mem. committee on inflammable liquids); Paint, Varnish and Oil Ass. (chairman, committee on fire prevention); Yale Eng. Ass. Organic chemistry; pyrimidins; linseed oil and its oxidation products; petroleum and asphalt.
- Mackenzie, Kenneth K(ent)**, 615 Prospect St, Maplewood, N. J. *Botany*. Brooklyn, N. Y., Oct. 13, 77. A.A.; Bot. Soc; Torrey Bot. Club. Systematic botany, especially Carex.
- Mackenzie, Prof. Marion**, 4816 Florence Ave, West Philadelphia, Pa. *Botany*. Philadelphia. B.S., Pennsylvania, 05, Ph.D., 09. *Prof. biol.*, Constantinople Col., 11-12; *Temple*, 12- Lecturer, Wagner Free Inst. A.A.; Bot. Soc; Pa. Bot. Soc. (v. pres). Araceae.
- McKenzie, Dr. R(obert) Tait**, 2014 Pine St, Philadelphia, Pa. *Anatomy, Physical training*. Almonte, Ont., May 26, 67. B.A., McGill, 89, M.D., C.M., 92; M.P.E., Springfield Training Sch., 13. House surgeon, Montreal Gen. Hosp., 93; ship surgeon, Beaver Line steamships, 94; med. director physical training, McGill, 95-04, asst. demonstrator anat., 94, demonstrator, 96, lecturer, 04; *prof. physical educ. and director, dept. physical educ, Pennsylvania*, 04-, *prof. physical therap*, 07- Lecturer artistic anat., Montreal Art Ass., 99-03; Harvard, 00-01; Olympic course, La. Purchase Expos., 04; inspector physical training, British Army, and med. officer in command, Henton Park, 16; major, R.A.M.C., 15-19. Physical Educ. Ass. (pres, 12-15); Directors Physical Educ. (pres, 01, 04-09); Soc. Research in Physical Educ; Phila. Col. Physicians. Facial expression in violent effort; anatomical characteristics of athletes; treatment of scoliosis and other deformities by exercise; the type of figure in the American college athlete as compared with Greek ideals (stature and measurements); exercise in education and medicine; sculpture of athletic types; reclaiming the maimed in war.
- McKibben, Prof. Frank P(ape)**, Union College, Schenectady, N. Y. *Civil engineering*. Fort Smith, Ark., Nov. 13, 71. Arkansas, 87-90; B.S., Mass. Inst. Tech., 94. Asst. engineer, New Bedford (Mass) Bridge, 98; Boston Elevated R. R., 99-01; Mass. R. R. Commission, 01-07; assoc. prof. *civil eng*, Mass. Inst. Tech., 06-07; *prof*, Lehigh, 07-19; *Union*, 19- Civil Eng; Soc. Test. Mat; Eng. Educ; Pa. Eng. Soc. Structural engineering; reinforced concrete.
- McKibben, Prof. Paul S(tilwell)**, Western University Medical School, London, Can. *Anatomy*. Granville, Ohio, March 14, 86. B.S., Denison, 06; fellow, Chicago, 07-08, Ph.D., 11. Asst. anat., Chicago, 08-11, assoc., 11-12, *instr.*, 12-13; *prof. and head of dept*, Western, London, Can., 13- A.A.; Ass. Anat. The nervus terminalis, eye-muscle nerves and peripheral olfactory apparatus of Amphibia; mast cells and medulla in Amphibia; intravascular fat; cerebrospinal fluid pressure and brain bulk.
- McKinney, Prof. T(homas) E(mery)**, University of South Dakota, Vermillion, S. Dak. *Mathematics*. Hebron, W. Va., April 26, 64. A.B., Marietta, 87, A.M., 90; Hopkins, 89-90, 95-96; fellow, Chicago, 96-97, Ph.D., 05. Instr. math., Marietta, 87-89, prof. math. and Lec lecturer astron., 90-06; assoc. prof. math., Wesleyan, 06-08; *prof*, South Dakota, 08-09, *math. and astron*, 09- Mem. Liek eclipse exped. to Spain, 05; assoc. ed., 'Sch. Science and Math.', 04- A.A.; Math. Soc; Math. Ass; Statist. Ass; Ass. New Eng. Math. Teachers; S. Dak. Acad. (v. pres, 18). Continued fractions; theory of equations; vital statistics.
- Mackintosh, R(oger) S(herman)**, 2153 Doswell Ave, St. Paul, Minn. *Horticulture*. Lincoln,

- Mass, Feb. 18, 72. Grad. Minn. Sch. Agr, 90; B.Agr, Minnesota, 02; M.S, Iowa State, 10. Asst. hort, Minn. Exp. Sta, 97-03; prof. hort, Ala. Polytech, horticulturist, Exp. Sta, and state horticulturist, 03-10; asst. hort, Iowa State, 09-10; Pa. State, 10-11; instr. agr, Caledonia High Sch, Minn, 11-13; *specialist agr. exten*, Minnesota, 13- A.A; Soc. Hort. Sci; Pomol. Soc; Minn. State Hort. Soc. (pres, 18, 19, sec'y, 20-).
- Macklin, Dr. Charles Clifford**, Johns Hopkins Medical School, Baltimore, Md. *Anatomy*. Fellow, Toronto, 12-13, M.B, 14, hon. M.D, 18. Asst. instr. and later assoc. anat, Hopkins, 14-18; assoc. prof, Pittsburgh, 18-19; assoc. *Hopkins*, 19-20, *assoc. prof*, 20- Assoc. prof. anat, Stanford, summer, 20. Ass. Anat. Development of the skull; growth of bone; phagocytosis; tissue culture.
- MacLachlan, Dr. William W(illiam) G(raham)**, 4715 Fifth Ave, Pittsburgh, Pa. *Medicine*. Guelph, Ont, June 2, 85. M.D.C.M, McGill, 07; Strasbourg, 12. Intern, Montreal Gen. Hosp, 07-10; pathologist, Mercy Hosp, Pittsburgh, Pa, 10-16; lecturer path, Pittsburgh, 10-12, *asst. prof*, 12-19, *med*, 18- Ass. Path. and Baet; Ass. Cancer Research; Am. Med. Ass. Internal medicine; pathology of tonsil; melanism pigmentation; melanin; pneumonia; aneurysm.
- MacLaren, Dr. J(ohn) D(ice)**, University of Oregon, Eugene, Oregon. *Physiology*. Toronto, Can, Sept. 16, 60. B.S, M.S, B.D, Kansas, 86; Hopkins, 88-90; M.D, Columbia, 96. Prof. biol, Wyoming, and director, U. S. Exp. Sta, 90-92; practising physician, N. Y, 96-08; prof. physiol, Oklahoma, 08-10; prof. physiol, Oregon, 10-19, retired, 19. A.A; Am. Med. Ass; Okla. Acad; Kans. Acad; British Ass. Pogonomymrux occidentalis; Thysanosoma actinoides; pollination; ecology; diphtheria; the functions of lymphoid tissues; lymph nodes and tonsils.
- MacLaren, Prof. Malcolm**, 38 Washington Road, Princeton, N. J. *Electrical engineering*. Annapolis, Md, June 21, 69. A.B, Princeton, 90, E.E, 92, A.M, 93. With Westinghouse Elec. and Mfg. Co, 93-98; Westinghouse Co, Ltd, London, 98-00; chief elec. engineer, British Westinghouse Elec. and Mfg. Co, 00-04; ry. eng. dept, Westinghouse Elec. Mfg. Co, 04-08; *prof. elec. eng*, Princeton, 08- Lieut. col, reserve corps engineers. Assoc. mem. Elec. Eng; British Inst. Elec. Eng. Power generation and distribution.
- McLaughlin, Dr. A(rlan) J(oseph)**, U. S. Public Health Service, Washington, D. C. *Sanitation*. London, Can, June 26, 72. M.D, Detroit Med. Col, 96. Asst. surgeon, U. S. Pub. Health Service, 00-05, passed asst. surgeon, 05-12, *surgeon*, 12-, *asst. surgeon gen*, 18- Mass. State Commissioner of Health, 15-17. Pub. Health Ass; Am. Med. Ass; Ass. Mil. Surg. Asiatic cholera; infant mortality in the Philippines; water pollution in relation to typhoid fever.
- McLean, Prof. Forman T(aylor)**, College of Agriculture, Los Banos, P. I. *Forestry*. Colts Neck, N. J, June 27, 85. Ph.B, Yale, 07, M.F, 08; Ph.D, Hopkins, 15. With U. S. Forest Service, 08-15; instr. bot, col. of agr, Univ. Philippines, 15-17, asst. prof, 17-18, assoc. prof, 18-20, *prof*, 20- A.A; Bot. Soc; Soc. Foresters; Ecol. Soc. Plant physiology; ecology; growth of plants in relation to habits; photosynthesis; agricultural climatology.
- McLean, Dr. Franklin C(hambers)**, Rockefeller Foundation, 61 Broadway, New York, N. Y. *Physiology, Medicine*. Maroa, Ill, Feb. 29, 88. B.S, Chicago, 07, M.S, 11, Ph.D, 15, M.D, Rush Med. Col, 10. Prof. pharmacol, Oregon, 11-14; asst. res. physician, hosp, Rockefeller Inst, 14-16; *prof. med. and director*, Peking Union Med. Col, 16- A.A; Am. Physicians; Soc. Biol. Chem; Soc. Pharmacol; Physiol. Soc; Soc. Exp. Biol; Soc. Clin. Invest; Harvey Soc. Excretion of urea and chlorids by the kidney.
- McLearn, Dr. F(rank) H(arris)**, Geological Survey, Ottawa, Can. *Geology*. Halifax, N. S, Feb. 27, 85. B.E, Dalhousie, 07; Ph.D, Yale, 17. Field asst, Can. Geol. Surv, 13, *temporary asst. geologist*, 14- Stratigraphy; Silurian and Mesozoic paleontology.
- McLendon, C(larence) A(lbertis)**, Atlanta, Ga. *Agriculture, Chemistry*. Bishopville, S. C, May 3, 83. B.S, Clemson, 08. Asst. botanist and plant pathologist, S. C. Exp. Sta, 08; botanist and plant pathologist, Ga. Exp. Sta, 08-14; field pathologist, S. C. Exp. Sta, 14-16; expert cotton breeding, Ga. State Board Entom, 16-20; agronomist, soil improv. committee, S. Fertilizer Ass, 20; manager, Humphrey Coker Seed Co, 20; *seedsman*, 20- A.A. Mendelian inheritance in cotton hybrids; cotton anthracnose; cooperative cotton breeding for boll-weevil, wilt and anthracnose resistance.
- McLennan, Prof. J(ohn) C(unningham)**, University of Toronto, Toronto, Can. *Physics*. Ingersoll, Ont, April 14, 67. B.A, Toronto, 92, LL.D, 19, Ph.D, 00; Cambridge, 98-99; D.Sc, Manchester, 19. Asst. demonstrator *physics*, Toronto, 92-99, demonstrator, 99-02, *assoc. prof*, 02-07, *director, physical lab*, 04-, *prof*, 07- Scientific adviser to British Admiralty, 19. A.A; Physical Soc; fel. Royal Soc. Can; Royal Soc. Electrical conductivity of gases; radioactivity; spontaneous ionization and excited radioactivity; magnetism; spectroscopy and low temperature investigations of helium.
- Macleod, Prof. Annie Louise**, Vassar College, Poughkeepsie, N. Y. *Chemistry*. Nova Scotia, 83. B.A, McGill, 04, M.S, 05, Ph.D, 10. *Assoc. prof. chem*, Vassar, 19- Organic chemistry; derivatives of p-dichlorodinitrobenzene.
- Macleod, Prof. J(ohn) J(ames) R(ickard)**, University of Toronto, Toronto, Can. **Physiology*. Dunkeld, Scotland, Sept. 6, 76. M.B, Ch.B, Aberdeen, 98. Anderson scholar, 98-00; Leipzig, 98-99; D.P.H, Cambridge, 02. Demonstrator physiol, London Hosp, 99-02, lecturer biochem, 02; Mackinnon research scholar, Royal Soc, 01-03; *prof. physiol*, Western Reserve, 03-18; *Toronto*, 18- A.A; Physiol. Soc; Soc. Exp. Biol; Soc. Biol. Chem; Am. Physicians; fel. Royal Soc. Can; London Physiol. Soc. The causation of enison disease; biochemistry of carbohydrates; physiological glycosuria; respiratory center; lactic acid metabolism.
- McLester, Dr. James (Somerville)**, 930 S. 20th St, Birmingham, Ala. *Medicine*. Tuscaloosa, Ala, Jan. 25, 77. A.B, Alabama, 96; M.D, Virginia, 99; Göttingen; Freiburg; Berlin; Munich. Intern, Phila. Polyclinic Hosp,

- 99-01; *prof. med.*, Alabama. A.A.; Am. Med. Ass. (sec'y, sect. practise of med. chairman, 20); Am. Physicians; Soc. Clin. Invest. Diseases of metabolism.
- McMahon, Prof. James**, Cornell University, Ithaca, N. Y. **Mathematics, Mathematical physics*. Armagh, Ireland, April 22, 56. B.A., Dublin, 81, M.A., 90, Sc.D., 18. Examiner *math.*, Cornell, 83-84, instr., 84-90, asst. prof., 90-04, *prof.*, 04- Assoc. ed., 'Annals of Math.', 91-98. A.A. (sec'y, A, 97, gen. sec'y, 98, v. pres, 01); Math. Soc.; London Math. Soc.; Circolo Mat. di Palermo. Mathematical functions needed in the solution of various physical, statistical and geometrical problems; flow of heat, electricity and fluids; applications of invariant theory to geometry and the vector field.
- McMaster, Dr. LeRoy**, Washington University, St. Louis, Mo. *Chemistry*. Mt. Pleasant, Md, March 26, 79. Ph.B., Dickinson, 01, A.M., 02; fellow, Hopkins, 05-06, Ph.D., 06. Instr. *chem.*, Dickinson, 01-04; *Washington (St. Louis)*, 06-10, asst. prof., 10-12, assoc. prof., 12-14, *prof.*, 14- Asst. author, 'Carnegie Memoirs.' Chem. Soc.; London Soc. Chem. Indust. Organic and physical chemistry; synthesis of fumaric and maleic acids from the two acetylene diiodides; hydrogenation; neutral ammonium salts of organic acids and their substituted derivatives; the formation of certain alcoholates by certain salts in solution in methyl and ethyl alcohols; conductivity and viscosity of certain salts in solution; detection of ozone, nitrogen peroxid and hydrogen peroxid in gas mixtures; acid carbonates of calcium and barium; transformation of nitriles into amids by hydrogen peroxid; action of hydroxylamin on fumaric nitrile; acetic acid in white lead; preparation of isophenolphthalein.
- McMeen, Samuel G(roenendyke)**, 683 S. Los Robles Ave, Pasadena, Calif. *Electrical engineering*. Eugene, Indiana, Nov. 28, 64. Chief engineer, Cent. Union Telephone Co, 96-02; telephone engineer, West. Elec. Co, 02-04; consulting engineer, 04-12; *pres.*, various *elec. companies*, 12- Elec. Eng.; Mech. Eng. Electrical communication; telephony; radio telephony.
- MacMillan, Dr. Daniel P(eter)**, Board of Education, Chicago, Ill. *Psychology*. Antigonish, N. S., July 3, 70. B.A., Acadia, 95; Ph.D., Chicago, 00, fellow, 06-08; Cornell, 05-06. Asst., *dept. child study and pedagogic investigation, pub. schools, Chicago*, 00-02, *director*, 02- Lecturer psychol. for teachers, summer quarters, sch. educ, Chicago, 05, 06. A.A.; Psychol. Ass.; West. Philos. Ass. The psychology of normal and subnormal children; deaf children; types of learning in relation to types of intelligence; education and the manual arts.
- MacMillan, Dr. H(oward) G(ove)**, U. S. Department of Agriculture, Washington, D. C. *Plant pathology*. Schaghticoke, N. Y., June 24, 90. Ph.B., Brown, 12; M.S., Wisconsin, Ph.D., 19. *Pathologist, bur. plant indust, U. S. Dept. Agr.* A.A.; Bot. Soc.; Phytopath. Soc.; Soc. Bact.; Meteorol. Soc.
- MacMillan, Dr. W(illiam) D(uncan)**, University of Chicago, Chicago, Ill. **Mathematics, Astronomy*. La Crosse, Wis, July 24, 71. A.B., Fort Worth, 98; A.M., Chicago, 06, Ph.D., 08. Assoc. math. and astron, *Chicago*, 08-09, instr. *astron.*, 09-12, asst. prof., 12-19, *assoc. prof.*, 19- Major, ordnance dept, 18- A.A.; Astron. Soc.; Math. Soc.; Math. Ass.; Int. Astron. Union. Elliptic functions; periodic orbits; real and implicit function theory; differential equations; isostasy; celestial mechanics; cosmology.
- McMullen, Prof. Lynn B(anks)**, Normal School, Flagstaff, Ariz. *Physics, Chemistry*. Arcadia, Ind, Jan. 28, 75. B.S., DePauw, 97; Chicago, 08; A.M., Columbia, 19. Teacher physics, Shortridge High Sch, Indianapolis, 97-08; head, dept. physics and chem, State Nor. Sch, Valley City, N. Dak., 08-19; director training sch, Colo. State Teachers College, 19-20; *pres.*, *Northern Ariz. Normal Sch.*, 20- Lecturer physics, Nor. Sch. of North Am. Gym. Union. N. Dak. Acad. (sec'y and v. pres); Ind. Acad. (sec'y); Ind. Sci. Teachers Ass. (pres); N. Dak. Sci. Teachers Ass. (pres). Practical applications of physics and the science curriculum in the grades.
- McMurphy, James (Ira Wilson)**, Stanford University, Calif. *Botany*. Ill, 71. A.B., Stanford, 08, A.M., 09. Instr. *bot.*, Stanford, 12- A.A.; Phytopath. Soc. Phytopathology.
- McMurrich, Prof. J(ames) Playfair**, University of Toronto, Toronto, Can. **Animal morphology*. Toronto, Oct. 16, 59. Upper Canada; B.A., Toronto, 79, A.M., 81; Ph.D., Hopkins, 85; LL.D., Michigan, 12. Prof. *biol.*, Ont. Agr. Col., 82-84; instr. *mammalian anat.*, Hopkins, 84-86; *prof. biol.*, Haverford, 86-89; docent and asst. *prof. animal morph.*, Clark, 89-92; *prof. biol.*, Cincinnati, 92-94; *anat.*, Michigan, 94-07; *Toronto*, 07- Instr., Woods Hole, 87-91, trustee, 92-96; mem. advisory board, Wistar Inst. A.A.; Soc. Nat. (pres, 07); Soc. Zool. (sec'y, 90-93); Ass. Anat. (pres, 08); Philos. Soc.; fel. Royal Soc. Can; fel. Royal Micos. Soc.; cor. mem. London Zool. Soc. Vertebrate morphology and embryology; history of science; morphology of Actinaria.
- McNair, Pres. F(red) W(alter)**, Houghton, Mich. *Physics, Geophysics*. Fennimore, Wis, Dec. 3, 62. Fellow, B.S., Wisconsin, 91; hon. Sc.D., Lafayette, 07; R. I. Col., 19. Asst. math, Wisconsin, 89-91; asst. prof., Mich. Agr. Col., 92-93; *prof. math. and physics, Mich. Col. of Mines*, 93-99, acting pres, 99, *pres. and prof. physics*, 99- Assoc. engineer physicist, Bur. Standards, 17-19, consulting engineer physicist, 19- A.A. (v. pres, 04, gen. sec'y, 07); Physical Soc.; Eng. Educ. (v. pres, 02, pres, 04); Lake Superior Min. Inst. (v. pres, 04-06). Mechanics and physics of deep mines; variation of gravity with distance below the surface; the subsurface temperature gradient.
- McNair, James B(irtley)**, Bureau of Animal Industry, Washington, D. C. *Biological chemistry*. Hazleton, Pa, March 18, 89. A.B., California, 16, A.M., 17. Asst. zymol., California, 14-15, *biol. chem.*, 15-16; asst. research chemist, Nev. Exp. Sta, 17; Pennsylvania, 18; asst. chemist, bur. chem, U. S. Dept. Agr, 19; chemist in charge, Chem. Econ. Co, 20; *chemist, dairy div, bur. animal indust, U. S. Dept. Agr.*, 20- Soc. Bact.; Bot. Soc. Identification of substances by

- enzyme action; poisonous plants; analysis of bacteriological products; citrus by-products.
- McNairn, Prof. W(illiam) Harvey**, 415 Brunswick Ave, Toronto, Can. *Geology*. Toronto, Sept. 3, 74. B.A, Toronto, 99, M.A, 00, Ph.D, 16; M.A, McMaster, 10. Asst. *geol. and miner*, Toronto, 00-02; lecturer, *McMaster*, 09-19, *prof*, 19- Mem. 12th Int. Geol. Cong, Toronto, 12. A.A; Can. Inst. Physical crystallography; origin of etch figures.
- MacNeal, Prof. W(ard) J**, N. Y. Post-Graduate Medical School, New York, N. Y. *Bacteriology*. Fenton, Mich, Feb. 17, 81. A.B, Michigan, 01, Ph.D, 04, Rockefeller fellow, 03-04, 05-06, M.D, 05. Asst. *bacter*, Michigan, 01-03, instr. *histol*, 05-06; anat. and *bacter*, West Virginia, 06-07; asst. chief in *bacter*, Ill. Exp. Sta, 07-11; asst. *prof. bacter*, Illinois, 08-11; lecturer *path. and bacter*, N. Y. *Post-Grad. Med. Sch*, 11-12, *prof*, 12-, asst. director, *laboratories*, 12-15, *director*, 15- Mem. Ill. State Pellagra Commission, 09-12; Robert M. Thompson Pellagra Commission, 12-17; Am. Trench Fever Commission, 18; lieut. col, M. R. C, A. E. F, 17-19. A.A; Soc. Bact. (councilor, 13); Soc. Exp. Biol; Ass. Path. and Bact; Am. Med. Ass; Ass. Tuber; Harvey Soc. Trypanosomes; Romanowsky stain; intestinal bacteria; coccidioidal granuloma; contagious abortion; tuberculosis of cattle; influence of saltpeter upon health; pellagra; trench fever; influenza.
- McNeil, Prof. H(iram) C(olver)**, 1210 Decatur St, N. W, Washington, D. C. *Chemistry*. Emerald, Ohio, Oct. 2, 66. B.S, Denison, 96, M.S, 00; Harvard, 96; Chicago, 98-99, 01; Ph.D, George Washington, 05. Instr. *chem*, Denison, 96-98; *prof*, Shurtleff, 99-04; *chemist*, Columbus Pharmacol. Co, 05-07; *bur. chem*, U. S. Dept. Agr, 07-14; *Bur. Standards*, 14-18; *head prof. chem*, *George Washington*, 18- Research *chemist*, Mariner and Hoskins, Chicago, Ill, 99; U. S. Geol. Surv, 04-05; lecturer *physical chem*, George Washington, 10- A.A; Chem. Soc. Silicates; moisture determination; litharge; fractional crystallization; analytical separations.
- McNeill, Prof. Jerome**, Thonotosassa, Fla. *Biology*. Laurel, Ohio, Sept. 25, 57. Antioch; B.S, Indiana, 86; Stanford, 99-00; Chicago, 09. Principal, high sch, Moline, Ill, 86-90; *prof. biol*, Arkansas, 90-99; Palmer, 02-04; *biol. and chem*, Florida State, 04-14. Field agent, U. S. Dept. Agr, 90-91. Calif. Acad; Wash. Entom. Soc; Cambridge Entom. Soc; Davenport Acad. (curator entom). Systematic entomology; homology of venation of wings of Orthoptera; Orthoptera of the United States.
- McNeill, Prof. Malcolm**, Lake Forest, Ill. *Mathematics*, *Astronomy*. Galena, Ill, March 1, 55. A.B, Princeton, 77, fellow, 78, A.M, 80, Ph.D, 89. Instr. and later asst. *prof. astron*, Princeton, 78-88; *prof. astron. and math*, *Lake Forest*, 88- A.A; Astron. Soc; Math. Soc.
- MacNeish, Prof. H(arris) F(ranklin)**, 185 Lake View Ave, Tuckahoe, N. Y. *Mathematics*. Roberts, Ill, Sept. 8, 79. B.S, Chicago, 02, M.S, 04, fellow, 05-06, Ph.D, 09. Instr. *math*, Univ. High Sch, Chicago, 02-08; Princeton, 08-10; Yale, 10-16; De Witt Clinton High Sch, N. Y. City, 16-18; *Col. City of N. Y*, 18- Math. Soc; Math. Ass. Calculus of variations; projective geometry; certain dual configurations in *n*-space; hyperspace geometry.
- MacNider, Dr. William de B(erniere)**, University of North Carolina, Chapel Hill, N. C. *Pharmacology*. Chapel Hill, June 25, 81. M.D, North Carolina, 03; Chicago; Western Reserve. Asst. *biol*, *North Carolina*, 99-00, anat, 00-01, *prof. pharmacol*, 05-18, *Kenan prof*, 18- A.A; Soc. Pharmacol. (assoc. ed, 'Jour,' treas. and councilor, 04-); Ass. Path. and Bact; Soc. Exp. Path; Physiol. Soc; Soc. Exp. Biol; Soc. Biol. Chem; Am. Med. Ass. Pharmacology of the kidney; acid-base equilibrium of the blood; toxicity of uranium; toxic effect of the general anesthetics; nephropathy in the dog.
- MacNutt, Prof. Barry**, Bethlehem, Pa. *Physics*, *Electrical engineering*. Fort McHenry, Md, June 15, 78. E.E, Lehigh, 97, M.S, 98. Instr. *physics* and *elec. eng*, *Lehigh*, 99-06, asst. *prof. physics*, 06-09, assoc. *prof*, 09-15, *prof*, 15- Asst. to U. S. A. inspector of ordnance, Bethlehem Steel Works, 98-99. A.A; Physical Soc; Electrochem. Soc; assoc. Elec. Eng; Eng. Educ; Meteorol. Soc. Polarization of electrolytic cells; electro-metallurgy of certain iron ores; the copper voltmeter; improvements in telephonic apparatus; ignition apparatus for internal combustion engines; carburetion; telephone receivers.
- Macomber, Prof. George S(tanley)**, 463 Auburn Ave, Buffalo, N. Y. *Electrical engineering*. Perry, N. Y, May 28, 77. M.E, Cornell, 00. Electrician, Perry Elec. Tel. Co, Perry, N. Y, 94-96; asst. eng. dept, Cent. Dist. and Printing Tel. Co, Pittsburgh, Pa, 00; instr. *elec. eng. and physics*, Washington (St. Louis), 01-02; *elec. eng*, Cornell, 02-05; engineer in charge test. lab, Stromberg Carlson Co, 05-06; asst. *prof. elec. eng*, Cornell, 06-14; *elec. engineer*, N. Y. State Pub. Service Commission, 14-15; senior telephone and telegraph engineer, Interstate Commerce Commission, 15-17; assoc. physicist and assoc. *elec. engineer*, Bur. Standards, 17-19; consulting engineer, 19-20; *director*, *Pub. Utilities*, Buffalo, N. Y, 20- A.A; Elec. Eng; Eng. Educ; Wash. Soc. Eng. Telephony; the telephone cable; telephonic apparatus; automatic telephony.
- Macoun, W(illiam) T(errill)**, Central Experimental Farm, Ottawa, Can. *Horticulture*. Belleville, Ont, 69. High sch. *At Central Exp. Farm, Ottawa, Can*, 87-, *curator, arboretum and bot. garden*, 95-, *horticulturist*, 98-; *Dominion horticulturist*, 10- Soc. Hort. Sci. Apples; plums; bush-fruits; potatoes; cross breeding of fruits to improve hardiness and quality.
- McPhedran, Dr. Alexander**, 151 Bloor St. W, Toronto, Can. *Medicine*. Ontario, Can. M.B, Toronto, 76, LL.D, 19. Prof. *med. and clin. med*, Toronto, 98-18. Am. Physicians (pres, 19); Can. Med. Ass. (pres, 07); fel. Royal Soc. Can; several Canadian societies; British Med. Ass; cor. mem. Medico-Chirurg. Soc. Edinburgh. Internal medicine.
- McPhedran, Dr. William Fletcher**, 151 Bloor St. W, Toronto, Can. *Medicine*. Toronto, Nov. 3, 83. B.A, Toronto, 05, M.D, 07. Asst. res. phy-

- sician, Hopkins Hosp, 09-11; *asst. med.*, Toronto, 12-; *asst. physician*, Toronto Gen. Hosp, 12- Soc. Clin. Invest. Internal medicine; pathological chemistry; anemia; jaundice.
- McPherson, Prof. William**, Ohio State University, Columbus, Ohio. **Chemistry*. Xenia, Ohio, July 2, 64. B.S., Ohio State, 87, M.S., 90, Sc.D., 95; Ph.D., Chicago, 99. Instr. chem. and physics, high sch., Toledo, 87-92; *asst. prof. chem.*, Ohio State, 93-95, *assoc. prof.*, 95-97, *prof.*, 97-, *dean, grad. sch.*, 11- Chief chemist, Ohio Dairy and Food Commission, 07-12; collaborating chemist, bur. chem., U. S. Dept. Agr., 08-17. Capt., major and lieut. col., C.W.S., 17-18. A.A. (sec'y, C, 01, v. pres, 09-15); Chem. Soc. (v. pres, Columbus sect, 09-11); Ohio Acad.; Wash. Acad. Hydroxyazo compounds; asymmetric synthesis.
- McRae, Dr. A(ustin) L(ee)**, Rolla, Mo. *Physics*. Near McRae, Ga., Oct. 25, 61. B.S., Georgia, 81; Sc.D., Harvard, 86. Elec. work, U. S. Signal Service, 82-89; *asst. prof. physics*, Missouri, 89-91, *prof. sch. of mines*, 91-94; *assoc. prof.*, Texas, 94-96; *prof. Mo. Sch. of Mines*, 99-15, *director*, 15- Consulting engineer, St. Louis, 96-99. A.A.; Eng. Educ; Tex. Acad. Elasticity of ice; cold on magnetism; change of dimensions due to magnetism; atmospheric electricity; Missouri rainfall and temperature.
- MacRae, Dr. Duncan**, Westinghouse Lamp Co., Bloomfield, N. J. *Physical chemistry*. Fayetteville, N. C., March 7, 91. B.S., North Carolina, 09, 09-10; Summer Sch. of South, 10; Columbia, summer, 11; Ph.D., Mass. Inst. Tech., 17. Asst. chem., North Carolina, 08-10; teacher science, Richmond Co. Acad., Ga., 10-12; *asst. theoret. chem.*, Mass. Inst. Tech., 12-13, *instr. inorg. chem.*, 13-15; chief chemist, eng. dept., Westinghouse Lamp Co., 17-18; *capt.*, C.W.S., 18-19; *research chemist, research lab. Westinghouse Lamp Co.*, 19- Chem. Soc. (reporter, N. C. sect, 10). Specific heat of organic liquids.
- McWhorter, Dr. Golder L(ouis)**, 1526 W. 103d St., Chicago, Ill. *Surgery*. Iowa, Sept. 23, 88. B.S., Chicago, 11, M.D., Rush Med. Col., 13; fellow, Minnesota, 14-17, Ph.D., 17. *Instr. surg.*, Rush Med. Col., 17- Am. Med. Ass. Abdominal surgery; the bile ducts; anatomy of the thoracic operculum; bone repair.
- Maddison, Miss Isabel**, Bryn Mawr College, Bryn Mawr, Pa. *Mathematics*. Reading, England. Girton, Cambridge, 89-92, *math. tripos* (wrangler), 92; Bryn Mawr, 92-93, fellow, 93-94, Ph.D., 96; B.Sc., London, 93; Göttingen, 94-95; B.A., Trinity (Dublin), 05. Asst. sec'y to pres, Bryn Mawr, 95-96, sec'y, 96-04, reader in math, 96-04, *assoc.*, 04-, *asst. to pres.*, 04-, *recording dean*, 10- Math. Soc.; London Math. Soc. Theory of singular solutions of differential equations of the first order.
- Madrill, Dr. J(ames) D(avis)**, Finance Building, Philadelphia, Pa. *Actuarial science*. Reno, Nev., April 13, 80. A.B., California, 03, fellow, Lick Observatory, 03-07, Ph.D., California, 07. Astronomer in charge, Int. Latitude Observatory, Ukiah, Calif., 07-12; *instr. math.*, California, 12-13; investigator actuarial dept., Travelers Ins. Co., 13-17; *actuary*, U. S. Bur. Efficiency, 17-18; *supt.*, Fed. Board Vocational Educ., 18, case officer and supervisor of training, San Francisco, 18-20; *actuary*, Pa. Mfrs. Ass. Casualty Ins. Co., 20- A.A.; Astron. Soc.; Seismol. Soc.; fel. Casualty Actuarial and Statist. Soc. (mem. examining committee, 17, 18, educ. committee, 18); Pacific Astron. Soc.; fel. Royal Astron. Soc.; Astron. Gesell. Micrometry; photometry; orbits; astrophysics; variable stars; variation of latitude; casualty insurance rates; occupational diseases; retirement pensions; war risk insurance; vocational rehabilitation of the disabled.
- Magath, Dr. Thomas Byrd**, Mayo Clinic, Rochester, Minn. *Parasitology*. Oxford, Ga., Jan. 28, 95. Ph.B., Emory, 13; fellow, James Millikin, 13-14, M.S., 14; fellow, Illinois, 16-17, Ph.D., 17, M.D., 19. Asst. zool., Illinois, 14-16, *instr. anat.*, med. dept., 17-19; *asst. prof. clin. bacter. and parasitol.*, Minnesota, 19-, *assoc.*, Mayo Clinic, 19- Teacher biol., Ill. State Nor. Univ., summer, 14; scientific investigator, Bur. Fisheries, 17. A.A.; Ass. Anat.; Soc. Zool.; Micros. Soc. Anatomy; chemistry.
- Magie, Prof. W(illiam) F(rancis)**, Princeton, N. J. **Physics*. Elizabeth, N. J., Dec. 14, 58. A.B., Princeton, 79, A.M., 82; Ph.D., Berlin, 85. Asst. and *instr. physics*, Princeton, 79-85, *asst. prof.*, 85-90, *prof.*, 90- A.A.; Physical Soc. (v. pres, 09, 10, pres, 11, 12); Philos. Soc. Capillarity; specific heats of solutions; heats of dilution.
- Magnusson, Prof. C(arl) Edward**, University of Washington, Seattle, Wash. *Electrical engineering*. Harris, Minn., Sept. 29, 72. B.E.F., Minnesota, 96, M.S., 97, E.E., 05; fellow, Wisconsin, 99-00, Ph.D., 00. Teacher science, State High Sch., St. Cloud, Minn., 00-01; *prof. physics*, New Mexico, 01-04; *assoc. prof. elec. eng.*, Washington (Seattle), 04-05, *prof.*, 05- Consulting engineer, Am. Nitrogen Products Co., 17-18. A.A.; Physical Soc.; Elec. Eng.; Chem. Soc.; Electrochem. Soc.; Eng. Educ; Radio Eng. Anomalous dispersion of cyanin; dimensional equations and conservation of energy; electrolytic corrosion in reinforced concrete; visual sensations in a magnetic field; artificial transmission line with variable line constants; induction heater.
- Magnusson, Prof. J(ohn) P(eter)**, Augustana College, Rock Island, Ill. *Physical chemistry*. Sweden, Dec. 12, 72. A.B., Gustavus Adolphus, 98; A.M., Minnesota, 03; fellow, Wisconsin, 03-04; Ph.D., Cornell, 06. Instr., high schools, Minn. and Mich., 98-03; physical chem., Cornell, 05-06; *prof. chem.*, Augustana, 06- A.A.; Chem. Soc.; Ill. Acad. Measurement of vapor pressures; equilibria in gaseous systems; purification of rare earths; chemical composition; colloids.
- Magrath, Dr. George Burgess**, Harvard Medical School, Boston, Mass. *Pathology*. Jackson, Mich., Oct. 2, 70. A.B., Harvard, 94, Bullard fellow, 97-98, M.D., 98, A.M., 99. *Instr. path.*, Harvard Med. Sch., 98- Pathologist, Cambridge, Faulkner, Carney and Baptist Hospitals, Boston. Ass. Path. and Bact.; Boston Soc. Med. Sci. Normal and pathological histology of arteries; histology of tumors; pathological anatomy and histology of variola; arteriosclerosis; melanoderma; acute yellow atrophy of the liver.

- Magruder, Egbert W(atson)**, F. S. Royster Guano Co, Norfolk, Va. *Chemistry*. Albemarle Co, Va, Oct. 25, 68. A.B, Hampden-Sidney, 91; Virginia, 92; Hopkins, 92-97. Asst. prof. chem, Miss. Agr. Col, 97-00; chief chemist and state chemist, Va. Dept. Agr, 00-15; *chief chemist, F.S.Royster Guano Co*, 15- Lecturer and asst. prof. food chem, Med. Col. of Va; chemist, Va. Oyster Commission, 13-14. A.A.; Chem. Soc. (pres, Va. sect). Agricultural chemistry; fertilizers.
- Magruder, Prof. W(illia)m T(homas)**, 342 W. Ninth Ave, Columbus, Ohio. *Mechanical engineering*. Baltimore, Md, April 22, 61. M.E, Stevens, 81; Hopkins, 86-87. Designer, Campbell Printing Press and Mfg. Co, 81-86; chief chemist, B. and O. R. R, 87; instr. *mech. eng*, Vanderbilt, 87-88, adj. prof, 88-96; *prof, Ohio State*, 96- Chief of machinery, Tenn. Expos, 96. A.A. (sec'y, D, 99-00, 02-07); Mech. Eng. (chairman, gas power sub-committee, 19); Eng. Educ. (councilor, 99-02, 07-11, v. pres, 05-06, sec'y, 06-07, pres, 12-13, councilor); Ohio Soc. Mech. Eng. (pres, 05-07); Eng. Club Columbus (pres, 04-05). Gas engines; materials of construction.
- Mahin, Prof. Edward G**, 27 Russell St, La Fayette, Ind. *Chemistry*. La Fayette, Aug. 16, 76. B.S, Purdue, 01, M.S, 03; fellow, Hopkins, 07, Ph.D, 08. Asst. chem, *Purdue*, 01-03, instr, 03-06, assoc. prof, 08-14, *prof. anal. chem*, 14- Metallographerist, U. S. Naval Eng. Exp. Sta, summers, 17, 18; consulting chem. engineer, Mich. Smelting and Ref. Co. A.A.; Chem. Soc; Min. and Met. Eng; Soc. Steel Treating; Soc. Test. Mat; Ind. Acad; British Inst. Metals. Metallurgy; London purple; conductivity and viscosity of organic solutions; aluminates; non-metallic inclusions in iron and steel; sulphur trioxide.
- Mahoney, J(ames) O(wen)**, 1900 Crockett St, Dallas, Tex. *Mathematics*. Lynnville, Tenn, Aug. 3, 70. B.E, Vanderbilt, 94, M.S, 96. Instr. math, Vanderbilt, 94-97; math. and science, Cooper Training Sch, Carthage, Tex, 98-99; *head, dept. math, Dallas High Sch*, 99- A.A.; Math. Soc; Cent. Ass. Sci. and Math. Teachers; British Math. Ass.
- Mahood, Dr. S(amuel) A(rthur)**, Tulane University, New Orleans, La. *Chemistry*. Platte Co, Nebraska, May 18, 84. B.S, Nebraska, 10, A.M, 11; Ph.D, Cornell, 17. Asst. chem, Nebraska, 08-10; head, dept. chem, high sch, Lincoln, Nebr, 10-11; instr. chem, Lawrence, 11-12; asst, Cornell, 12-13, instr. org. chem, 13-17; senior research chemist, forest products lab, U. S. Forest Service, and lecturer forest products, Wisconsin, 17-20; *assoc. prof. chem, Tulane*, 20- Chem. Soc. Chemistry of forest products; halogen derivatives of phenolphthalein.
- Mailey, R(oyal) D(avis)**, 323 Springdale Ave, East Orange, N. J. *Electrical engineering*. Lynn, Mass, 80. B.S, Mass. Inst. Tech, 04. Assoc. physical chem, Mass. Inst. Tech, 04-14; *chief engineer, Cooper Hewitt Elec. Co*, 16- Physical Soc; Chem. Soc; Elec. Eng. Thermodynamics; electrical conduction in gas and vapors.
- Mailliard, Joseph**, 1815 Vallejo St, San Francisco, Calif. *Ornithology*. Bordentown, N. J, Dec. 30, 57. California, 68. *Curator birds and mammals, Calif. Acad*, 19- A.A; fel. Ornith. Union; Calif. Acad; Cooper Ornith. Club. Geographic distribution and habits of birds.
- Mains, Dr. E(dwin) B(utterworth)**, Agricultural Experiment Station, La Fayette, Ind. *Botany*. Coldwater, Mich, March 31, 90. A.B, Michigan, 13, fellow, 15, Ph.D, 16. Asst. botanist, *exp. sta, Purdue*, 16-17, *assoc. botanist*, 17- A.A; Bot. Soc; Phytopath. Soc. Physiology, biology and taxonomy of Uredinales.
- Major, Prof. C(harles) C(urtis)**, Iowa State College, Ames, Iowa. *Mechanical engineering*. Lehman, Pa, Jan. 4, 69. M.E, Bloomsburg Nor. Sch, 91; M.E, Cornell, 98. Asst. chief engineer, Swift and Co, St. Joseph, Mo, 98-99; instr. mech. eng, Cornell, 99-01; California, 01-03; head, sch. applied sci, Oklahoma, 04-05; asst. prof. mech drawing, Ohio State, 05-07; mech. engineer, Midgley Mfg. Co, 07-08; *assoc. prof. mech. eng, Iowa State*, 08- Engineer for various indust. concerns, summers. Mech Eng.
- Major, Prof. David R**, Huntington Bank Building, Columbus, Ohio. *Psychology, Education*. Frankfort, Ind, March 26, 66. B.S, Wabash, 90; Ph.D, Cornell, 96; higher diploma in educ, Teachers Col, Columbia, 99; LL.B, Indiana, 16. Principal, high sch, Warren, Ind, 90-92; Frankfort, Ind, 96-98; acting prof. pedag, Nebraska, 99-00; asst. educ, Teachers Col, Columbia, 00-01; prof, Ohio State, 01-14. A.A; Psychol. Ass; West. Philos. Soc; Ass. Univ. Professors Educ.
- Major, Dr. R(alph) H(ermon)**, Rosedale, Kans. *Pathology*. Liberty, Mo, Aug. 29, 84. A.B, William Jewell, 02; Leipsie, 03-06; M.D, Hopkins, 10; Munich, 12-13. Asst. med, Hopkins, 11-13; instr. *path*, Stanford, 13-14; *prof, Kansas*, 14- Ass. Path. and Bact. Endocarditis; anaphylaxis; diabetes.
- Malcolm, C(harles) W(esley)**, 1233 Granville Ave, Chicago, Ill. *Engineering*. Roseville, Ill, Oct. 13, 79. B.S, Illinois, 02, C.E, 06. Instr. civil eng, Illinois, 02-06, assoc, 06-07, asst. prof. struct. eng, 07-13; v. pres. and gen. manager, *Geyser Elec. Co*, 13- Assoc. mem. Civil Eng; Eng. Educ. Graphic statics; structural engineering.
- Malleis, O(tto) O(scar)**, Mellon Institute, Pittsburgh, Pa. *Chemistry*. Halstead, Kans, July 9, 89. A.B, Kansas, 12, M.S, 13. Commercial chemist, 12-16; fellow, *Koppers Co, Mellon Inst*, 17- Chem. Soc; Soc. Test. Mat. Reactions of formamidines; coal and coke.
- Mallinckrodt, E(dward), Jr**, 16 Westmoreland Place, St. Louis, Mo. *Chemistry*. St. Louis, Nov. 17, 78. A.B, Harvard, 00, A.M, 01. V. pres, *Mallinckrodt Chem. Works*, 05- A.A; Chem. Soc; Mech. Eng.
- Malloch, John Russell**, Urbana, Ill. *Entomology*. Milton of Campsie, Scotland, Nov. 16, 75. B.A, Glasgow, 97. Scientific asst, bur. entom, U. S. Dept. Agr, 12-13; asst. to state entomologist, Ill, 13-17; *entomologist, Ill. Nat. Hist. Surv*, 17- Ecol. Soc; Wash. Entom. Soc; fel. London

Entom. Soc. Biology and taxonomy of Diptera, Hemiptera and Hymenoptera.

Mallory, Dr. F(rank) B(urr), Boston City Hospital, Boston, Mass. **Pathology*. Cleveland, Ohio, Nov. 12, 62. A.B. Harvard, 86, A.M., M.D., 90, fellow (Prague and Freiburg), 93-94. Asst. histol., Harvard Med. Sch., 90-91, path., 91-93, instr., 94-96, asst. prof., 96-01, assoc. prof., 01-19; *pathologist, Boston City Hosp.* Visiting pathologist, Children's Hosp. A.A.; Ass. Path. and Bact. (treas., 11); Am. Physicians; Ass. Cancer Research (pres., 10); Am. Med. Ass.; Social Sci. Ass.; Am. Acad.; Boston Soc. Med. Sci. (treas., 08); Boston Soc. Med. Improv.; Path. Gesell. Actinomycosis; typhoid fever; epidemic cerebro-spinal meningitis; diphtheria; necrosis of the liver; histological technic; dural endothelioma; measles; scarlet fever.

Mally, Prof. Fred(erick) W(illiam), Laredo, Tex. *Plant breeding*. Des Moines, Iowa, Nov. 30, 68. B.S., Iowa State, 87, M.S., 89. Asst. to state entomologist, Ill., 89-90; asst. entomologist, U. S. Dept. Agr., 90-99; prof. entom., Tex. Col., 99-03; *state entomologist, Tex.*, 09- Director, Cross S Farm Co. A.A.; Tex. Hort. Soc. (pres.); Tex. Truck Growers Ass. (pres.); Tex. Acad.; Iowa Acad. Injurious insects; boll weevil of cotton; plant breeding.

Malmberg, Dr. C(onstantine) F(rithiof), 837 N. 21st St., Philadelphia, Pa. *Psychology*. DeKalb, Ill., Aug. 13, 84. A.B., Bethany, 03; Columbia, 06-07; Yale, 07-08; fellow, Iowa, 11-13, Ph.D., 14. Instr. educ. and English, Gustavus Adolphus, 08-11, prof. educ. psychol., 13-15; head, dept. psychol. and educ., Thiel, 15-18; *educ. director (mental cases), Fed. Board for Vocational Educ.*, 19- With Sanit. C., U. S. A., 18. Psychol. Ass. Psychology of musical sounds; army tests.

Malone, Prof. Edward F(all), University of Cincinnati, Cincinnati, Ohio. *Anatomy*. Nashville, Tenn., April 4, 80. A.B., Vanderbilt, 03; M.D., Hopkins, 07; Berlin, 07-10. Asst. prof. anat., Cincinnati, 10-15, assoc. prof., 15-18, *prof. histol.*, 18- A.A.; Ass. Anat. Distribution, histology and function of mammalian brain cells; nervous anatomy.

Malott, Dr. Clyde A(mnett), Bloomington, Ind. *Physiography, Geology*. Atlanta, Ind. A.B., Indiana, 13, A.M., 15, Ph.D., 19. Instr. geol. and physiog., high sch., Fort Wayne, Ind., 15; tutor *geol.*, Indiana, 15-16, instr., 16-17, *asst. prof.*, 18- Field asst., Okla. Geol. Surv., summer, 16. A.A.; Ind. Acad. Flood conditions and physiography of Indiana; glacial geology.

Maltby, Dr. Margaret E(liza), Barnard College, New York, N. Y. **Physics, Physical chemistry*. Bristolville, Ohio, Dec. 10, 60. A.B., Oberlin, 82, A.M., 91; B.S., Mass. Inst. Tech., 91, fellow, 93-95; Ph.D., Göttingen, 95; Ass. Col. Alumnae fellow, 95-96; Clark, 99-00. Instr. physics, Wellesley, 89-93, in charge, dept. physics, 96; instr. physics and math., Lake Erie, 97-98; asst. to pres., Physik. Tech. Reichsanstalt, Charlottenburg, 98-99; instr. chem., *Barnard, Columbia*, 00-03, adj. prof. physics, 03-10, *assoc. prof.*, 10- A.A.; Physical Soc. Electricity; measurement of high electrolytic resistances; measurement of

periods of rapid electrical oscillations; conductivity of very dilute solutions of certain salts; radioactivity.

Mance, Prof. G(lover) C(leveland), 31 Main St., Canton, N. Y. *Geology*. Pine Bush, N. Y., Feb. 5, 83. B.S., Colgate, 06; A.M., Indiana, 14, fellow, 13-14, Ph.D., 15. Teacher nat. science, Rochester, 06-08; high sch., Ottawa, Ill., 08-09; principal, Maysville, Ky., 15-16; *prof. geol. St. Lawrence*, 16- Ill. Acad.; Ind. Acad. Economic geology; quarrying.

Mandel, Dr. Arthur R(udolph), 150 E. 40th St., New York, N. Y. *Pathology*. Boston, Mass., June 7, 76. Col. City of N. Y., 94-97; Univ. and Bellevue Hosp. Med. Col., 98-02, Lusk fellow, 02; M.D., Munich, 04. Asst. chem., N. Y. Univ., 97-02; *prof. applied path., Univ. and Bellevue Hosp. Med. Col.*, 02- Pathologist and visiting physician, St. Vincent Hosp., 02- Soc. Exp. Biol.; Am. Med. Ass.; Harvey Soc.; N. Y. Path. Soc. Physiological chemistry; diabetes; metabolism of fever.

Mandel, Prof. John A(lfred), 338 E. 26th St., New York, N. Y. *Physiological chemistry*. Stockholm, Sweden, Oct. 18, 65. Berlin; Sc.D., N. Y. Univ., 01. Adj. prof. chem. and physiol. chem., Univ. and Bellevue Hosp. Med. Col., 97-98, *prof.*, 98- Asst. prof. chem. and physics, Col. City of N. Y., 98-99. A.A.; Physiol. Soc.; Soc. Biol. Chem.; Chem. Soc.; assoc. fel. N. Y. Acad. Med.; Chem. Gesell. Origin of glycuronic acid in the animal body; nucleic acid and glucosulfonic acid of the mammary glands; nucleic acids and their cleavages.

Mandlebaum, Dr. F(red) S(amuel), 1300 Madison Ave., New York, N. Y. *Pathology*. Hartford, Conn., Jan. 18, 67. M.D., Bellevue Hosp. Med. Col., 89; Vienna and Berlin, 91-93. Asst. pathologist, *Mt. Sinai Hosp., N. Y.*, 93-95, *pathologist*, 95- Lecturer internal med., N. Y. Polyclinic, 93-94; visiting physician, Chapin Home, N. Y., 95-01. A.A.; Ass. Path. and Bact.; Am. Med. Ass.; N. Y. Acad. Med.; N. Y. Path. Soc. (pres., 06). Mediastinal dermoid cyst; actinomycosis; splenomegaly; bladder tumors; carcinoma of appendix; myasthenia gravis with thymus tumor; malignant tumors.

Maneval, Prof. W(illis) E(dgar), University of Missouri, Columbia, Mo. *Botany*. Liberty, Pa., Feb. 5, 77. Ph.B., Bucknell, 02, M.S., 03; fellow, Hopkins, 11-12, Ph.D., 12. Acting prof. biol., Roanoke, 07-10; Randolph-Macon, 12-14; instr. bot., Virginia, 14-15; *Missouri*, 15-17, *asst. prof.*, 17- Mem. staff, biol. lab., Cold Spring Harbor, 12-14. Collaborator, bur. plant indust., U. S. Dept. Agr. A.A.; Phytopath. Soc.; Bot. Soc. Development of Magnolia and Liriodendron; fusarial diseases of plants; distribution of parasitic fungi.

Manges, Dr. Morris, 72 E. 79th St., New York, N. Y. *Medicine*. New York, May 10, 65. A.B., Col. City of N. Y., 84, A.M., 87; M.D., Columbia, 87; Berlin and Vienna, 88-89. *Prof. clin. med.*, N. Y. Polyclinic Med. Sch., 98-08; *N. Y. Univ.*, 11- Visiting physician, Mt. Sinai Hosp., N. Y., 98- Am. Med. Ass.; Climat. Ass.; Gastro-Enterol. Ass.; fel. N. Y. Acad. Med.; N. Y. Path. Soc. Clinical medicine.

Manheimer, Dr. Wallace A(aron), 201 West 87th St., New York, N. Y. *Sanitation*. New York, Feb. 13, 87. A.B., Col. City of N. Y., 08; A.M., Columbia, 12, Ph.D., 14. *Research, research lab, N. Y. Dept. Health, 15-; teacher, Evander Childs High Sch, 10- Pub. Health Ass; Soc. Bact; Ass. Prom. Hygiene and Pub. Baths (sec'y and ed. 'Jour'). Bacteriology; public health; water disinfection; school and swimming pool sanitation.*

Manley, Dr. O(rville) T(itus), Warren, Ohio. *Medicine*. Garrettsville, Ohio, Nov. 20, 74. B.L., Hiram, 98; Ohio State, 93-94; M.D., Cleveland Col. Physicians and Surg, 00. House surgeon, St. Alexis Hosp., Cleveland, 99-00; *demonstrator exp. med, Western Reserve, 15- Surgeon, Warren City Hosp, Warren, Ohio, 14- A.A; Am. Med. Ass; Cleveland Med. Library Ass. Surgery; tissue transplantation; ductless glands; secretory innervation of the thyroid gland; tumor; cancer.*

Mann, Dr. Albert, Carnegie Institution, Washington, D. C. *Botany*. Hoboken, N. J., June 30, 53. A.B., A.M., Wesleyan, 79; Ph.D., Munich, 94. Prof. bot, Ohio Wesleyan, 94-00; expert, U. S. Dept. Agr., 06-19; *with Carnegie Institution, 19- Prof. bot, George Washington, 07-09. Wash. Biol. Soc; Wash. Bot. Soc; Royal Micros. Soc. Diatoms; morphological botany; barley.*

Mann, Dean A(lbert) R(ussell), Ithaca, N. Y. *Agriculture*. Hawkins, Pa., Dec. 26, 80. B.S.A., Cornell, 04, A.M., Chicago, 16. Sec'y, registrar and ed, N. Y. State Col. Agr., Cornell, 09-15, prof. rural social organization, 15-16, acting dean, 16-17, *dean, 17-, director, Exp. Sta. and exten, 17- Trustee, N. Y. State Sch. Agr., Alfred; Morrisville; Delhi. A.A; Sociol. Soc; Ass. Agr. Legis.*

Mann, B(enjamin) Pickman, 1918 Sunderland Place, Washington, D. C. *Social economics*. West Newton, Mass., April 30, 48. A.B., Harvard, 70. Govt. entomologist, Brazil, 70-71; consulting econ. entomologist, 72-81; asst. entomologist and asst. div. entom., U. S. Dept. Agr., 81-86; *asst. examiner, U. S. Patent Office, 87- Instr. bot, Bowdoin, 77; ed, 'Psyche,' 74-85; mem. Board of Children's Guardians, D. C. (sec'y, 93-04, pres, 05-14). A.A; assoc. mem. Ass. Econ. Entom; Entom. Soc; Bibliog. Soc; Library Ass; Esperanto Ass. N. Am. (treas, 19); Wash. Biol. Soc; Cambridge Entom. Club (sec'y and treas, 74-81, pres, 83); cor. mem. Phila. Acad. (Entom. Soc); British Esperanto Ass. Entomology; botany; bibliography; Esperanto.*

Mann, Prof. Charles A(ugust), University of Minnesota, Minneapolis, Minn. *Chemistry*. Milwaukee, Wis., June 5, 86. B.S., Wisconsin, 09, M.S., 11, Ph.D., 15. Instr. chem. eng, Wisconsin, 11-16; *prof, Iowa State, 16-19; chem. eng, Minnesota, 19- Chem. Soc. (chairman, Ames sect, 18); Electrochem. Soc; Wis. Acad. Chemistry of saw palmetto berries and corn cobs; lead from sulphate residues.*

Mann, Prof. C(harles) R(iborg), War Department, Washington, D. C. **Physics*. Orange, N. J., July 12, 69. A.B., Columbia, 90, fellow, 90-92, A.M., 91, John Tyndall fellow, 92-95; Ph.D., Berlin, 95; hon. Sc.D., Lafayette, 18. Instr.

physics, Chicago, 96-02, asst. prof, 02-07, assoc. prof, 07-14; research expert, eng. educ., Carnegie Foundation, 14-18; *consulting expert educ, for W. D., U.S.A., 18- D. S. medal, U.S.A., 19. A.A. (sec'y, L, 08, 10); Math. Soc; Physical Soc; Nature Study Soc; Federation Teachers Math. and Nat. Sci. (sec'y-treas, 08, 09, pres, 10). Induced magnetism; optics; history and teaching of science; education.*

Mann, Dr. Frank Charles, Mayo Foundation, Rochester, Minn. *Surgery*. Decatur, Ind., 87. A.B., Indiana, 11, M.D., 13, A.M., 14. Teaching fellow physiol, Indiana, 09-12, instr. surg, 13-14; *assoc. prof. exp. surg. and path, Mayo Foundation, Minnesota, 17- Physiol. Soc. Experimental surgery, physiology and pathology; surgical shock.*

Mann, P(aul) B(lakeslee), Evander Childs High School, 184th St. and Creston Ave., New York, N. Y. *Biology*. Potsdam, N. Y., 76. A.B., Cornell, 02, A.M., 03. Head, science dept, Nyack High Sch, 99-01; asst. zool, Cornell, 02-03; teacher *biol, Hill Sch, Pottstown, Pa., 03-04; instr, Morris High Sch, New York, 04-14; head of dept, Evander Childs High Sch, 14- Asst. prof. biol. methods, Cornell, summers, 08-10; reader bot, C. E. E. B., 11, zool, 12-, biol, 17-, examiner zool, 14-16, 18-; lecturer birds, Am. Museum Nat. Hist. A.A; N. Y. Biol. Teachers Ass. Spiracular cleft in ganoid fishes; respiration in Rana; mental hygiene.*

Mann, Dr. William M., U. S. National Museum, Washington, D. C. *Entomology*. Helena, Mont., July 1, 86. A.B., Stanford, 11; Sc.D., Harvard, 15, Sheldon traveling fellow, 15-16. *Specialist in ants, bur. entom, U. S. Dept. Agr., 17- Hon. curator Hymenoptera, U. S. Nat. Museum; entomologist, Stanford exped. to Brazil, 11; expeditions to Cuba and Haiti, 12; Mexico, 13; Turkey in Asia, 14; South Sea Islands, 15-16. Entom. Soc; Pacific Coast Entom. Soc; Wash. Entom. Soc; Cambridge Entom. Club (sec'y, 11-14). Classification, behavior and geographical distribution of ants; tropical insect life; ant guests.*

Manning, Prof. Henry P(arker), Brown University, Providence, R. I. **Mathematics*. Woodstock, Conn., Oct. 3, 59. A.B., Brown, 83, A.M., 86; fellow, Hopkins, 90-91, Ph.D., 91. Teacher, 83-89; instr. math, Brown, 91-95, asst. prof. pure math, 95-06, assoc. prof, 06-20, retired. Assoc. ed, 'Am. Math. Monthly,' 19- A.A; Math. Soc; Circolo Mat. di Palermo. Theory of functions; geometry of four dimensions.

Manning, Dr. Van H(artrog), U. S. Bureau of Mines, Washington, D. C. *Engineering*. Horn Lake Depot, Miss., Dec. 15, 61. Hon. D.Eng., Pittsburgh, 19. Civil engineer, U. S. Geol. Surv., 85-10; administrative asst., U. S. Bur. Mines, 10-11, asst. director, 11-15, *director, 15-20; research, Am. Petrol. Inst, 20- Mem. Nat. Research Council. Min. Eng; Min. Cong; Soc. Test. Mat; Coal Min. Inst; Wash. Soc. Eng. Topographic maps; coal.*

Manning, Prof. W(illiam) A(lbert), Stanford University, Calif. **Mathematics*. Salem, Oregon, Dec. 5, 76. A.B., Willamette, 00; A.M., Stanford, 02, Ph.D., 04; Paris, 04-05. Asst. math, Stanford, 00-02, instr. applied math, 02-

- 04, asst. prof, 04-13, *assoc. prof.*, 13- Math. Soc. Substitution groups; groups of permutations.
- Manns, Dr. A(lbert) G(eorge)**, Oconomowoc, Wis. *Chemistry*. Allegheny, Pa, June 5, 60. Ph.G, Chicago Col. Pharmacy, 80; B.S, Illinois, 85; Ph.D, Berlin, 88. *Chemist*, Ill. Exp. Sta, 88-90; instr. chem, Chicago Col. Pharmacy, 90-93; *chief chemist*, Armour and Co, Chicago, 93-07; *Albert Trostel and Sons Co*, 07- *Chem. Soc.*
- Manns, Dr. Tho(mas) F(ranklin)**, Delaware Agricultural Experiment Station, Newark, Del. *Plant pathology, Bacteriology*. Logan, Ont, Nov. 7, 76. B.S, N. Dak. Col, 01, M.S, 03; Ph.D, Pennsylvania, 13. Asst. bot, N. Dak. Col, 01-03, 03-04; teacher science, Philippine Islands, 04-07; asst. botanist, Ohio Exp. Sta, 07-10, soil bacteriologist, 10-12; *plant pathologist and soil bacteriologist*, Del. Col. and Exp. Sta, 12- A.A; Phytopath. Soc; Bot. Soc. Plant pathology and physiology; soil bacteriology; fungi of flax seed and flax sick soil; anthracnose diseases of certain cereals and grasses; the fungus of wheat scab as a seed and seedling parasite; the brown blight of oats; potato storage and diseases; new bacterial diseases of legumes; muck as a fertilizer; apple root rot in Delaware; diseases and storage of sweet potatoes; cabbage yellows and food rot.
- Mansfield, Albert K(ing)**, Salem, Ohio. *Mechanical engineering*. Newburyport, Mass, March 25, 49. Mass. Inst. Tech, 70-73; Polytech, Munich, 73. Gen. foreman, ear dept, P. C. C. and St. L. R. R, 79-83; supt. motive power, N. Y. and N. E. R. R, 93-94; mech. manager, Buckeye Engine Co, 88-04; consulting engineer, U. S. Wind Eng. and Pump Co, 04-07, retired. A.A; Mech. Eng. Governors; wheel arms; teeth of gears; valve gear; shaft governors.
- Mansfield, Prof. G(eorge) R(ogers)**, U. S. Geological Survey, Washington, D. C. *Geology*. Gloucester, Mass, Aug. 30, 75. B.S, Amherst, 97, A.M, 01; Harvard, 04, Ph.D, 06. Teacher, Cent. High Sch, Cleveland, Ohio, 97-03; Austin teaching fellow, Harvard, 04-06, instr. geol, 06-09; asst. prof, Northwestern, 09-13; asst. U. S. *Geol. Surv.*, 10-12, *assoc. geologist*, 12-13, *geologist*, 13- Instr. geol, summer sch, Harvard, 06; in charge, Harvard summer geol. course in Montana, 07-09; in charge, Harvard Seismographic Sta, 08-09. A.A; *Geol. Soc*; *Ass. Geog*; *Min. and Metal. Eng*; Wash. Acad; Wash. *Geol. Soc.* (treas, 20-). Conglomerates; physiography; phosphates in Idaho and Wyoming; nitrates in Oregon and California; coal and mineral resources in southeastern Idaho; sulphur in New Mexico; greensands in New Jersey.
- Manson, Prof. E(dmund) S(ewall)**, Jr, Ohio State University, Columbus, Ohio. *Astronomy*. Scituate, Mass, Dec. 1, 75. B.S; Mass. Inst. Tech, 97, M.S, 98. Computer, Lowell Observatory, 99-01; asst, Harvard Col. Observatory, 02-07; instr. *astron.*, Ohio State, 07-08, asst. prof, 08-09; *assoc. prof.*, 09- A.A; *Astron. Soc*; fel. Royal *Astron. Soc.* Measurements of positions of asteroids.
- Manson, Dr. Marsden**, Hobart Building, San Francisco, Calif. *Geology, Climatology*. Lee-wood, Va, Feb. 14, 50. Grad, Va. Mil. Inst, 70, C.E, 77; Ph.D, California, 93. Asst. prof. physics and chem, Va. Mil. Inst, 75-77; asst. engineer, Calif. State Eng. Dept, 78-80; U. S. Eng. Dept, 80-82; chief engineer, Board of Harbor Commission, San Francisco, 83-92; consulting engineer, Commission Pub. Works, Calif, 93-94; pres, Dept. Highways, 95-99; mem. Board Pub. Works, San Francisco, 00-04, city engineer, 08-13; *consulting engineer*. A.A; *Civil Eng*; Calif. Acad; fel. Royal *Geog. Soc.* Dynamic and glacial geology; climatology; evolution of climates.
- Manuel, Earle V(incent)**, 4303 Oakenwald Ave, Chicago, Ill. *Chemistry*. Minn, 85. B.S, Minnesota, 07. Asst. chem, Illinois, 07-08; chemist, Pfister and Vogel Lea Co, 08-10; U. S. Glue Co, 10; *chem. engineer*. Chem. Soc. Organic chemistry; non-ferrous metals.
- Manwaring, Dr. Wilfred H(amilton)**, Stanford University, Calif. *Experimental pathology*. Ashland, Va, Sept. 14, 71. B.S, Michigan, 95; M.D, Hopkins, 04; fellow, Chicago, 04-05; traveling fellow, Rockefeller Inst, 07-08; Berlin, 07-08; Frankfurt a/M, 08-09; Lister Institute, London, 09-10. Asst. path, Chicago, 04-06; *assoc. prof. path. and bacter.*, Indiana, 05-07; asst. path. and bacter, Rockefeller Inst, 10-13; *prof. bacter. and exper. path.*, Stanford University, 13- A.A; *Ass. Path. and Bact*; *Soc. Bact*; *Soc. Exper. Path*; *Soc. Exper. Biol. and Med*; *Soc. Immunol.* Functional pathology; immunology.
- Marbaker, Dr. Edward E(llsworth)**, 622 Marlyn Road, Philadelphia, Pa. *Chemistry*. Trenton, N. J, June 28, 88. B.S, Cent. High Sch, Phila, 06; Pennsylvania, 10, Ph.D, 14. Asst. chemist, Westinghouse Lamp Co, 10-12, chief chemist, 14-17; *Alexander Bros*, 17-19, *chief engineer*, 19- *Chem. Soc*; *Leather Chem. Ass*; *Franklin Inst.* Tungsten; molybdenum; leather chemistry.
- Marbut, Prof. C(urtis) F(letcher)**, U. S. Department of Agriculture, Washington, D. C. *Geology*. Lawrence Co, Mo, July 19, 63. B.S, Missouri, 89; A.M, Harvard, 94; LL.D, Missouri, 16. Asst. geologist, Mo. *Geol. Surv.*, 90-95; instr. geol, Missouri, 95-97, asst. prof, 97-99, prof, 99-13; *in charge soil surv.*, U. S. *Dept. Agr.*, 10- Director, Mo. *Soil Surv.*, 05-13; special agent, bur. soils, U. S. *Dept. Agr.*, 09-10; mem. Nat. Research Council, 19- *Geol. Soc*; *Ass. Geog.* Physical geography and geology of Missouri; soils of the United States.
- March, Prof. H(erman) W(illiam)**, 115 Summit Ave, Madison, Wis. *Mathematics*. Ochevedan, Iowa, Dec. 14, 78. A.B, Michigan, 04, A.M, 05; Ph.D, Munich, 11. Asst. astron, Michigan, 02-05; instr. physics, Princeton, 05-06; *math, Wisconsin*, 06-09, asst. prof, 11-20; *assoc. prof.*, 20- A.A; *Math. Soc.* Diffraction of waves of wireless telegraphy; integral representation of arbitrary functions.
- Marckworth, O(tto) S(tanley)**, Chamber of Commerce, Columbus, Ohio. *Chemistry*. Clifton, Cincinnati, Ohio, Dec. 30, 79. Cincinnati; B.S, Ohio State, 01. Asst. chemist, Carnegie Steel Co, 01-02; N. Y. Underground R. R. Co, 02; director, Ohio Test. Lab, 02; *state chemist*, Ohio, 03- Managing *assoc.*, The Vitrocell Co.

- A.A.; Chem. Soc; Soc. Chem. Indust; Agr. Chem. Agricultural chemistry; food products.
- Marcovitch, S(imon)**, University of Tennessee, Knoxville, Tenn. *Entomology*. Russia, Dec. 12, 90. B.S. Cornell, 14; M.S. Minnesota, 16. *Asst. entomologist*, Minnesota; *Exp. Sta. Tennessee*. A.A.; Entom. Soc; Ass. Econ. Entom; Ecol. Soc. Seed-infesting chalcids-flies; strawberry weevil; weed-attacking insects.
- Marcus, Dr. Joseph K(eats)**, 580 St. Nicholas Ave, New York, N. Y. *Chemistry*. New York, Jan. 28, 94. A.B. Col. City of N. Y., 14; Ph.D. Columbia, 18. *Asst. chem.* Columbia, 16-18; *chemist*, hygienic lab, U. S. Pub. Health Service, 18-19; *Org. Salt and Acid Co*, 19- *Synthetic dyestuffs*.
- Marcy, Dr. Henry O(rlando)**, 180 Commonwealth Ave, Boston, Mass. *Surgery, Sanitary science*. Otis, Mass, June 23, 37. A.M. Amherst; M.D. Harvard, 63; Berlin, London and Edinburgh, 69-70; LL.D. Wesleyan, 87. *Surgeon*, U.S.A. 63, med. director, Fla, 64-65; practising physician, 66-69; *surgeon, Cambridge Hosp. for Women*, 80- Ninth Int. Med. Cong. (pres, sect. gynec). Col. Surg; Am. Med. Ass. (pres, 92); Am. Acad. Med. (pres, 84); Boston Gynec. Soc; British Med. Ass; cor. mem. Bologna Medico-Chirurg. Soc. Antiseptic wound treatment; the buried animal-suture; anatomy and surgical treatment of hernia; the histogenesis of the reproductive processes in mammals.
- Marden, Prof. J(ohn) W(esley)**, University of Missouri, Columbia, Mo. *Chemistry*. Saginaw, Mich, May 11, 87. B.S. Ill. Wesleyan, 09; Illinois, 09-10; fellow, N. Y. Univ, 10-12, M.S. 11, Sc.D, 12; Minnesota, 12-13. *Asst. chem.* Ill. Wesleyan, 07-09; Illinois, 09-10; instr, Minnesota, 12-13; analyst, S. Dak. Food and Drug Dept, 13-14; instr. chem, Missouri, 14-16, *asst. prof.*, 16-18; metallurgist, Bur. Mines, 18-19; *assoc. prof. chem. Missouri*, 19- *Chem. Soc.* (chairman, Missouri sect, 16-18, councilor, 18); Electrochem. Soc. Physical and analytical chemistry; equilibrium in cobalt amines; extractions by immiscible solutions; thermal value of fats and oils; drying agents; zirconium.
- Marine, Dr. David**, Montefiore Hospital, New York, N. Y. *Experimental medicine*. Whitelysburg, Md, 80. A.B. Western Maryland, 00, A.M, 06; M.D. Hopkins, 05. *Pathologist*, Lakeside Hosp, Cleveland, 05-06; demonstrator, instr, *asst. prof.* and *assoc prof. exp. med.* Western Reserve, 06-20; *director, lab, Montefiore Hosp*, 20- *Ass. Path. and Bact*; Soc. Exp. Path; Physiol. Soc; Soc. Exp. Biol. Physiology and pathology of the ductless glands.
- Mark, Clara G(ould)**, 270 S. State St, Westerville, Ohio. *Geology*. Franklin Furnace, Ohio, Jan. 23, 82. A.B. Ohio State, 06, A.M, 10, fellow, 11-13. *Instr. geol.* Mt. Holyoke, 10-11; Ohio State, 13-17; *Ohio Wesleyan*, 20- A.A.; Paleont. Soc; Fern Soc; Sullivant Moss Soc; Ohio Acad. Botany; Ohio Carboniferous paleontology; Ohio mosses and Pteridophytes.
- Mark, Dr. E(dward) L(aurens)**, 109 Irving St, Cambridge, Mass. *Zoology*. Hamlet, N. Y., May 30, 47. A.B. Michigan, 71, LL.D, 96; Ph.D. Leipzig, 76; LL.D. Wisconsin, 04. *Inst. math.* Michigan, 71-72; *asst. astronomer*, Northern Boundary Surv, 72-73; *instr. zool.* Harvard, 77-83, *asst. prof.*, 83-86, *prof. anat.*, 85-, *director, zool. lab.*, 00-, *Bermuda Biol. Sta.*, 03- *Ed.* 'Contrib. Zool. Lab.' Harvard, 83-; 'Contrib. Bermuda Biol. Sta.' 03- *Delegate*, Int. Cong. Zool. Graz, 10. *Nat. Acad.*; A.A. (v. pres, 02, 04); Soc. Nat. (pres, 04); Soc. Zool. (pres, 96); Ass. Anat; Philos. Soc; Am. Acad. (chairman, pub. committee, 02-09); corp. mem. Boston Soc. Nat. Hist; fel. London Soc. Biol. Chem; Zool. Gesell; life mem. Anat. Gesell; for. mem. Bohemian Royal Soc. Sci; Belgian Soc. Zool. and Malacol. Anatomy and histology of arthropods; maturation, fertilization, etc, of mollusks; trichinae in swine; development of Lepidosteus; embryology of Lepidosteus; cytology in heredity.
- Mark, Dr. Kenneth L(amartine)**, 39 Pilgrim Road, Boston, Mass. *Physical chemistry*. Leipzig, Germany, Aug. 27, 74. A.B. Harvard, 98, A.M, 00, Ph.D, 03. *Asst. chem.* Harvard, 97, 99-03; *instr.* Simmons (Mass), 03-06, *asst. prof.*, 06-14, *assoc. prof.*, 14-16, *prof.*, 16- *Capt. Sanit. C.* 18. *Chem. Soc.* (sec'y, northeastern sect, 03-09). Expansion of gases by heat.
- Markel, Dr. P(aul) D(avid)**, 2111 Procter St, Port Arthur, Tex. *Chemistry*. Union Bridge, Md, June 21, 92. B.S. Pennsylvania Col, 13; Ph.D. Hopkins, 16. *Chemist, Texas Co*, 16- Petroleum.
- Markle, Prof. M(illard) S**, Earlham, Ind. *Botany*. Hagerstown, Ind, Nov. 26, 83. B.S. Earlham, 10; M.S. Chicago, 13, fellow, 14-15, Ph.D, 15. *Asst. biol.* Earlham, 09-10, *instr.*, 10-12, *asst. prof.*, 12-15, *prof. bot.*, 15-18, *biol.*, 18- *Bot. Soc*; Ind. Acad. Ecology; plant reproduction; root systems of desert plants; peat bogs; plant associations.
- Markley, Prof. Joseph L(ybrand)**, Geddes Ave. and Oxford Road, Ann Arbor, Mich. *Mathematics*. East Nantmeal, Pa, Oct. 6, 59. A.B. Haverford, 85, A.M, 86; Morgan fellow, Harvard, 87-89, Ph.D, 89; Göttingen, 95-97. *Instr. math.* Harvard, 89-90; *Michigan*, 90-95, *asst. prof.*, 95-04, *junior prof.*, 04-07, *prof.*, 07- *Math. Soc.* (asst. ed, 'Bul.' 98). Bessel's functions; theory of functions.
- Marks, Dr. Henry K(oval)**, 565 Park Ave, New York, N. Y. *Neurology*. San Francisco, Calif, June 27, 82. A.B. Stanford, 03; M.D. Harvard, 07; Berlin, Paris, Munich, 10-13. *House physician*, Mass. Gen. Hosp, 09; *asst. path.* Rockefeller Inst, 10-11; *senior house physician*, Nat. Hosp. for Paralyzed and Epileptics, London, Eng, 12. *Vasomotor studies*; nature of complement; poliomyelitis; the finer pathological alterations of nerve fibers.
- Marks, Prof. Lionel S(imeon)**, 192 Brattle St, Cambridge, Mass. *Mechanical engineering*. Birmingham, England, Sept. 8, 71. Diploma in eng, Mason Col, England, 91; B.S. London, 92; M.M.E. Cornell, 94. *Instr. mech. eng.* Harvard, 94-00, *asst. prof.*, 00-09, *prof.*, 09- *Consulting engineer*, Bur. Aircraft Production, 18; chairman, motive power sect, Nat. Research Council, 18. A.A.; Mech. Eng; Am. Acad. Steam engines; gas engines; properties of coal; explosions of gaseous mixtures; new gas engine cycles; fuels; mechanical refrigeration.

- Marks, L(ouis) B.**, 103 Park Ave, New York, N. Y. *Illuminating engineering*. New York, Jan. 25, 69. Col. City of N. Y., 83-88; B.S., M.E., Cornell, 89, M.M.E., 90. Expert and manager, Washington Carbon Co, Pa., 90-93; *consulting illum. engineer*, 93- Non-res. lecturer, Hopkins, 10. A.A.; Elec. Eng.; Illum. Eng. Soc.; Soc. Int. des Elec. Electric light carbons; invention and development of the enclosed arc lamp; lighting and photometry; design of illumination.
- Marlatt, C(harles) L(ester)**, 1521 16th St, N. W., Washington, D. C. **Entomology*. Atchison, Kans., Sept. 26, 63. B.S., Kansas State, 84, M.S., 86. Asst. entom., Kansas State, 87-88; asst. entomologist, U. S. Dept. Agr., 89-94, *first asst. and asst. chief entomologist*, 94-; *chairman, fed. hort. board*, 12- Ed., 'Jour. Agr. Research,' 13- A.A. (sec'y, F, 99); Ass. Econ. Entom. (sec'y, 3 years, pres, 99); Wash. Entom. Soc. (sec'y, many years, pres, 97); Wash. Acad.; Wash. Biol. Soc.; Kans. Acad. Economic entomology; plant quarantine; subtropical insects; Coccidae; collections in China, Japan and other eastern countries; introduction of foreign beneficial insects.
- Marquette, Prof. W(illiam George)**, Pleasantville, N. Y. *Botany*. Watertown, Wis., Feb. 4, 82. Ph.D., Northwestern, 99; B.S., Wisconsin, 03, Ph.D., 07. Asst. prof. bot., Wisconsin; assoc. prof., Columbia, 11-18. Cellular physiology.
- Marriott, R(obert) H(enry)**, 810 Second St, Breckerton, Wash. *Physics*. Richwood, Ohio, Feb. 19, 79. B.S., Ohio State, 01. Radio engineer, various indust. institutions, 02-12; radio inspector, U. S. Dept. Commerce, 12-15; *expert radio aid, Navy Dept.*, 15- Mem. elec. eng. advisory board, Washington (Seattle), 16- A.A.; fel. Radio Eng. (pres, 12, mem. board of direction, 12-); Wireless Inst. (pres, 09-12); assoc. Elec. Eng. Radio range variation; radio shadows.
- Marriott, Prof. W(illiams) McKim**, 500 S. Kingshighway, St. Louis, Mo. *Medicine*. Baltimore, Md., March 5, 85. B.S., North Carolina, 04; M.D., Cornell, 10. Asst. chem., North Carolina, 02-04; *physiol. chem.*, Cornell, 04-07; *instr. biol. chem.*, Washington (St. Louis), 10-14; *assoc. pediat.*, Hopkins, 14-17; *prof., Washington (St. Louis)*, 17- *Lecturer radioactivity*, U. S. Geol. Surv. exhibit, La. Purchase Expos, 04. Soc. Biol. Chem.; Physiol. Soc.; Soc. Clin. Invest.; Harvey Soc. Cystinuria; intermediary fat metabolism; methods for blood analysis; nutrition and metabolic disturbances of infants.
- Marsh, Dr. C(harles) Dwight**, 1882 Monroe St, N. W., Washington, D. C. *Biology*. Hadley, Mass., Dec. 20, 55. A.B., Amherst, 77, A.M., 80; Ph.D., Chicago, 04. Teacher, high schools, 78-83; *prof. chem. and biol.*, Ripon, 83-89, *biol.*, 89-04, *acting pres.*, 00-01, *dean*, 00-04; *prof. biol.*, Earlham, 04-05; *physiologist in charge, investigations of poisonous plants, bur. plant indust.*, U. S. Dept. Agr., 05- Mem. and sec'y, board commissioners, Wis. Nat. Hist. Surv., 97-99, *biologist*, 97-04; *lecturer biol.*, Milwaukee Med. Col., 03-04. A.A.; Soc. Nat.; Wash. Acad.; Wash. Biol. Soc.; Wash. Bot. Soc.; Wis. Acad. (pres, 97-99). Plankton; copepods; poisonous plants and their effects.
- Marsh, Rev. D(aniel) B(rand)**, Pickering, Ont., Can. *Physics*. Walter's Falls, Ont., Nov. 5, 58. Toronto, 84-91; Ph.B., Wisconsin, 96, Sc.D., 97. *Presb. minister*, 91- Dominion Govt. eclipse exped. to Labrador, 05. Astron. Soc.; Royal Astron. Soc. Can.; fel. Royal Astron. Soc.; fel. Soc. Astron. de Mex.; Soc. Belge d'Astron. Mechanics; solar physics; vibration; solar and planetary photography; stethophone.
- Marsh, Horace Wilmer**, Pratt Institute, Brooklyn, N. Y. *Mathematics*. Susquehanna Co, Pa., Aug. 24, 63. A.B., Lafayette, 89, A.M., 93; Columbia, 97-02. Principal, Talladega, 89-91; *prof. Latin and Anglo Saxon*, Emporia, 92-95; *head, dept. math, Pratt Inst.*, 96- *Lecturer teaching of math*, California, summer, 14. A.A.; Indust. Educ.; Ass. Teachers Math. Middle States and Md.; Brooklyn Inst. Industrial and technical mathematics; teaching of mathematics.
- Marsh, Dr. H(oward) D(aniel)**, College of the City of New York, New York, N. Y. *Psychology*. Bloomington, Ill., March 30, 71. A.B., Ohio Wesleyan, 01, A.M., 02, *traveling fellow*, 06-07; Ph.D., Columbia, 05. *Instr. physiol.*, Ohio Wesleyan, 05-06; *Col. City of N. Y.*, 07-17, *asst. prof.*, 17- A.A.; Psychol. Ass. The diurnal course of efficiency; psychology of religion.
- Marsh, M(illard) C(aleb)**, Springville, N. Y. *Biology*. Groton, N. Y., Dec. 23, 72. B.S., Cornell, 97; M.S., George Washington, 05. Asst. Bur. Fisheries, 97-07, Alaska salmon agent, 07-11, *naturalist*, Alaska seal fisheries, 11-12; *biologist, State Inst. for Study of Malignant Disease, Buffalo, N. Y.*, 12- A.A.; Soc. Baet.; Ass. Cancer Research; Fisheries Soc. Ichthyology; bacteriology; fish and fur seal diseases; salmon fisheries; water pollution; cancer.
- Marshall, Prof. Charles E(dward)**, Massachusetts Agricultural College, Amherst, Mass. *Bacteriology, Hygiene*. Port Clinton, Ohio, Oct. 6, 66. Ph.B., Michigan, 96; Jørgensen's Lab, Copenhagen, 98; Ph.D., Michigan, 02; Pasteur Inst. and Osterlag's Lab, 03; *Inst. für Infektions Krankheiten*, 13. Asst. bacter., Michigan, 93-96; *bacteriologist*, Exp. Sta., Mich. Agr. Col., 96-12, *prof. bacter. and hygiene*, 02-12, *scientist and v. director*, Exp. Sta., 08-12; *prof. microbiol. and director, grad. sch., Mass. Col.*, 12- Ed., 'Microbiol.' A.A.; Soc. Baet. (sec'y, 10-12, pres, 14); Pub. Health Ass.; Mich. Acad. (sec'y, 04, pres, 08). Microbiology; dairy bacteriology; tuberculosis; aeration of milk; associative action of bacteria in milk; classification of milk; epidemics among swine in Michigan.
- Marshall, Prof. E(li) K(ennerly), Jr.**, Johns Hopkins University School of Medicine, Baltimore, Md. **Pharmacology*. Charleston, S.C., May 2, 89. B.S., Charleston, 08; Ph.D., Hopkins, 11, M.D., 17. Asst. *physiol. chem.*, Hopkins, 11-13, *assoc.*, 13-14, *pharmacol.*, 14-17, *assoc. prof.*, 17-19; *prof.*, Washington (St. Louis), 19-21; *physiol.*, Hopkins, 21- A.A.; Chem. Soc.; Soc. Biol. Chem.; Soc. Pharmacol.; Physiol. Soc. Physiological chemistry; urea determinations; kidney function; urinary secretion; action of diuretics.
- Marshall, Dr. Harry T(saylor)**, University of Virginia, Charlottesville, Va. *Medicine*. Baltimore, Md., May 19, 75. A.B., Hopkins, 94, M.D., 98, *fellow*, 99; *fellow*, Rockefeller Inst., 01-02.

- Asst. path, Hopkins, 01-03, instr. med, 03-06; pathologist, Bur. Sci, P. I, 06-08; *prof. path, Virginia*, 08- A.A.; Ass. Path. and Bact; Soc. Bact; Am. Med. Ass. Cytolysis; immunity; immunity of bacteria; locoweed disease of live stock.
- Marshall, Dr. Henry Rutgers**, 7 W. 43d St, New York, N. Y. **Psychology, Esthetics, Philosophy*. New York, July 22, 52. A.B, Columbia, 73, A.M, 75; L.H.D, Rutgers, 03; hon. Sc.D, Hobart, 10. *Architect*, 78- Lecturer, Columbia, 94, 04; Yale, 99, 06; mem. jury of awards, Pan-Am. Expos, 01; Art Commission, N. Y., 02-04, exec. sec'y, 19. A.A.; Soc. Nat; Psychol. Ass. (pres, 07); Philos. Ass; fel. Inst. Archit. (pres, N. Y. Chapter, 02). Pain, pleasure and esthetics; instinct and reason; theory of feeling; consciousness; mind and conduct.
- Marshall, Prof. John**, 1718 Pine St, Philadelphia, Pa. **Chemistry*. Reading, Pa, Feb. 9, 55. Pennsylvania Col, 73-75, LL.D, 99; M.D, Pennsylvania, 78; Göttingen, 79; Nat. Sc.D, Tübingen, 82; Christiania, 86. Asst. demonstrator practical chem, *med. dept, Pennsylvania*, 78-79, demonstrator, 79-89, asst. prof, 89-97, *prof. chem. and toxicol*, 97- Dean, faculty of vet. med, Pennsylvania, 89-97, faculty of med, 92-02. Physiol. Soc; Chem. Soc; Soc. Biol. Chem; Philos. Soc. Hemoglobin and other physiologic chemical subjects.
- Marshall, Prof. John A (Ibert)**, 128 Edgewood Ave, San Francisco, Calif. *Biochemistry*. Chicago, Ill, 84. B.S, California, 07, M.S, 15, D.D.S, 16, Ph.D, 17. Instr. biochem, *California*, 16-17, *assoc. prof. biochem. and dental path*, 19- Asst. director, research inst, Nat. Dental Ass; assoc. ed, 'Jour. Dental Research.' Capt, ordnance dept, 17-19. Nat. Dental Ass. Relation of saliva to dental caries; military explosives.
- Marshall, R (obert) B (radford)**, 3157 18th St, Washington, D. C. *Geography*. Amelia Co, Va, May 22, 67. George Washington. Topographer, *U. S. Geol. Surv*, 89-04, geographer, 04-08, *chief geographer*, 08-, supt, nat. parks, 15-16. Commissioner to change boundary, Yosemite Nat. Park, Calif. Ass. Geog; Civil Eng; Wash. Geol. Soc. Topographic maps; topographic map of the United States.
- Marshall, Dr. Ruth**, Rockford College, Rockford, Ill. *Zoology*. Big Spring, Wis, Dec. 24, 69. B.S, Wisconsin, 92, M.S, 00; fellow, Nebraska, 06-07, Ph.D, 07. Teacher biol. science, various high schools, Wis, 92-09; *head, dept. biol*, Rockford, 09-14; Lane Tech. Sch, Chicago, Ill, 16-20; Rockford, 20- A.A.; Soc. Zool; Micros. Soc; Wis. Acad; Ill. Acad. Systematic zoology; geographical distribution; Hydrachnidæ.
- Marshall, Prof. William**, 1017 State St, La Fayette, Ind. *Mathematics*. Southfield, Mich, April 5, 69. B.S, Michigan, 97, M.S, 98; Göttingen, 06-07; Ph.D, Zürich, 08. Instr. *math*, Michigan, 00-08; asst. prof, *Purdue*, 08-10, assoc. prof, 10-17, *prof*, 17- Math. Soc. Cylinder functions.
- Marshall, W (illiam) C (rosby)**, Yale Club, New York, N. Y. *Engineering*. Avon, Conn, Sept. 21, 70. Ph.B, Yale, 90, M.E, 94, C.E, 00; Ecole des Beaux Arts and Ecole du Genie Maritime, Paris, 06-07. Civil engineer, Berlin Iron Bridge Co, 90-93; asst. mech. and civil eng, Yale, 94-96, instr. drawing and descrip. geom, 96-02, asst. prof, 02-12, machine design, 12-13; consulting engineer, Fed. Sugar Ref. Co, 13-15; research engineer, Remington Arms Co, 15-17; capt, ordnance dept, 17-19; trade commissioner, U. S. Bur. Commerce, 19; *mech. engineer, Nat. Spun Silk Co*, 19- Mech. Eng; Automotive Eng. Descriptive geometry; machine design; naval architecture; automobiles; mechanical and civil engineering in sugar refining plants.
- Marshall, Prof. W (illiam) S (tanley)**, 139 E. Gilman St, Madison, Wis. *Entomology*. Milwaukee, Wis, Dec. 14, 66. B.S, Swarthmore, 88; Pennsylvania, 88-89; Ph.D, Leipzig, 92. Instr. biol, *Wisconsin*, 93-98, asst. prof. zool, 98-05, *assoc. prof. entom*, 05- A.A.; Soc. Zool; Entom. Soc; Wis. Acad. Anatomy and embryology of insects.
- Marsters, Prof. V (ernon) F (reeman)**, Reliance Building, Kansas City, Mo. *Geology, Geography*. B.A, Acadia, 86; Cornell, 88-89; A.M, Harvard, 98; Columbia, 03-05. Instr. geol, Cornell, 89-91; prof. geol. and geog, Indiana, 91-03; geologist, Republic of Peru, 05-11; consulting and mining geologist, N. Y. and Honduras Mining Co, 11-17; *consulting geologist*, 17- A.A.; Geol. Soc; Min. Eng; Ass. Petrol. Geol; Seismol. Soc; Boston Soc. Nat. Hist; Soc. de Ing. Lima; fel. London Geol. Soc. Petrography; economic geology; geology of non-metallic deposits; petroleum deposits of southern Peru; underground waters for irrigation; gold, silver and copper mines of Peru.
- Marston, Prof. A (nson)**, Ames, Iowa. *Civil engineering*. Winnebago, Ill, May 31, 64. Berea, 84; C.E, Cornell, 89. Railroad and bridge engineer, 89-92; prof. civil eng, *Iowa State*, 92-19, col. engineer, 98-12, *dean, eng. div*, 04-; *consulting engineer*, 92- State highway commissioner, 04-; major, E.C, 17-18, lieutenant, 18; mem. Nat. Research Council, 19- Civil Eng; Eng. Educ; Soc. Test. Mat; Western Soc. Civil Eng; Iowa Eng. Soc; Iowa Acad. Study of stresses by polarized light; tests of brick and stone; fire streams; sewage purification; water-towers; statistics of public roads and water works; ground water flow; drains; theory of loads on pipes in ditches; testing drain pipes and sewer tile; history of engineering.
- Martin, Prof. Arthur W (esley)**, Tunki, Anhui, China. *Physical chemistry*. Mankato, Minn. A.B, Hamline, 99; B.S, Minnesota, 01; Ph.D, Chicago, 14. Assoc. prof. science, Simpson, 03-05; prof. chem, Nanking, 05-17; *supt, New Mission Sta, South Anhui*, 17-
- Martin, Dr. Bertha E (dith)**, Wheaton College, Norton, Mass. *Zoology*. North Hatfield, Mass, Feb. 3, 87. A.B, Mt. Holyoke, 09; Ph.D, Chicago, 15. Asst. prof. zool, *Wheaton*, 15- Vertebrate embryology; comparative anatomy.
- Martin, Dr. C (harles) F (erdinand)**, 660 Sherbrooke St, W, Montreal, Can. *Medicine*. Montreal, Oct. 14, 68. B.A, McGill, 88, M.D, C.M, 92; Göttingen, 93; Prague and Paris, 94. Res. physician, Montreal Gen. Hosp, 92-93; demonstrator path, *McGill*, 94-96, lecturer, 97-98, lecturer med, 98-99, asst. prof. *med. and clin. med*,

- 99-07, *prof*, 07- Physician, Royal Victoria Hosp, Montreal; consulting physician, Montreal Baby and Foundling Hosp. Am. Physicians; Ass. Path. and Bact; Pediat. Soc. Value of tuberculin; Hodgkin's disease and leukemia; sarcomatosis; congenital dilatation of the large intestine; condition of the urine in infants; diseases of the stomach; purin bodies in nephritis.
- Martin, Prof. D(aniel) S(trobel)**, Charleston Museum, Charleston, S. C. *Geology, Mineralogy*. New York, N. Y., June 30, 42. A.B., N. Y. Univ, 63, A.M., 66; hon. Ph.D., Regents Univ. State of N. Y., 79. *Prof. geol.*, Rutgers Female Col., N. Y. City, 68-95; Col. for Women, Columbia, S. C., 98-04; *Chicora Col., Greenville, S. C.*, 08- Lecturer geol., Cooper Union, 89-91; hon. curator, minerals, rocks and invert. fossils, Charleston Museum, 06- A.A.; N. Y. Acad. (v. pres. 83, ed, 78-91); N. Y. Miner. Club.
- Martin, Miss Emilie N(orton)**, South Hadley, Mass. *Mathematics*. Elizabeth, N. J., Dec. 30, 69. A.B., Bryn Mawr, 94, fellow, 95-96, Mary E. Garrett fellow (Göttingen), 97-98, Ph.D., 01. Teacher *math.*, Mrs. Head's Sch., Germantown, Pa., 00-02; instr., *Mt. Holyoke*, 03-11, *assoc. prof.*, 11- Private tutor *math.* and *Latin*, 99-02; collaborator, 'Revue Semestrielle des Pub. Math.', 99-02. A.A.; Math. Soc.; Math. Ass.; Ass. Prof. Imprimitive substitution groups of degree fifteen and the primitive substitution groups of degree eighteen.
- Martin, Prof. E(rnest) G(ale)**, Stanford University, Calif. *Physiology*. Minneapolis, Minn., Nov. 16, 76. Ph.B., Hamline, 97; fellow, Hopkins, 02-03, Ph.D., 04. Asst. biol., Hamline, 94-95; *physiol.*, Hopkins, 03-04; instr. anat. and *physiol.*, Purdue, 04-06; *physiol.*, Harvard Med. Sch., 06-10; asst. prof., 10-16; *prof.*, *Stanford*, 16- Physiologist, Vt. State Board of Health; research physiologist, U. S. Pub. Health Service; capt., Sanit. C. A.A.; *Physiol. Soc.*; Am. Acad.; West. Soc. Nat. Influence of blood salts on the heart; induction shocks; vasomotor reflexes; human electrocutaneous sensitivity; reactions of decerebrate young animals; strength of voluntary muscles in human beings; industrial fatigue.
- Martin, Prof. F(ernando) W(ood)**, 12 Parkmont Apartments, Lynchburg, Va. *Chemistry*. Volga, W. Va., May 5, 63. B.S., Ill. Wesleyan, 86; Ph.D., Syracuse, 93; Leipzig, 97-98. *Prof. nat. science*, Chaddock, 86-90; Fort Worth, 90-92; *chem. and geol.*, *Randolph-Macon*, 93- A.A.; Chem. Soc. The garnet group of silicates.
- Martin, Dr. George C(urtis)**, U. S. Geological Survey, Washington, D. C. *Geology*. Cheshire, Mass., July 18, 75. B.S., Cornell, 98; Ph.D., Hopkins, 01. Special asst. paleont., Phila. Acad., 97; asst. geologist, Md. Geol. Survey, 98-01, geologist, 01-04; asst. paleont., Hopkins, 01-04, instr., 03-04; asst. geologist, *U. S. Geol. Surv.*, 04-06, paleontologist, 06-09, *geologist*, 09- A.A.; Geol. Soc.; Wash. Geol. Soc.; Wash. Acad. Tertiary paleontology, stratigraphy and economic geology of the Appalachian region; geology, petroleum and coal of the Pacific Coast of Alaska.
- Martin, G(eorge) Hamilton, Jr**, U. S. Department of Agriculture, Washington, D. C. *Botany*. Burlington, Iowa, Feb. 14, 87. B.S.F., Washington (Seattle), 13; M.S., Wash. State, 16; Harvard, 16-17. Instr. bot., Wash. State, 14-16; asst., Harvard, 17; teaching fellow, Washington (Seattle), 17-18; *asst. pathologist, plant disease surv., bur. plant indust., U. S. Dept. Agr.*, 18- A.A.; Phytopath. Soc.; West. Soc. Nat.; Wash. Bot. Soc. Parasitic fungi and their hosts; underground stems.
- Martin, Dr. Geo(rge) W**, 129 S. Eighth St., Monmouth, Ill. *Biology*. Lagro, Ind., Jan. 23, 67. B.S., Wabash, 87, 90-91; Ph.D., Indiana, 92; Woods Hole, 93, 94, 95; Cornell, summer, 02. Principal, high sch., Bluffton, Ind., 87-88; Monticello, Ind., 88-90; asst. biol., Indiana, 91-92; prof. biol. and geol., high sch., Indianapolis, 92-99; biol., Vanderbilt, 99-16; state entomologist, Tenn., 01-05; *prof. biol.*, *Monmouth*, 16- Plant pathologist, U. S. Dept. Agr., 18, 19. A.A.; Ass. Econ. Entom.; Tenn. Hort. Soc. (sec'y and treas.); Wash. Entom. Club. Organology and embryology of Aster and Solidago; morphology and cytology of the Algae; biology in secondary schools.
- Martin, Prof. George W(illard)**, Rutgers College, New Brunswick, N. J. *Botany*. Brooklyn, N. Y., Oct. 27, 86. Litt.B., Rutgers, 12, M.S., 15; Chicago, 15-16; Sorbonne, 19. Instr. bot., Mass. Col., 16-17; *asst. prof.*, *Rutgers*, 19- A.A.; Phytopath. Soc.
- Martin, Dr. James C(ook)**, U. S. Geological Survey, Washington, D. C. *Geology*. Nashville, Tenn., Jan. 26, 87. St. Lawrence, 04-06; Ph.B., Brown, 08; Columbia, 08-09; A.M., Princeton, 12, fellow, 12-13, Ph.D., 13, Jacobus fellow, 13-14. Asst. geol., Brown, 09-10; R. I. Natural Resources Surv., 09-10; geol., Princeton, 11-12; asst. curator, systematic and applied geol., U. S. Nat. Museum, 13-19; *with U. S. Geol. Surv.*, 19- Wash. Geol. Soc. Pre-Cambrian and tectonic geology.
- Martin, Prof. J(ohn) N(athan)**, 507 Welsh Ave., Ames, Iowa. *Botany*. Bowling Green, Ind., 75. A.B., Indiana, 07; Ph.D., Chicago, 13. Head, dept. biol., Manchester, 07-09; *prof. morphol. and cytol.*, *Iowa State*, 11- A.A.; Bot. Soc.; Iowa Acad. Plant morphology and physiology; physiology of pollen and seed setting; comparative morphology of Leguminosae.
- Martin, Major Lawrence**, General Staff, U. S. A., War Department, Washington, D. C. **Geology, Geography*. Stockbridge, Mass., Feb. 14, 80. A.B., Cornell, 04, Ph.D., 13; A.M., Harvard, 06. Asst. geol., Cornell, 04-05; Wisconsin, 06-07, instr., 07-08, asst. prof., 08-13, *assoc. prof.*, 13-17; lieut., N. A., 17, capt., 18, *major*, 18-, *gen. staff corps*, 18-; instr. topog., Ft. Sheridan, 17-18; map expert, Army War College, and gen. headquarters, A.E.F., 18; attached to Am. Commission to Negotiate Peace, 18-19; *on duty, mil. intelligence div, War Dept.*, 20- Field asst., U. S. Geol. Surv., 03-05, geol. aid, 06-07, junior geologist, 08-; geologist, Wis. Geol. Surv., 08-; Am. Geog. Soc. exped. to Yakutat Bay, Alaska, 05; Nat. Geog. Soc. exped. to Alaska, 09, 10, 11; guide, Int. Geol. Cong. excursion to Alaska, 13; mem. Harbord Mission to Armenia, Turkey, Mesopotamia and Transcaucasus; past assoc. ed., 'Jour. Geog.' and 'Bull. Am. Geog. Soc.'; mem. Nat. Research Council; Gilman Mem. lecturer geog., Hopkins, 20-21.

Gold medal and Brun prize, Soc. de Géog. de Paris. Geol. Soc.; Ass. Geog.; Appalachian Mt. Club; Phila. Geog. Soc.; Wis. Acad.; Wash. Geol. Soc.; Vienna Geog. Soc.; Int. Comm. des Glaciers; Int. Comm. de l'Atlas des Formes du Relief Terrestre. Geography; glacial geology; seismology; physiography and regional geography of the Lake Superior region and Wisconsin; glaciers of Alaska; geography of military and international affairs and foreign trade.

Martin, Prof. Lillian J(ane), Shreve Building, San Francisco, Calif. **Psychology*. Olean, N. Y., 51. A.B., Vassar, 80; Göttingen, 94-98; Würzburg, 07; Bonn, 08, 12, hon. Ph.D., 13; Munich, 14. Teacher science, high sch., Indianapolis, 80-89; v. principal and head, dept. science, Girls' High Sch., San Francisco, 89-94; asst. prof., *psychol.*, Stanford, 99-09, assoc. prof., 09-11, prof., 11-16, emer. prof., 16-; consulting *psychologist*, San Francisco, 16-; *psychopathologist* and chief, *mental hygiene clinic*, San Francisco *Poly-clinic*, and Mt. Zion Hosp., 16- Mem. Exp. Psychol. Cong. A.A. (v. pres, H., 14); Psychol. Ass.; Calif. Soc. Mental Hygiene (pres). Analysis of sensible discriminations; esthetics; suggestion in normal psychology; the projection method; the unconscious; personality as revealed by mental images; mental hygiene; training of emotions.

Martin, Prof. Louis A(dolphe), Jr., 911 Castle Point Terrace, Hoboken, N. J. *Mathematical physics*, *Engineering*. Hoboken, Nov. 5, 80. M.E., Stevens, 00; A.M., Columbia, 03. Inst. math. physics and chem., Hoboken Acad., 00-02; math. and mech., Stevens, 03-06, asst. prof., 06-07, acting prof. mech., 07-08, prof., 08-, dean, junior class, 10-19, senior class, 19- Instr. applied elec., Cooper Union, 00-01; exp. mech., Stevens, 00, 02; lecturer physics, Mechanics' Inst., N. Y., 01-02. A.A.; Math. Soc.; Eng. Educ.; Mech. Eng. Statics; kinematics and kinetics; mechanics of materials; applied statics; hydraulics; thermodynamics.

Martin, Prof. Thomas Adams, Commerce, Tex. *Mathematics*. Commercial Point, Ohio, Aug. 19, 60. B.S., Ohio (Athens), 95; A.M., Ohio Wesleyan, 98; Michigan, 03-04; A.M., Yale, 12. Tutor math., Ohio (Athens), 95-96; supt. schools, Spencer, Ohio, 96-03; prof. math., Ohio Northern, 05-08; asst. prof., Mt. Union, 08-10; prof., East Tex. Nor. Sch., 10-15; asst. prof., Norwich, 17- Math. Soc. Differential equations.

Martin, Thomas Commerford, Larchmont Manor, N. Y. *Electrical engineering*. London, England, July 22, 56. Private schools and tutor. Asst., Edison Lab., 77-79; ed., 'Electrical World,' 82-09; sec'y and advisory sec'y, Nat. Elec. Light Ass., 10- Special expert agent, U. S. Census, 00- Officier de l'Instruction Pub. Elec. Eng. (past pres); hon. mem. Nat. Elec. Light Ass.; N. Y. Elec. Soc. (past pres); fel. N. Y. Acad.; Franklin Inst.; British Inst. Elec. Eng.; British Iron and Steel Inst. History and statistics of electrical engineering and science.

Martin, Dr. Thomas L, Hineckley, Utah. *Agronomy*. England, 85. A.B., Brigham Young, 12; Ph.D., Cornell, 19. Principal, Big Horn Acad., 12-15; Emery Acad., 16-17; instr. soils, Cornell, 17-19; principal, Millard Acad., 19-20; soil

investigator, Utah-Idaho Sugar Co., 20- Soil technology.

Martin, Dr. Walton, 151 E. 63d St., New York, N. Y. *Anatomy, Surgery*. Staten Island, N. Y., Feb. 4, 69. Ph.B., Yale, 89; M.D., Columbia, 92. Demonstrator anat., Columbia, 97-02, instr. surg., 01-10, assoc., 10; prof. clin. surg., 10-18, assoc. prof. surg., 18- Attending surgeon, St. Luke's Hosp. A.A.; Ass. Anat.; Surg. Ass.; Col. Surg.; Ass. Thoracic Surg.; Int. Soc. Surg. Factors influencing infection; bone cavities; etiology of chronic empyema.

Martin, Dr. William H(ope), New Jersey Agricultural Experiment Station, New Brunswick, N. J. *Plant pathology*. Carlisle, Pa., June 3, 90. A.B., Maine, 15; M.S., Rutgers, 17, Ph.D., 18. Instr. plant physiol., Maine, 14-15; asst., Rutgers, 15-18, assoc. plant pathologist, N. J. Exp. Sta., 19- A.A.; Phytopath. Soc. Plant physiology; tomato diseases; influence of Bordeaux mixture on transpiration; soil acidity; potato scab.

Marvin, Prof. Cha(rie)s F(rederick), U. S. Weather Bureau, Washington, D. C. **Physics*, *Meteorology*, *Mechanical engineering*. Putnam, Ohio, Oct. 7, 58. M.E., Ohio State, 83. Instr. physical and mech. laboratories, Ohio State, 78-83; prof. meteorol., U. S. Weather Bur., 91-13, chief, 13- Mem. Nat. Advisory Committee Aeronaut. Medals, Columbian Expos., 93; Omaha, 98; Paris, 00. A.A.; Wash. Acad.; Wash. Philos. Soc. Constants of psychrometric formula; the Robinson anemometer; use of kites for upper air explorations; solar radiation; seismology; evaporation.

Marvin, Prof. H(enry) H(oward), University of Nebraska, Lincoln, Nebr. *Physics*. Grinnell, Iowa, Aug. 14, 84. B.S., Grinnell, 06; fellow, Columbia, 09-11, Ph.D., 12. Instr. physics, high sch., Grinnell, Iowa, 06-08; Mass. Inst. Tech., 11-12; asst. prof., Tufts, 12-17, head of dept., 17-19; prof., Nebraska, 19- A.A.; Physical Soc. Absorption and dispersion in infra-red.

Marvin, R(ichard) H(ale), Monroe Apartments, East Liverpool, Ohio. *Electrical engineering*. Brooklyn, N. Y., Oct. 27, 79. M.E., Stevens, 03; M.S., Union, 14. With Gen. Elec. Co., 03-14; elec. engineer, R. Thomas and Sons Co., 14- A.A.; Elec. Eng.; Radio Eng. High voltage engineering.

Marx, Prof. Cha(rie)s D(avid), Stanford University, Calif. *Civil engineering*. Toledo, Ohio, Oct. 10, 57. Real-Gymnasium, Karlsruhe, 76; C.E., Cornell, 78; Polytech., Karlsruhe, 81; LL.D., California, 18. Instr. civil eng., Polytech., Karlsruhe, 81; lever, transitman and draftsman, B. H. T. and W. R. R., 81-82; U. S. asst. engineer, Mo. River Improv., 82-83; Miss. River Improv., 83-84; asst. prof. civil eng., Cornell, 84-90; prof., Wisconsin, 90-91; Stanford, 91- Chief inspector pub. improvements, Rochester, N. Y.; principal asst. engineer, East Side Trunk Sewer, Rochester, N. Y.; consulting engineer, various companies; in charge irrig. investigations, Salinas Valley, chairman, Calif. State Water Commission, 12-15. Civil Eng. (past. pres); Eng. Educ.; Western Soc. Eng.; Pacific Coast Tech. Soc.; Wis. Acad. Hydraulics.

- Marx, Prof. Guido H(ugo)**, Stanford University, Calif. *Engineering, Education*. Toledo, Ohio, March 29, 71. M.E. Cornell, 93. Instr. mech. eng, Stanford, 95-97, asst. prof, 97-99, assoc. prof, 99-09, *prof. machine design*, 09- Lecturer, New Sch. for Social Science, 20- A.A.; Mech. Eng. Machine design.
- Maryott, Dr. Carlton H(oward)**, University of Georgia, Augusta, Ga. *Chemistry*. Berlin, N. Y., June 11, 81. A.B. Brown, 04; Ph.D. Yale, 11. Instr. chem, Yale, 06-09; *prof*, Baylor, 11-14; Georgia, 14- A.A.; Chem. Soc.
- Masius, Dr. Morton**, 52 Fruit St, Worcester, Mass. *Physics, Physical chemistry*. Egg Harbor City, N. J., Oct. 6, 83. Ph.D. Leipzig, 08; fellow, Harvard, 08-09. Instr. *physics, Worcester*, 09-15, asst. prof, 15-19, *prof*, 19- Physical Soc. Adsorption; thermodynamics; radiation.
- Mason, Dr. J(ohn) Alden**, Field Museum of Natural History, Chicago, Ill. *Anthropology*. Germantown, Pa., Jan. 14, 85. A.B. Pennsylvania, 07; Ph.D. California, 11. *Asst. curator Mex. and S. Am. archeol. Field Museum Nat. Hist.*, 17- Representative, Pennsylvania, at Int. Sch. Mex. Archeol. exped. to Jalisco, 11-13; investigator, Can. Geol. Surv. exped. to Great Slave Lake, 13; mem. P. R. Insular Surv, 14-15; research fellow, California exped. to Salinan Indians, 16; investigator, Southwest Soc. exped. to Papago Indians, 18. A.A.; Anthropol. Ass. (mem. council, 19); Ethnol. Soc.; Folk-lore Soc.; Chicago Geog. Soc.; Southwest Soc. Porto Rican folk-lore, archeology and dialect; Tepecano, Papago, Salinan, Costanoan and Athabaskan linguistics and ethnology.
- Mason, Dr. Max**, University of Wisconsin, Madison, Wis. **Mathematics*. Madison, Oct. 26, 77. B.L. Wisconsin, 98; Ph.D. Göttingen, 03. Instr. math, Mass. Inst. Tech, 03-04; asst. prof, Sheffield Sci. Sch, Yale, 05-08; assoc. prof, *Wisconsin*, 08-10, *prof. math. physics*, 10- Lecturer math, Harvard, 11; mem. research staff, U.S.N. Exp. Sta, 17-19; mem. div. physical sciences, Nat. Research Council, 18- A.A. (v. pres, B, 20); Math. Soc.; Physical Soc.; Math. Verein; Circolo Mat. di Palermo. Differential equations; calculus of variations; electromagnetic theory; submarine detection devices; acoustical compensators.
- Mason, Mayne S(eguine)**, Westinghouse Electric International Co, 165 Broadway, New York, N. Y. *Electrical engineering*. Buda, Ill, June 3, 90. B.S. Illinois, 11, fellow, Eng. Exp. Sta, 11-13, M.S. 13. Student engineer, Gen. Elec. Co, 13-15; instr. elec. eng. and physics, Rutgers, 15-17, acting prof. physics, 17; fellow, Mellon Inst, 19; with *Westinghouse Elec. Int. Co*, 20- Lieut, Air Service, 17-18. Elec. Eng. Heat insulating coverings.
- Mason, (Preston) W(alter)**, U. S. Department of Agriculture, Washington, D. C. *Entomology*. Warren, Mich, April 12, 89. B.S. Mich. Agr. Col, 12; M.S. Purdue, 17. Asst. entom, Mich. Agr. Col, 09-12; Purdue, 12-17, asst. prof, 17-18; *bur. entom, U. S. Dept. Agr.*, 18- A.A.; Entom. Soc.; Ass. Econ. Entom.; Wash. Entom. Soc.
- Mason, Prof. S(ilas) C(heever)**, 213 Prospect St, Chery Chase, D. C. *Botany*. Greensboro, Vt, April 19, 57. B.S. Kansas State, 90, M.S. 93. Prof. hort. and forestry, Kansas State, 93-97; Berea, 97-06; *arboriculturist, bur. plant indust, U. S. Dept. Agr.*, 07- Detailed by sec'y of agr. to study the date palm in the Nile Valley, 13-14. A.A.; Bot. Soc.; Wash. Acad.; Wash. Bot. Soc. Distribution of forest trees; arboriculture; date palm.
- Mason, Prof. Tho(mas) E(dward)**, 130 Andrew Place, La Fayette, Ind. *Mathematics*. Boone Grove, Ind, Oct. 1, 83. A.B. Indiana, 05, A.M. 12, fellow, 11-14, Ph.D. 14. Instr. and later *assoc. prof. math, Purdue*, 14- A.A.; Math. Soc.; Ind. Acad. Difference equations; number theory.
- Mason, Prof. William P(itt)**, Troy, N. Y. **Chemistry*. New York, N. Y., Oct. 12, 53. C.E. Rensselaer, 74, B.S. 77; M.D. Albany Med. Col, 81; Pasteur Inst, Paris, 95; LL.D. Lafayette, 08; hon. Sc.D. Union, 17. Asst. chem, *Rensselaer*, 75-82, anal. chem, 82-93, *prof. chem*, 93- Mem. U. S. Assay Commission, 96. A.A. (see'y, C, 95, v. pres, 97); Chem. Soc.; Chem. Eng.; Philos. Soc.; Franklin Inst; Pub. Health Ass.; Water Works Ass. (pres, 09); New Eng. Water Works Ass; Wash. Acad; British Sanit. Inst; hon. mem. Ass. Gén. des Ingénieurs. Potable water; water for city supply; purification of water.
- Massey, Prof. A(rthur) B(allard)**, Blacksburg, Va. *Plant pathology*. Miller's School, Va, Jan. 10, 89. B.S. N. C. Col, 09; Chicago, summer, 13. Instr. bot, Clemson, 10-13; asst. prof, Ala. Polytech, and Exp. Sta, 13-18; *assoc. prof. plant path. and bacter, Va. Polytech, and Exp. Sta*, 18- A.A.; Phytopath. Soc.
- Massey, Prof. L(ouis) M(elville)**, Cornell University, Ithaca, N. Y. *Plant pathology*. West Point, Iowa, Aug. 25, 89. A.B. Wabash, 12; Ph.D. Cornell, 16. Asst. *plant path, Cornell*, 12-14, instr, 14-16, *asst. prof*, 16-18, 19- Plant pathologist, U. S. Dept. Agr, 18-19; collaborator, 'Bot. Abstracts.' A.A.; Bot. Soc.; Phytopath. Soc. Diseases of florists' crops, especially of roses and gladioli.
- Mast, Prof. S(amuel) O(ttmar)**, Johns Hopkins University, Baltimore, Md. **Biology*. Wash. tenaw Co, Mich, Oct. 5, 71. A.B. Michigan, 99; Ph.D. Harvard, 06; M.Pd. Mich. Nor. Col, 10. Prof. biol. science, Hope, 99-08; assoc. prof. biol. and later prof. bot, Goucher, 08-11; assoc. prof. and later *prof. zool, Hopkins*, 11- Johnston research scholar, Hopkins, 07-08, special lecturer, 08-09. Cartwright prize, Columbia, 09. A.A.; Soc. Nat; Soc. Zool. General physiology; animal behavior; reactions in lower organisms; experimental zoölogy.
- Masters, Dr. Carl L**, Southern Dyestuffs Corp, Nitro, W. Va. *Chemistry, Plant pathology*. Fryburg, Pa, July 25, 90. B.S. Cornell, 16. Asst. Cornell, 14-16; supt. chemist, Heller and Merz Co, 16-20; with *South. Dyestuffs Corp*, 20- A.A.; Bot. Soc.; Chem. Soc. Coal-tar intermediates; dyestuffs; azo dyes.
- Mateer, Dr. Florence (Edna)**, Bureau of Juvenile Research, Columbus, Ohio. *Psychology*. Lancaster, Pa, Dec. 6, 87. Pennsylvania, 12-13; A.M. Clark, 14, Ph.D. 16. Teacher, pub. schools, 06-10; research asst, psychol. lab, N. J. Train-

- ing Sch. for Feeble-Minded Boys and Girls, 11-13; psychologist, Mass. Sch. for Feeble-Minded, 16-18; *psycho-clinician, Ohio Bur. of Juvenile Research, 18-* Psychologist, Que. Immigration Sta, 14; Peterboro Sch, 18; lecturer abnor. psychol, Worcester Special Schools, Worcester, Mass, 17-18. A.A.; Psychol. Ass; Ass. Clin. Psychol. Clinical psychology; conditioned reflexes; differential diagnosis.
- Mather, Prof. Kirtley F (letcher)**, Granville, Ohio. *Geology*. Chicago, Ill, Feb. 13, 88. B.S, Denison, 09; Ph.D, Chicago, 15. Instr. and asst. prof. geol, Arkansas, 11-14; assoc. prof, Queen's (Can), 15-17, *prof. paleont*, 17-18; *geol. Denison, 18-* Junior, asst. and assoc. geologist, U. S. Geol. Surv, 11-; capt. engineers, O.R.C; petrol. geologist, Bolivia and Argentina, 19-20. A.A; Geol. Soc; Paleont. Soc; Seismol. Soc; Min. Eng. Pennsylvania faunas of Arkansas and Oklahoma; Quaternary geology of San Juan Mountains, Colorado; oil and gas resources of Oklahoma and Kentucky; Quaternary history of Ontario and Ohio.
- Mather, Prof. William T (yler)**, University of Texas, Austin, Tex. *Physics*. Amherst, Mass, Sept. 2, 64. A.B, Amherst, 86, A.M, 91; Hopkins, 95-96, fellow, 96-97, Ph.D, 07. Instr, Leicester Acad, Mass, 86-87; Williston Sem, Easthampton, Mass, 87-93; consulting chemist, Boston, 93-94; asst. *physics*, Hopkins, 97-08; assoc. prof, *Texas*, 98-07, *prof*, 07- A.A; Physical Soc; Tex. Acad. Relative velocities of silver ions.
- Mathers, Prof. Frank C (urry)**, Indiana University, Bloomington, Ind. *Chemistry*. Bloomington, Feb. 12, 81. A.B, Indiana, 03, A.M, 05; fellow, Cornell, 06-07, Ph.D, 07. Instr. *chem*, Indiana, 03-07, asst. prof, 07-09, *assoc. prof*, 09- Chem. Soc; Electrochem. Soc. Atomic weight and chemistry of indium; the electro-deposition of metals from perchlorate baths; effect of addition agents in the electro-deposition of various metals; electrolytic preparation of fluorine gas.
- Matheson, Prof. Robert**, Cayuga Heights, Ithaca, N. Y. *Entomology*. West River, N. S, Dec. 20, 81. B.S.A, Cornell, 06, M.S, 07, Ph.D, 11. Instr. entom, S. Dak. Col, 07-08, *prof*, 08-09; state entomologist, 08-09; asst. biol, Cornell, 09-10, instr, 10-12; *prof. zool. and entom*, N. S. Agr. Col, 12-13; *asst. prof. entom. and asst. entomologist*, Cornell, 14- A.A; Entom. Soc; Ass. Eeon. Entom. The silk glands and life-history of *Apanteles glomeratus*; the number of moults of the female of *Daetylopius citri*; the Halipidae; aquatic hymenoptera; fore-gut of *Corydalis cornutus*; poplar and willow borer; plant lice; insect parasitism.
- Mathews, Prof. A (lbert) P (rescott)**, University of Cincinnati, Cincinnati, Ohio. **Physiological chemistry*. Chicago, Nov. 26, 71. B.S, Mass. Inst. Tech, 92; Cambridge, 95; Marburg, 95-97; Ph.D, Columbia, 98. Asst. biol, Mass. Inst. Tech, 92-93; physiologist, Harvard Med. Sch, 98-99; instr, Tufts Med. Sch, 98-99, asst. *prof*, 99-00; instr, Harvard, 00-01; asst. *prof. physiol. chem*, Chicago, 01-03, *assoc. prof*, 04-05, *prof*, 05-19, *head of dept*, Cincinnati, 19- Head, dept. *physiol*, Woods Hole, 04-16. A.A; Soc.
- Nat; Physiol. Soc; Chem. Soc; Soc. Exp. Biol; Soc. Biol. Chem; Wash. Acad. Morphology of fertilization process; physiology of secretion; chemistry of spermatozoa; chemical relations of nerves; relation between potential of ions and pharmacological action; nature of toxic and antitoxic action; the nature of stimulation in nerves; changes in protoplasm by mechanical shock; protoplasmic respiration: molecular cohesion.
- Mathews, Prof. Clarence W (entworth)**, 680 S. Limestone St, Lexington, Ky. *Horticulture*. Lawrence, Mass, Feb. 10, 61. B.S, Cornell, 91, fellow, 91. *Prof. hort and bot*, Ky. State, 92-13; *hort, Kentucky, 13-* A.A; Pomol. Soc; Soc. Hort. Sci.
- Mathews, Prof. Edward B (ennett)**, Johns Hopkins University, Baltimore, Md. **Petrography*. Portland, Maine, Aug. 16, 69. A.B, Colby, 91; fellow, Hopkins, 93-94, Ph.D, 94. Instr. *miner. and petrog*, Hopkins, 94-95, *assoc*, 95-99, *assoc. prof*, 99-04, *prof*, 04-, *chairman, geol. dept*, 17- Field asst, U. S. Geol. Surv, 91-94; asst. state geologist, Md, 98-17, state geologist, 17-; director, Md. State Weather Service, 17-; exec. officer, Md. State Board of Forestry, 17-; chairman, div. geol. and geog, Nat. Research Council, 19- A.A; Geol. Soc. (treas, 19-); Min. and Metal. Eng; Wash. Geol. Soc; Wash. Acad; Md. Hist. Soc. Igneous and metamorphic rocks, especially of the Piedmont Plateau; crystalline rocks of northern and central Maryland.
- Mathews, Ferdinand Schuyler**, 17 Frost St, Cambridge, Mass. *Botany, Ornithology*. New Brighton, N. Y, May 30, 54. Cooper Inst, 73; Italy, 87. Artist, L. Prang and Co, Boston, 80-90; *bot. artist, Gray Herbarium, Harvard, 04-* Lecturer. Ornith. Union; New Eng. Bot. Soc. American wild flowers and wild birds; evolution of color in flowers; the nature and character of music of wild birds.
- Mathews, Prof. Hubert Berton**, South Dakota Agricultural College, Brookings, S. Dak. *Physics*. Eagle Corners, Wis, April 10, 68. B.S, S. Dak. Col, 92, M.S, 99; Nebraska, 92; Michigan, 93-95; Wisconsin, 99. Asst. chem. and physics, S. Dak. Col, 93-96, *prof. physics*, 96-99, physics and elec. eng, 99-09, *physics*, 09-, *asst. dean of faculty*, 18- A.A; Eng. Educ. Storage cells; secondary batteries.
- Mathews, Dr. John A (lexander)**, Bellefield Dwellings, Pittsburgh, Pa. **Metallurgy*. Washington, Pa, May 20, 72. B.S, Washington and Jefferson, 93, M.S, 96, hon. Sc.D, 03; A.M, Columbia, 95, fellow, 97-98, Ph.D, 98, Barnard fellow, 00-03 (Royal Sch. of Mines, London, 00-01); Carnegie research scholar, British Iron and Steel Inst, 01-02. Instr. chem, Columbia, 98-00; metallurgist and asst. manager, Sanderson Bros. Steel Co, 02-08; pres. and gen. manager, Halcumb Steel Co, 08-20; *pres, Crucible Steel Co, 20-* Chairman, committee on alloy steels, Nat. Research Council; committee on aircraft engine forgings, Bur. Aircraft Production, 18. Andrew Carnegie gold medal for research, London, 02. A.A; Chem. Soc; Electrochem. Soc; Soc. Test. Mat; Min. Eng; Am. Iron and Steel Inst; British Iron and Steel Inst. Chemistry; ferrous metallurgy; electric furnace

- steel processes; alloy steels; permanent magnetism.
- Mathews, Prof. J(oseph) Howard**, University of Wisconsin, Madison, Wis. *Chemistry*. Aurora-ville, Wis, Oct. 15, 81. B.S. Wisconsin, 03, A.M. 05; A.M. Harvard, 06, Ph.D. 08. Asst. physical chem, Wisconsin, 05; instr. physical and indust. chem, Case, 06-07; *physical chem, Wisconsin*, 08-11, asst. prof, 11-17, assoc. prof, 17-19, *prof*, 19-, *chairman, dept. chem. and director course*, 19- Capt, ordnance R.C. major, ordnance dept, 18. A.A.; Chem. Soc; Wis. Acad. Compressibility and other properties of organic liquids; heats of vaporization; viscosity and lubrication; osmosis; phase rule; photochemistry; thermal chemistry of colloids; thermodynamical behavior of mixed solvents.
- Mathewson, Dr. C(hampton) H(erbert)**, 120 Linden St, New Haven, Conn. *Metallurgy*. Essex, Conn, Oct. 7, 81. Ph.B, Yale, 02; Ph.D, Göttingen, 06. Asst. chem, Mass. Inst. Tech. 02-04, instr, 06-07; chem. and metallol, *Sheffield Sci. Sch, Yale*, 07-11, asst. prof, 11-19, *prof. metal. and metallol*, 19- Chem. Soc; Min. and Metal. Eng; British Inst. Metals. Non-ferrous metallography; copper; brass; zinc.
- Mathewson, Prof. L(ouis) C(lark)**, Hanover, N. H. *Mathematics*. Mendon, Mich, 84. A.B, Albion, 10, A.M. 11; Illinois, 12-14, Ph.D, 14. Instr. *math*, high sch, Sioux City, Iowa, 11; *Dartmouth*, 14-17, *asst. prof*, 18- A.A; Math. Soc; Math. Ass. The group of isomorphisms in the theory of finite groups.
- Mátos, Walter A(ntonio)**, 309 College Ave, Swarthmore, Pa. *Astronomy*. Philadelphia, Pa, Oct. 31, 74. A.B, Cent. High Sch, Phila, 93. *Rector, Trinity Church, Swarthmore*, 98-; *vol. observer, Sproul Observatory*, 15- Astron. Soc; Royal Astron. Soc. Mathematics; physics; theory of light; molecular theory; radioactivity.
- Matson, George Charlton**, Clinton Building, Tulsa, Okla. *Geology*. B.S, Doane, 00; A.M, Cornell, 03; fellow, Chicago, 04-06. Asst. geol, Cornell, 01-03; asst. geologist and later *geologist*, U. S. Geol. Surv, 06-16; Mex. Gulf Oil Co. and Gulf Ref. Co. of La, 16-17; *Gypsy Oil Co. and S. Am. Gulf Oil Co*, 17- A.A; Geol. Soc; Min. and Metal. Eng; Ass. Petrol. Geol. Petroleum geology and engineering.
- Matteson, W(allace) G(eorge)**, Texas State Bank Building, Fort Worth, Tex. *Geology*. Pattersonville, N. Y, April 2, 89. B.S, Syracuse, 09; E.M, Colo. Sch. Mines, 11. Geologist, Int. Construction Co, 11; asst. chief surveyor, Santa Gertrudis Mining Co, 12; chief engineer, Mazapil Copper Co, 12; mine boss, Cananea Consol. Copper Co, 13; instr. miner. and petrol, Lehigh, 13-16; petrol. geologist, 16-18; *consulting petrol. geologist*, 18- Min. Eng. Common features of the world's greatest silver mines.
- Matthes, François E(mile)**, U. S. Geological Survey, Washington, D. C. **Physiography*. Amsterdam, Holland, March 16, 74. B.S, Mass. Inst. Tech, 95; Austin teaching fellow, Harvard, 04-05. Draftsman, city engineer's office, Rutland, Vt, 95-96; field asst, *U. S. Geol. Surv*, 96-98, asst. topographer, 98-99, topographer, 99-07, topog. inspector, 07-13, assoc. geologist, 13-17, *geologist*, 17- Field investigations for Calif. State Earthquake Investigation Commission, 06; cor. mem. Int. Glacier Commission; Chevalier Order Leopold II. A.A; Ass. Geog. (treas, 13-20); Geol. Soc; assoc. mem. Civil Eng; Am. Geog. Soc; Wash. Acad; Wash. Geol. Soc. (sec'y, 09-10). Physiography; glacial erosion; physiographic studies of Yosemite Valley region; topographic delineation.
- Matthes, G(erard) H(endrik)**, U. S. Engineer's Office, Chattanooga, Tenn. *Hydraulics*. Amsterdam, Holland, March 16, 74. B.S.(C.E), Mass. Inst. Tech, 95. Div. engineer, Pa. Water Supply Commission, 14-15; engineer, Miami Conservancy District, 15-20; *U. S. asst. engineer in charge Tenn. River Surv*, 20- Mem. Mass. Inst. Tech. astron. exped. to Sumatra, 01. A.A; Civil Eng. Flood control in Pennsylvania; irrigation; water power.
- Matthew, Dr. G(eorge) F(rederic)**, 115 Carmarthen St, St. John, N. B, Can. *Geology, Archeology*. St. John, Aug. 12, 37. M.A, New Brunswick, 78, LL.D, 97; hon. Sc.D, Laval, 94. Clerk of Treas. Dept, N. B, 53-68; with Can. Geol. Surv, 68-94; surveyor of customs, Can, 94-14. Cor. mem. N. Y. Acad; fel. Royal Soc. Can; N. B. Nat. Hist. Soc; cor. mem. Montreal Nat. Hist. Soc; London Geol. Soc; cor. mem. Soc. Royale Géol. de Belgique. Paleontology; paleobotany; Cambrian faunas; Silurian land faunas and floras; surface geology; geology of St. John (N. B) locality.
- Matthew, Dr. W(illiam) D(iller)**, American Museum of Natural History, New York, N. Y. **Paleontology*. St. John, N. B, Feb. 19, 71. B.A, New Brunswick, 89; Ph.B, Columbia, 93, A.M, 94, Ph.D, 95. Asst. paleont, *Am. Museum Nat. Hist*, 95-98, asst. curator, 99-01, assoc. curator, 02-10, *curator*, 10- Field asst, Can. Geol. Surv, 89; N. Y. Geol. Surv, 93; U. S. Geol. Surv, 02. A.A; Geol. Soc; Paleont. Soc. (treas, 09, v. pres, 11); Philos. Soc; Soc. Mammal; fel. N. Y. Acad; N. Y. Zool. Soc; cor. mem. New Brunswick Nat. Hist. Soc; fel. Royal Soc; London Zool. Soc. Tertiary Mammalia of western United States; evolution and migrations of Tertiary vertebrates; West Indian fossil mammals; paleovolcanic rocks; Cenozoic vertebrates, paleogeography and correlation.
- Matthews, C(harles) D(esmond)**, North Carolina Experiment Station, Raleigh, N. C. *Horticulture*. Moberley, Mo, Feb. 29, 92. B.S.A, Missouri, 14. Exp. horticulturist, *N. C. Exp. Sta*, 15-18, *acting chief, div. hort*, 18- Soc. Hort. Sci; Pomol. Soc. Pruning; culture of peaches and pecans; Irish and sweet potatoes.
- Matthews, Dr. J(oseph) Merritt**, 50 E. 41st St, New York, N. Y. *Chemistry*. Philadelphia, Pa, June 9, 74. B.S, Pennsylvania, 95, fellow, 96-98, Ph.D, 98. Prof. chem. and dyeing, Phila. Textile Sch, 98-07; *consulting expert in textile chem*, 07- Ed, 'Color Trade Jour.' A.A; Chem. Soc. (v. pres, 01); Soc. Chem. Indust; Franklin Inst; British Soc. Dyers and Colorists. Compounds of halides of rare earths with various amido bodies; indigo dyeing; textile chemistry; properties of indigo-red; mercerization of cotton; chemistry of wool fiber; shade compounding with dyestuffs; chemistry of textile fibers.

- Matthews, Prof. Samuel Alexander**, 706 S. Lincoln St, Chicago, Ill. *Physiology*. Indiana, Pa, April 17, 65. M.D, Michigan, 95. Asst. pharmacol, Michigan, 93-97; physiol, Chicago, 00-06, asst. prof. exp. therapeut, 07-13; *prof. physiol*, Kansas, 13-17; Alabama, 17-19; *physiol. pharmacol. and therapeut*, Loyola, 19- A.A; Physiol. Soc; Pharmacol. Soc. Pharmacology; physiology of the liver and of the glands of internal secretion.
- Mattill, Dr. Helen I(sham)**, 61 Selye Terrace, Rochester, N. Y. *Chemistry*. Titusville, Pa, July 14, 81. A.B, Cornell, 03, 04-05, fellow, 05-06, Ph.D, 06. Asst. chem, Columbia, 03-04; lab. asst, Bur. Standards, 06-07; instr, Illinois, 07-11, assoc. 11-12; instr. nutrition, California, 18-19. Chem. Soc. Inorganic chemistry; hydronitric acid; steel analysis; rare earths.
- Mattill, Prof. Henry A(lbright)**, University of Rochester, Rochester, N. Y. *Physiological chemistry*. Glasgow, Mo, Nov. 28, 83. A.B, Western Reserve, 06, A.M, 07; fellow, Illinois, 08-10, Ph.D, 10. Asst. chem, Illinois, 06-08; asst. prof. physiol. and physiol. chem, Utah, 10-11, assoc. prof, 11-12, prof, 12-15; *asst. prof. nutrition*, California, 15-19; *biol. chem. Rochester*, 19- Major, Sanit. C, A.E.F. A.A; Soc. Biol. Chem; Physiol. Soc; Soc. Animal Production. Influence of water drinking at meals, fasting and bathing on metabolism; nutrition with isolated food substances; functions of intestinal bacteria.
- Mattoon, Prof. A(rthur) M(artyn)**, Albany College, Albany, Oregon. *Mathematics, Astronomy*. Maxtown, Ohio, Sept. 12, 55. A.B, Marietta, 80, A.M, 83; Cambridge, 93-94. Instr. math, Albany (Oregon), 80-83; Col. of Montana, 83-87; principal, acad, Bozeman, Mont, 87-89; inst. math, Blackburn, 89-90; principal, acad, Elgin, Ill, 90-91; prof. math. and astron, and director, Scott Observatory, Park, 92-12; prof. math. and astron, Albany (Oregon), 17-20. A.A; Pacific Astron. Soc; Mo. Soc. Teachers Math. and Sci. Rotation period of Mars; theory of equations; trigonometry.
- Mattoon, W(ilbur) R(eed)**, U. S. Forest Service, Washington, D. C. *Forestry*. Harwich, Mass, Aug. 14, 75. A.B, Wesleyan, 99; M.F, Yale, 04. Forest asst, U. S. Forest Service, 04-07, forest inspector, 07-09, forest supervisor, 09-12, *forest examiner*, 12- Soc. Foresters (pres, Wash. sect, 18); Ecol. Soc. Life history, reproduction, growth and yield of forest trees.
- Matz, Julius**, Insular Experiment Station, Rio Piedras, P. R. *Plant pathology*. Russia, 86. B.S, Mass. Col, 13. Asst. plant path, Fla. Exp. Sta, 13-18; *chief, dept. bot. and plant path*, Ins. Exp. Sta, 18- Agent, bur. plant indust, U. S. Dept. Agr, 18- A.A; Phytopath. Soc. Diseases of pecan, fig, sugar cane and citrus fruits.
- Mauchly, Dr. S(ebastian) J(acob)**, 36th St. and Broad Branch Road, Washington, D. C. *Physics*. Swanton, Ohio, July 9, 78. Ohio State; Chicago; A.B, Cincinnati, 11, fellow, 11-13, Ph.D, 13. Instr. physics and math, Hartwell High Sch, Cincinnati, 05-11; head, physics dept, Woodward High Sch, 13-14; *assoc. physicist, dept. terrestrial magnetism, Carnegie Institution*, 14- Chief, Carnegie Institution solar eclipse exped. to Lakin, Kans, 18. A.A; Physical Soc; Wash. Acad; Wash. Philos. Soc. (rec. sec'y, 19-21). Electrical conduction through gases; earth currents.
- Maury, Miss Antonia C(oetana de P. P)**, Hastings-on-Hudson, N. Y. *Astrophysics*. Cold Spring, N. Y, March 21, 66. A.B, Vassar, 87. Asst, *Harvard Observatory*, 89-96, 18- Instr. physical science, Gilman Sch, Cambridge, Mass, 91-94. Astron. Soc. Classification of stellar spectra; spectroscopic binaries.
- Maury, Dr. Carlotta J(oaquina)**, Hastings-on-Hudson, N. Y. *Paleontology*. Hastings-on-Hudson, Jan. 6, 74. Radcliffe, 91-93; Ph.B, Cornell, 96, Schuyler fellow, 98; Paris, 99-00; Ph.D, Cornell, 02. Asst. paleont, Columbia, 04-06; La. Geol. Surv, 07-09; lecturer geol, Barnard, Columbia, 09-12; prof. zool, Cape of Good Hope, 12-15; *paleontologist, Brazil Surv*, 18- Sarah Berliner fellow, 17. A.A. Comparison of the Tertiary of western Europe and that of southern United States; distribution of the molluscan fauna of New York; Pleistocene fauna of Cayuga Basin; new Tertiary Mollusca from Florida; Quaternary of the gulf coast; lower Eocene and Miocene of Trinidad Island; Santo Domingan fossils and sections; Tertiary fossils of Brazil with descriptions of new Cretaceous species; Tertiary mollusca of Porto Rico.
- Mavor, Prof. James W(att)**, Union College, Schenectady, N. Y. *Zoology*. Glasgow, Scotland, Dec. 13, 83. B.A, Cambridge, 05; A.M, Harvard, 10, Ph.D, 13. Lecturer science and math, King's Col, Can, 06-07; instr. zool, Syracuse, 10-11; teaching fellow, Harvard, 12-13; instr, Wisconsin, 13-16; *asst. prof, Union*, 16- Scientific investigator, Can. Biol. Board, Dept. Naval Service; curator, biol. sta, Georgian Bay, 13; marine biol. sta, St. Andrews, 14; mem. Can. fisheries exped. to Gulf of St. Lawrence and Atlantic Waters of Can, 15. A.A; Soc. Zool; Ass. Prof; Wis. Acad. Protozoology; embryology; economic fishes; Myxosporidia; hemoflagellates; corals; growth of fishes; oceanography.
- Maxfield, Dr. Francis N(orton)**, Department of Public Instruction, Harrisburg, Pa. *Psychology*. Sandwich, Mass, Aug. 29, 77. A.B, Haverford, 97; Ph.D, Pennsylvania, 12. Instr, secondary schools, 97-12; head master, Oakwood Sem, Union Springs, N. Y, 01-03; master science and math. and v. principal, Friends' Sch, Germantown, Pa, 03-12; instr. psychol, Pennsylvania, 12-14, asst. prof, 14-18; psychologist, pub. sch. clinic, Newark, N. J, 18-20; *director, bur. psychol, dept. pub. instr, Pa*, 20- Asst. director, psychol. clinic, Pennsylvania, 13- A.A; Psychol. Ass. (chairman, sect. clin. psychol). Clinical psychology.
- Maxim, Hudson**, Maxim Park, Landing, N. J. *Chemistry*. Orneville, Maine, Feb. 3, 53. Kent's Hill Acad; Sc.D, Heidelberg (Ohio), 13; LL.D, St. Peter's, 18. Inventor and manufacturer, ordnance and explosives, 88-98; *consulting engineer, E. I. duPont de Nemours and Co, Wilmington, Del*, 98- A.A; Mil. Serv. Inst; Aeronaut. Soc. N. Y. (pres, 10-). Explosives; smokeless powder; a detonating fuse for projectiles;

- propulsion of automobile torpedoes; calcium carbide; military preparedness.
- Maxon, William R (alph)**, U. S. National Museum, Washington, D. C. **Botany*. Oneida, N. Y., Feb. 27, 77. Ph.B., Syracuse, 98. Aid crypt. bot. div. of plants, U. S. Nat. Museum, 99-05; asst. curator, 05-14, *assoc. curator*, 14- A.A.; Bot. Soc; Fern Soc. (pres, 00, 01, 19); Wash. Acad. (rec. sec'y, 17-); Wash. Bot. Soc. Taxonomy of Pteridophyta, especially of tropical America.
- Maxson, Prof. Ralph N (elson)**, State University, Lexington, Ky. *Chemistry*. Westerly, R. I., Dec. 2, 79. B.S., R. I. Col, 02; Ph.D., Yale, 05. Asst. chem., Yale, 04-05; instr. gen. chem., Pa. State, 05-06; asst. prof., *Kentucky*, 06-08, *prof. inorg. chem.*, 08- Inorganic chemistry.
- Maxwell, Dr. S (amuel) S (teen)**, University of California, Berkeley, Calif. *Physiology*. Manor Cunningham, Ireland, Aug. 4, 60. B.S., Amity, 86, M.S., 88; Hopkins, 89-90; fellow, Chicago, 95-96, Ph.D., 96. Instr. math., Amity, 86-87, prof. nat. science, 87-89; Monmouth, 90-92, biol., 92-94, 96-02; asst. *physiol.*, Harvard, 02-03, instr., 03-05; instr. *California*, 05-07, asst. prof., 07-10, *assoc. prof.*, 10- Instr. *physiol.*, Chicago, summer, 96. A.A.; *Physiol. Soc*; *Soc. Exp. Biol.* Physiology of invertebrate nervous system; voluntary control of smooth muscle; physiology of muscular contraction and of ciliary movement; physiology of cerebral cortex; nature of nerve conduction; equilibrium functions of the labyrinth.
- May, Dr. Charles H (enry)**, 698 Madison Ave, New York, N. Y. *Ophthalmology*. Baltimore, Md, Aug. 7, 61. Col. City of N. Y., 75-77; M.D., Columbia, 83. Lecturer ophthal., N. Y. Polyclinic, 87-90; asst. surgeon, N. Y. Ophthal. and Aural Inst., 87-94; chief, eye clinic, and instr. ophthal., Columbia, 92-03. Ophthal. surgeon to various hospitals; co-editor, 'Annals of Ophthal.,' 92-04; 'Ophthalmology,' 04; 'Am. Jour. Ophthal.,' 19- Ophthal. Soc; Am. Acad. Med; Am. Med. Ass; fel. N. Y. Acad. Med. Operations and diseases of eye; the field of vision; congenital abnormalities of the eye; injuries to the eye during parturition; trachoma; manual of diseases of the eye.
- May, Prof. C (larence) E (arl)**, Bloomington, Ind. *Chemistry*. Bloomington, March 3, 84. A.B., Indiana, 04, A.M., 05; fellow, Columbia, 07-08, Ph.D., 08. Asst. chem., *Indiana*, 03-05, instr., 05-08, asst. prof., 08-12, *assoc. prof.*, 14- Chem. Soc. (asst. ed., 'Chem. Abstracts,' 07). Organic and biological chemistry.
- May, David W (illiam)**, Mayaguez, P. R. *Agriculture*. Barry, Mo, April 22, 68. B.S.A., Missouri, 94, M.S.A., 96. Asst. agr., Missouri, 96-98; scientific asst., U. S. Dept. Agr., 99-01; animal husbandman, Ky. Exp. Sta., 01-04; *director*, P. R. Exp. Sta., 04- Trustee, Univ. Porto Rico, 07- Animal husbandry; agronomy; tropical agriculture.
- May, Prof. Henry G (ustav)**, Kingston, R. I. *Zoology*. East Prussia, Germany, Oct. 22, 86. B.S., Rochester, 13; Woods Hole, 12-13; biol. sta., Michigan, 15; Ph.D., Illinois, 17. Asst. zool., Illinois, 14-17; junior zoologist, bur. animal indust., U. S. Dept. Agr., 17-19; *prof. biol.*, Miss. Col., 19-20; *bacter. and chief, div. animal breeding and path.*, R. I. Col., 20- Asst. zool., Michigan, 15; bacteriologist, med. dept., A.E.F., 18. A.A.; *Micros. Soc*; *Soc. Baet.* Parasitology; selection in *Drosophila*; life histories of American Gordiaceae; Nematodirus.
- May, Dr. James V (ance)**, Boston State Hospital, Dorchester Center, Boston, Mass. *Psychiatry*. Lawrence, Kans, July 6, 73. A.B., Kansas, 94; M.D., Pennsylvania, 97. Res. physician, Phila. Hosp., 97-98; acting asst. surgeon, U.S.A., 00-02; asst. physician, Binghamton State Hosp., N. Y., 02-11; supt., Matteawan State Hosp., N. Y., 11; mem. N. Y. State Hosp. Commission, 12-16; supt., Grafton State Hosp., Mass., 16-17; *Boston State Hosp.*, 17- Lieut, capt. and major, M.R.C., 17. Am. Med. Ass; Medico-Psychol. Ass; New Eng. Psychiat. Soc.
- May, Prof. Mark Arthur**, 287 Westmoreland Ave, Syracuse, N. Y. *Psychology*. Jonesboro, Tenn., Aug. 12, 91. A.B., Maryville, 11; Ph.B., Chicago, 12; A.M., Columbia, 15, Ph.D., 17. *Prof. psychol.*, *Syracuse*, 19- Lieut, Sanit. C., 18-19. Psychol. Ass; Religious Educ. Ass. (mem. exec. council). Controlled association; standardized elementary psychology tests; psychology of conscientious objectors.
- Maynard, Charles J (ohnson)**, West Newton, Mass. *Ornithology*. West Newton, May 6, 45. Pub. schools. Instr. *econ. bird study*, Mass. Col. Six exploring expeditions to Bahamas. Boston Soc. Nat. Hist; Newton Soc. Nat. Hist. Sponges; Cerionidae; anatomy of birds; evolution and recession of species.
- Maynard, George W (illiam)**, 20 Nassau St, New York, N. Y. *Mining engineering*. Brooklyn, N. Y., June 12, 39. Göttingen, 60-61; A.M., Columbia, 62; Royal Sch. Mines, Clausthal, 62-63. Manager mines, Ireland, 63; Colo., 64-67; prof. mining and metal, Rensselaer, 68-72; consulting engineer, iron and steel works, England, and copper works, Russia, 73-79; *consulting mining engineer*, 80- Min. Eng. (v. pres); Min. and Metal. Soc; Electrochem. Soc; British Inst. Min. and Metal; London Iron and Steel Inst. Mining; metallurgy of iron, steel, gold, silver and copper.
- Maynard, Dr. L (eonard) A (mby)**, New York State College of Agriculture, Ithaca, N. Y. *Agricultural chemistry*. Hartford, N. Y., Nov. 8, 87. A.B., Wesleyan, 11; fellow, Cornell, 14-15, Ph.D., 15. Asst. chem., Iowa Exp. Sta., 11-12; R. I. Exp. Sta., 12-13; asst. prof. animal husbandry, Cornell, 15-17; lieut, capt. and major, U.S.A., 17-19; asst. prof. *animal breeding*, Cornell, 17-19; *prof.*, 20- A.A.; Chem. Soc. Plant and animal nutrition.
- Maynard, Prof. S (amuel) T (aylor)**, Northboro, Mass. *Horticulture*. Hardwick, Mass., Dec. 6, 44. Mass. Col., 72. *Prof. bot. and hort.*, Mass. Col., 79- Director, hort. div., Mass. Exp. Sta; botanist and pomologist, Mass. State Board Agr; Mass. Fruit Growers Ass. (sec'y); assoc. ed., 'Suburban Life.' Botany; landscape gardening.
- Maynard, Dr. T (homas) Poole**, Hurt Building, Atlanta, Ga. *Geology*. Baltimore, Md, Feb. 15, 83. A.B., Hopkins, 05, Ph.D., 09. Asst. geol., Hopkins, 05-08; asst. state geologist, Ga. Geol.

- Surv, 09-12; *consulting geologist*, 12- Mem. Md. and Va. Geol. Surveys, 05-09; with U. S. Geol. Surv, 07. A.A.; Geol. Soc; Paleont. Soc; Min. Eng; Ceramic Soc; Electrochem. Soc; Ass. Pulp and Paper Indust. Buckingham-Fluvanna slate district of Virginia; Corrigan formation of Maryland; limestones, slates and cements of Georgia; stratigraphy of northwest Georgia; white rock phosphates of Tennessee; paleontology of the lower Devonian deposits of Maryland.
- Mayne, Bruce**, U. S. Public Health Service, Washington, D. C. *Entomology*. London, England, July 25, 82. B.S. California, 08, M.S., 10; certificate, London Sch. Trop. Med. Field asst. entom. California, 06-07; tech. asst. plague lab, U. S. Pub. Health Service, 08-10; entomologist, Vet. Corps, Bur. Science, P. I., 10-14; *biologist*, U. S. Pub. Health Service, 14- Demonstrator, London Sch. Trop. Med; lecturer, Univ. Philippines; Tennessee; U. S. Pub. Health Service. A.A. Bionomics of insects affecting the health of man; infectivity of insects relative to transmission of bubonic plague, trypanosomiasis, anthrax and malaria.
- Mayo, Dr. Charles Horace**, Rochester, Minn. *Surgery*. Rochester, July 19, 65. M.D., Chicago Med. Col, 88; A.M. Northwestern, 02; LL.D. Maryland, 09; Kenyon, 16; Sc.D., Princeton, 17; F.R.C.S., 20. *Surgeon, Mayo Clinic (St. Mary's Hosp)*; *prof. surg. med. sch., Minnesota*; *Mayo Foundation, Minnesota*, 15- Consulting surgeon, C. and N. W. Ry; C. G. W. Ry; G. N. Ry; director, Nat. Dental Ass. Research Inst; mem. med. committee in the U. S. Am. Hosp. for Gt. Britain; elector, Hall of Fame; D. S. medal, 20; founder, Mayo Foundation, Minnesota, 15; mem. advisory council, north. div. Am. Red Cross. Pres, surg. sect, Int. Cong. Tuberculosis, Washington, 08. A.A.; Col. Surg. (regent); Surg. Ass; Am. Med. Ass. (pres, 16-17, chairman, sect. surg, 10); Soc. Clin. Surg; Ass. Mil. Surg; Catholic Hosp. Ass; Fed. State Med. Boards; hon. mem. Inst. Soc. Sci; West. Surg. Ass. (pres, 04-05); S. Surg. and Gynec. Soc; S. Minn. Med. Ass; Minn. Med. Soc. (pres, 05); Minn. Pub. Health Ass; Minn. Path. Ass; hon. mem. Bronx Co. (N. Y.) Med. Soc; Int. Soc. Surg; hon. mem. Serbian Med. Soc.
- Mayo, Dr. M(arion) J(udson)**, Harris Teachers College, St. Louis, Mo. *Psychology*. Prestonsburg, Ky, March 1, 71. A.B., Lebanon, 94; fellow, N. Y. Univ, 01-03, A.M., Pd.D., 04; Ph.D., Columbia, 13. Prof. math, E. Tex. Nor. Col, 94-01; teacher psychol, State Nor. Sch, Stroudsburg, Pa, 03-04; *teacher math, high schools*, N. Y. City, 05-16; *psychol, Harris Teachers Col*, 16- Psychol. Ass. Race psychology.
- Mayo, Dr. William J(ames)**, 701 College Hill, Rochester, Minn. *Surgery*. Le Sueur, Minn, June 29, 61. M.D., Michigan, 83, A.M., 99, Sc.D., 08; F. R. C. S., Edinburgh, 05; LL.D., Toronto, 06; Maryland, 07; Sc.D., Columbia, 10; LL.D., Pennsylvania, 12; F.R.C.S., London, 13. *Surgeon, Mayo Clinic (St. Mary's Hosp)*. Col. and chief consultant all surg. services, U.S.A., 17-19; D. S. medal, 19. Regent, Minnesota, 07, founder, Mayo Foundation, 15. A.A.; Surg. Ass. (pres, 13); Soc. Clin. Surg. (pres, 11); Col. Surg. (pres, 17-19); Am. Med. Ass. (pres, 05); Minn. Med. Soc. (pres, 95); Acad. de Chirurg. de Paris; hon. mem. Soc. Peruana de Cirujia.
- Mayor, Dr. Alfred (Goldsborough)**, Carnegie Institution, Washington, D. C. **Zoology*. Frederick, Md, April 16, 68. M.E., Stevens, 89; Sc.D., Harvard, 97. Asst. physics, Clark, 89-90; Kansas, 90-92; asst. to Mr. Alexander Agassiz and in charge of radiates, museum comp. zool, Harvard, 92-00; curator nat. sciences and curator-in-chief, museum, Brooklyn Inst, 00-04; *director, dept. marine biol, Carnegie Institution*, 04- Trustee, Woods Hole. Nat. Acad; A.A. (v. pres, F, 13); Soc. Nat; Soc. Zool. (pres, east. branch, 12); Soc. Exp. Biol; Philos. Soc; N. Y. Acad; Wash. Acad. (v. pres, 16); Boston Soc. Nat. Hist; fel. and patron N. Y. Zool. Soc; Phila. Acad; Cambridge Entom. Club (pres, 99). Evolution and cause of coloration in Lepidoptera; evolution of Partula of Tahiti; Atlantic palolo worm; instincts of Lepidoptera; pulsation of Medusae; Medusae of the world; etenophores of the Atlantic; physiology of coral reefs of the Pacific.
- Mazyck, W(illiam) G(aillard)**, Equitable Building, Charleston, S. C. *Conchology*. Cordesville, S. C, Oct. 12, 46. Railroad work, 62-64; librarian, Charleston Library Soc, 65-68; railroad work, 69-95; *sec'y and treas, Equitable Fire Ins. Co*, 95- Hon. curator conchol, Charleston Museum, 06- Elliott Soc. (sec'y and treas); S. C. Huguenot Soc. (historian, 00-). Pulmonata geophila; Pulmonata; Mollusca of South Carolina.
- Mead, Dr. A(lbert) D(avis)**, 283 Wayland Ave, Providence, R. I. **Zoology, Comparative anatomy*. Swanton, Vt, April 15, 69. A.B., Middlebury, 90, Sc.D., 16; A.M., Brown, 91; Clark, 91-92; Ph.D., Chicago, 95; Sc.D., Pittsburgh, 12. Instr. *comp. anat, Brown*, 95-96, assoc. prof, 96-00, *prof*, 00- Mem. R. I. Commission of Inland Fisheries; Biol. Board, 08- Prizes, Int. Fishery Cong, 08. A.A.; Soc. Nat. (sec'y, 00, 01); Soc. Zool; Am. Acad; cor. mem. Seefischerei Verein. Embryology; fertilization and cleavage of egg; natural history of marine invertebrates; rate of growth of marine invertebrates; artificial culture of marine food animals.
- Mead, Prof. Cyrus D(e Witt)**, 1568 Le Roy Ave, Berkeley, Calif. *Education*. Spencer, Ind, Nov. 4, 75. Ph.B., DePauw, 98; fellow, Columbia, 10-12, M.A., 12, Ph.D., 14. Principal, Ind. Sch. for Feeble-Minded, 04-10; asst. prof. educ, Cincinnati, 12-18; *assoc. prof. elementary educ, California*, 18- Nat. Soc. Study Educ; Soc. Col. Teachers Educ; Nat. Educ. Ass.
- Mead, Prof. Elwood**, University of California, Berkeley, Calif. *Irrigation engineering*. Patriot, Ind, Jan. 16, 58. B.S., Purdue, 82, M.S., 84, hon. D.Eng., 04; C.E., Iowa State, 83. Prof. irrig. eng, Colo. Agr. Col, 83-85; asst. state engineer, Colo, 85-86; prof. irrig. eng, Colo. Agr. Col, 86-88; state engineer, Wyo, 88-98; chief irrig. investigation, U. S. Dept. Agr, 98-07; chairman, State Water Supply Commission, Victoria, Australia, 07-15; consulting engineer, Dept. Interior, 15-19; *prof. rural institutions, California, and chairman, State Land Settlement Board*, 15- Prof. institutions and prac-

- tise of irrig, California, 99- Civil Eng; Eng. Educ. Irrigation engineering; irrigation laws; rural development.
- Mead, Prof. George H(erbert)**, University of Chicago, Chicago, Ill. *Philosophy*. South Hadley, Mass, Feb. 27, 63. A.B. Oberlin, 83; A.B. Harvard, 88. Instr. *philos.* Michigan, 91-93, asst. prof, 93-94; *Chicago*, 94-02, assoc. prof, 02-07, *prof*, 07- A.A.; Psychol. Ass. Relation of philosophy to the natural sciences; comparative psychology; the criterion of intelligence in lower forms.
- Mead, Prof. H(arold) T(upper)**, Tulane University, New Orleans, La. *Zoology*. Bakersfield, Vt, Nov. 1, 81. A.B. Yale, 07; M.S. Chicago, 13. Prof. biol. and geol, Dak. Wesleyan, 13-16; instr. micros. anat, Colorado, 17-18; *prof. zool, Tulane*, 18- A.A.; Ass. Anat; Micros. Soc; S. Dak. Acad; La. Entom. Ass; New Orleans Acad; New Orleans Zool. Ass. (director, 19). The intestine of amphibians; Arthropoda; interstitial glands of mammals.
- Mead, Prof. W(arren) J(udson)**, University of Wisconsin, Madison, Wis. *Geology*. Plymouth, Wis, Aug. 5, 83. B.S. Wisconsin, 06, A.M. 08. Asst. instr, asst. prof, assoc. prof. and *prof. geol, Wisconsin*, 06- A.A.; Geol. Soc; Min. Eng. Metamorphic, economic and structural geology.
- Meade, Prof. DeVoe**, University of Maryland, College Park, Md. *Agriculture*. Clyde, N. Y., Aug. 26, 86. B.S. Pa. State, 11; Ph.D. Cornell, 18. Agriculturist, high sch, Hector, Minn, 11-12; in charge, dairy and animal husbandry departments, N. Y. State Sch. Agr, Alfred, 12-14; instr. *animal husbandry*, Cornell, 14-18; *prof, Maryland*, 18- Soc. Animal Production. Breeding; genetics; farm management.
- Meade, George P(eterkin)**, Cuban Sugar Refining Co, Cardenas, Cuba. *Chemistry*. Cumberland, Md, Dec. 26, 83. B.S. N. Y. Univ, 05. Chief chemist, Nat. Sugar Refinery, 06-09; chief chemist and asst. supt, Colonial Sugar Co, 09-13; *supt, Cardenas Refinery, and director, control lab, Cuban-Am. Sugar Co*, 13- Eighth Int. Cong. Applied Chem. (mem. sugar committee). A.A.; Chem. Soc; Chem. Eng; N. Y. Chemists Club. Sugar analysis and refining; action of disinfectants on sugar solutions.
- Meade, Richard K(iddler)**, 11 E. Fayette St, Baltimore, Md. *Chemistry*. Charlottesville, Va, Nov. 28, 74. Virginia, 92-94; B.S. Lafayette, 99, hon. M.S. 08. Chemist, Longdale Iron Co, 96-97; instr. chem, Lafayette, 97-02; chief chemist, Edison Portland Cement Co, 02-03; Dexter Portland Cement Co, 03; ed, 'The Chemical Engineer,' 04-10; *director, Meade Test Laboratories*, 07-; v. pres, *Fuller Eng. Co*, 09-; gen. manager, Tidewater Portland Cement Co. 11; *consulting chem. engineer*, 11- Chem. Soc. (sec'y, Lehigh Valley sect, 98-); Soc. Test. Mat; Chem. Eng. (auditor, 08, v. pres, 14); Electrochem. Soc. Methods of volumetric analysis; technical analysis and chemistry of Portland cement; chemical composition of and causes of the setting of hydraulic cements; potash; lime; hydrated lime; barium compounds; designing and building chemical plants.
- Meador, Prof. F(red) M(arlin)**, Department of Health, Detroit, Mich. *Preventive medicine*. North Haverhill, N. H., Jan. 28, 76. B.S. Wesleyan, 02, M.S. 05; M.D. Hopkins, 09. Instr. path. and bacter, Syracuse, 09-10, asst. prof, 10-11, assoc. prof, 11-12, prev. med. and hygiene, 12-20; assoc. epidemiol, sch. hygiene and pub. health, Hopkins, 20; *director med. services, dept. health, Detroit, Mich*, 20- Major, M.C. U.S.A., 17-19; director, div. communicable diseases, N. Y. State Dept. of Health, Albany. Soc. Bact; Pub. Health Ass. Public health; carriers of disease.
- Meador, Dr. Percy D(avor)**, 310 W. Monument St, Baltimore, Md. *Bacteriology*. Providence, R.I., 90. Ph.B. Brown, 14, M.S. 16, Ph.D. 18. Asst. bacter, Brown, 15-16; *instr. sch. hygiene and pub. health, Hopkins*, 18- Soc. Bact; Pub. Health Ass. Immunology.
- Meakins, Prof. J(onathan) C(ampbell)**, University of Edinburgh, Edinburgh, Scotland. *Medicine*. Hamilton, Ont, May 16, 82. M.D. C.M. McGill, 04; F.R.C.P. Edinburgh, 19. Lecturer med, McGill, 11-19, path, 12-19, director exp. med, 13-19; *Christison prof. therapist, Edinburgh*, 19- Am. Physicians; Soc. Clin. Invest; Ass. Path. and Bact; London Physiol. Soc; London Path. Soc. Clinical medicine; therapeutics; pathology; immunity.
- Means, A(ian) H(ay)**, American Smelting and Refining Co, El Paso, Tex. *Geology*. Peru, Ill Jan. 22, 90. B.S. Mass. Inst. Tech, 13, M.S. 14. Asst. to Prof. W. Lindgren, 15; *geologist, Am. Smelting and Ref. Co*, 15-16, 19- A.A.; Min. Eng. Economic geology; mineralogy; tourmaline bearing gold quartz veins of Michipicoten district, Ontario; ore deposits of Red Cliff, Colorado.
- Means, C(harles) M(errill)**, 2329 Oliver Building, Pittsburgh, Pa. *Electrical engineering*. Punxsutawney, Pa, Sept. 29, 69. Private tutors. Elec. engineer, Pa. R. R., 88-97; Rochester and Pittsburgh Coal and Iron Co, 97-99; Jefferson Traction Co, 99-00; Rochester and Pittsburgh Coal and Iron Co, 00-11; *consulting engineer, Randolph-Means Co*, 11-17; *Charles M. Means Co*, 17- Consulting elec. engineer, Bur. Mines; Pa. Dept. of Mines. Elec. Eng. Electricity in coal mining.
- Means, Dr. James H(oward)**, 15 Chestnut St, Boston, Mass. *Medicine*. Dorchester, Mass, June 24, 85. A.B. Harvard, 07, M.D. 11. Research fellow, *Harvard Med. Sch*, 13-15, teaching fellow, 16-18, *instr. med*, 19-; *assoc. med, Mass. Gen. Hosp*, 17- Lieut. to major, M. C. A. E. F., 17-19. Assoc. Am. Physicians; Soc. Clin. Invest; Am. Med. Ass; Ass. Tuber; Boston Soc. Nat. Hist. Respiratory metabolism in disease; functional pathology of the respiratory and circulatory systems.
- Means, Philip Ainsworth**, Harvard Club, Boston, Mass. *Anthropology*. Boston, April 3, 92. A.B. Harvard, 15, A.M. 16. Asst. Yale exped. to Peru, 14-15; *honorary collaborator archeol, U. S. Nat. Mus*, 16-; *special investigator in Peru for Wonalancet Cotton Co*, 19-; *director, Nat. Museum of Archeol, Lima, Peru*, 20- A.A.; Anthropol. Ass; Am. Geog. Soc; N. Y. Cortes Soc. (councilor); Royal Anthropol. Inst; Lima Geog. Soc. History, anthropology and sociology of the Hispanic-American countries; races in Peru.

- Means, Tho(ma)s H(erbert)**, 3004 College Ave, Berkeley, Calif. *Geology*. Waterford, Va, Nov. 15, 75. B.S, George Washington, 98, M.S, 01. In charge, western div. soil surv., U. S. Dept. Agr, 99-01, soil surv, 02, alkali land reclamation, 03-04, engineer of soils, U. S. Reclamation Service, 04-07, project engineer, 08-10; *practising agr. engineer*, 10- A.A.; Civil Eng; Wash. Geol. Soc. Agricultural geology; drainage of irrigated districts; agricultural engineering.
- Mears, Dr. Brainerd**, Williams College, Williamstown, Mass. *Chemistry*. Amherst, Mass, Jan. 17, 81. A.B, Williams, 03, A.M, 05; fellow, Hopkins, 07-08, Ph.D, 08. Asst. chem, Williams, 03-06; instr, Illinois, 08-09; *Williams*, 09-10, asst. prof, 10-17, *prof*, 17- A.A. Osmotic pressure; asphalt analysis.
- Mecklin, Prof. John M(offatt)**, Dartmouth College, Hanover, N. H. *Psychology*. Winona, Miss, Jan. 21, 71. A.B, Southwestern Presbyterian, 90, A.M, 92; Union Theol. Sem. (Va), 92-94; B.D, Princeton, 96; Berlin; Marburg; Munich; Ph.D, Leipzig, 99; Am. Sch. Classical Studies, Athens, 99-00; fellow, Hopkins, 00-01. Instr, Lafayette, 01-02; *prof*. Greek, Washington and Jefferson, 02-05; philos, Lafayette, 05-13; Pittsburgh, 13-19; *sociol*, Dartmouth, 19- Lecturer, Columbia, summer, 14; Indiana, summer, 19. A.A; Psychol. Ass; Philos. Ass; Ass. Prof; West. Philos. Ass. Social psychology and ethics; psychology of religion; race friction.
- Medalia, Dr. Leon S(amuel)**, 483 Beacon St, Boston, Mass. *Pathology*. Palestine, Turkey, Dec. 5, 81. M.D, Tufts, 05. Instr. path. and bacter, Tufts, 05-10; *research and private practise*. Major, M.C, and chief of lab. and infectious disease service, 17-19. A.A; Am. Med. Ass. Bacteriology; hemolytic streptococcus and puerperal septicemia; therapeutic immunization; tubercle bacillus; pyorrhea; influenza; meningitis; pneumonia; H-ion concentration.
- Medes, Prof. Grace**, Vassar College, Poughkeepsie, N. Y. *Physiology*. Keokuk, Iowa, 87. A.B, Kansas, 04, A.M, 13; A.M, Ph.D, Bryn Mawr, 16. Instr. zool, *Vassar*, 16-19, *asst. prof. physiol*, 19- Biophysics; cell respiration; effects of acids on growth.
- Meek, Prof. Walter J(oseph)**, 2015 Chadbourne Ave, Madison, Wis. *Physiology*. Dillon, Kans, Aug. 15, 78. A.B, Kansas, 02; A.M, Penn (Iowa), 07; Ph.D, Chicago, 09. Prof. biol, Penn (Iowa), 03-08; instr. *physiol*, Wisconsin, 08-10, asst. prof, 10-12, *assoc. prof*, 12-18, *prof*, 18-, *assoc. dean, med. sch*, 20- Major, C.W.S, 18-19. A.A; Physiol. Soc. (mem. council, 15). Peripheral nervous system; fibrinogen; cardiac physiology; blood volume.
- Meeker, Prof. G(eorge) H(erbert)**, University of Pennsylvania, Philadelphia, Pa. *Physics*, *Chemistry*. Phillipsburg, N. J, Aug. 13, 71. B.S, Lafayette, 93, M.S, 95, Ph.D, 98; LL.D, Ursinus, 05; Phar.D, Medico-Chirurg. Col, Phila, 06, D.D.S, 07; Munich, 09-10; Sc.D, Villanova, 13. Chemist or manager various chem. industries, 93-02; *consulting toxicologist*, 97-; prof. chem, Medico-Chirurg. Col, Phila, 97-16; dean, dept. pharmaceut. chem, 07-16; *prof. chem. and biochem*, Pennsylvania, 16-, *dean, grad. sch.*
- med*, 18- Staff biochemist, Phila. Gen. Hosp. Medal, Franklin Inst, 06. A.A; Chem. Soc; Franklin Inst; Phila. Path. Soc. Molecular physics; applied electricity; analytical chemistry; molecular constitution of liquids; chemical technology.
- Mees, Pres. C(arl) L(eo)**, Rose Polytechnic Institute, Terre Haute, Ind. *Physics*. Columbus, Ohio, May 20, 53. Ohio State, 73-74; M.D, Starling Med. Col, 74; Berlin and South Kensington, 80-81; Ph.D, Rose, 92. Prof. physics, Male High Sch, Louisville, Ky, 76-80; Ohio State, 81-87; *Rose*, 87-20, *pres*, 95-20, *emer. pres*, 20- A.A. (sec'y, A, 87, *gen. sec'y*, 89, v. *pres*, 96); Physical Soc; Eng. Educ; Elec. Eng. (pres); Northwest. Ass. Sci. and Math. Teachers; Cent. Ass. Sci. and Math. Teachers; Ind. Acad. Micro-measurements; elastic behavior of solids; velocity of air in tornadoes; electrolysis; electromotive force constant.
- Mees, Dr. C(harles) E(ward) Kenneth**, Eastman Kodak Co, Rochester, N. Y. *Photography*. Wellingborough, England, May 26, 82. B.S, London, 03, D.Sc, 06. Managing director, Wratten and Wainwright, Ltd, England, 06-12; *director, research lab, Eastman Kodak Co*, 12- Progress medal, Royal Photog. Soc, 13. A.A; Chem. Soc; Physical Soc; Astron. Soc; Optical Soc; Royal Photog. Soc. (v. *pres*, 12); London Chem. Soc. Photographic theory.
- Meggers, Dr. William F(rederick)**, 28 Leland St, Chevy Chase, Md. *Physics*. Clintonville, Wis, July 13, 88. A.B, Ripon, 10; A.M, Wisconsin, 16; Ph.D, Hopkins, 17. Instr. physics, Ripon, 10-11; Wisconsin, 11-12; Carnegie Inst. Tech, 12-14; *physicist*, *Bur. Standards*, 14- A.A; Physical Soc; Astron. Soc; Optical Soc; Wash. Philos. Soc. Spectroscopy; astrophysics; photography; measurements of standard wave-lengths.
- Mehl, Dr. Maurice G(oldsmitth)**, University of Missouri, Columbia, Mo. *Paleontology*, *Geology*. Burlingame, Kans, Dec. 25, 87. B.S, Chicago, 11, fellow, 12-13, Ph.D, 14. Instr. paleont, Chicago, 12-13; paleont. and geol, Wisconsin, 13-15; *prof. geol*, Oklahoma, 15-17; *acting prof*, Denison, 18-19; *Missouri*, 19- A.A; Paleont. Soc; Ass. Petrol. Geol. Petroleum geology; fossil Reptilia and Amphibia.
- Meier, F(red) C(ampbell)**, U. S. Department of Agriculture, Washington, D. C. *Plant pathology*. Riggston, Ill, April 5, 93. B.S, Harvard, 16, A.M, 17. *Pathologist, bur. plant indust*, U. S. Dept. Agr, 18- Phytopath. Soc. Diseases of cucurbits.
- Meier, Prof. Henry Frederick August**, Syracuse, N. Y. *Botany*. Edwardsport, Ind, Jan. 7, 81. A.B, Indiana, 12, A.M, 13. Science teacher, secondary schools, 04-11; teaching fellow, Indiana, 11-12; *assoc. prof. bot*, Syracuse, 12- Instr. bot, Indiana, summers, 11-12; asst. plant physiol, Columbia, 15-16. A.A; Bot. Soc. Plant physiology; cellular physiology; inorganic salt requirements.
- Meigs, Dr. Edward B(rowning)**, 1445 Rhode Island Ave, N. W, Washington, D. C. *Physiology*. Philadelphia, Pa, Sept. 10, 79. A.B, Princeton, 00; M.D, Pennsylvania, 04. Asst. physiol,

- Pennsylvania, 04-06; instr. Harvard Med. Sch., 07-10; fellow physiol. Wistar Inst., 10-15; *physiologist, dairy div., U. S. Dept. Agr.*, 15- A.A.; Soc. Nat.; Physiol. Soc.; Soc. Exp. Biol.; Soc. Biol. Chem.; Am. Med. Ass.; Phila. Acad.; Phila. Col. Physicians; Wash. Acad.; Boston Soc. Med. Sci. Physiology of muscular contraction; osmotic properties of muscle; osmotic properties of calcium and magnesium phosphates; physiology of milk secretion.
- Meigs, Montgomery**, Keokuk, Iowa. *Civil engineering*. Detroit, Mich., Feb. 27, 47. Harvard; Royal Polytech., Stuttgart, 67-69. Res. engineer, Northern Pacific R. R., 70-73; *U. S. civil engineer, improvements of Mississippi River*, 74-, in charge *Des Moines Rapids canal*, 82- A.A.; Civil Eng. A 'canvas cofferdam'; steamboats and dredge tenders; relief of pressure on dams by compressed air.
- Mein, William Wallace**, 43 Exchange Place, New York, N. Y. *Mining engineering*. Nevada City, Calif., July 19, 73. B.S., California, 00. Mine manager and consulting engineer, S. Africa, 01-10; *Int. Nickel Co., pres, Maracaibo Oil Exploration Co. and other companies*, 10- Min. Eng.; Min. and Metal. Eng.; British Min. and Metal. Inst.; S. African Ass. Eng. and Metal.
- Meinecke, Dr. E(milio) P(epe Michael)**, U. S. Forest Service, Ferry Building, San Francisco, Calif. *Forestry*. Alameda, Calif., July 26, 69. Ph.D., Heidelberg, 93. Asst. Bot. Inst., Heidelberg, 94-98; Royal Forestry Exp. Sta., Munich, 98-02; prof., Univ. and Museum La Plata; *pathologist, bur. plant indust., U. S. Dept. Agr.* A.A.; Bot. Soc.; Soc. Foresters; Phytopath. Soc. Anatomy and pathology of plants; physiology of fermentation; pathology of forest trees.
- Meinzer, O(scar) E(dward)**, 2355 Rhode Island Ave, N. E., Washington, D. C. *Geology*. Davis, Ill., Nov. 28, 76. A.B., Beloit, 01; fellow, Chicago, 06-07. Principal, pub. sch., Frankfort, S. Dak., 01-03; prof. physical sciences, Lenox, 03-05; *with U. S. Geol. Surv.*, 06-, in charge, *div. ground waters*, 12- Instr. geol. gor. sch., Chicago, 06-08; capt., corps engineers, 18. Geol. Soc.; Ass. Geog.; Wash. Acad.; Wash. Geol. Soc. Ground water; water supply.
- Melander, Prof. A(xel) L(eonard)**, Pullman, Wash. *Entomology*. Chicago, Ill., June 3, 78. B.S., Texas, 01, fellow, 01-02, M.S., 02; fellow, Chicago, 02-04; Sc.D., Harvard, 14. Asst. zool., Texas, 00-01; instr. *entom., Wash. State*, 04-06, *prof.*, 06-, *head, dept. zool.*, 07-, asst. entomologist, *Exp. Sta.*, 04-06, *entomologist*, 06- Mem. staff, Woods Hole, 02; Puget Sound Marine Sta., 09; Cold Spring Harbor, 13. A.A.; Entom. Soc.; Ass. Econ. Entom.; West. Soc. Nat.; Entom. Soc. Pacific; Cambridge Entom. Soc. Economic entomology; taxonomy of insects; especially Diptera; Empididae; codling moth; insecticides and spraying; San Jose scale; fossil insects.
- Melcher, Arthur C(larke)**, 58 Bowen St., Newton Center, Mass. *Chemistry*. Newton Center, June 26, 80. B.S., Mass. Inst. Tech., 00. Research asst., *Mass. Inst. Tech.*, 00-04, research assoc., 04-14, *purchasing agent*, 14- A.A.; Chem. Soc.; Soc. Chem. Indust. Ammonio-silver compounds; electrical conductivities of solutions and solubilities of salts at high temperatures; physical chemistry of mixtures; pure chemicals.
- Melchers, Prof. L(eo) E(dward)**, Manhattan, Kans. *Botany*. Toledo, Ohio, Aug. 1, 87. B.S., Ohio State, 12, M.S., 13. Instr. bot., *Kansas State*, and acting plant pathologist, Exp. Sta., and later *prof. plant path. and in charge, dept. bot. and plant path.*, 13- A.A.; Phytopath. Soc. Plant pathology; diseases of cereals, forage crops, fruits and vegetables.
- Meldrum, Prof. W(illiam) Buell**, Haverford College, Haverford, Pa. *Chemistry*. Hull, Que., Dec. 18, 87. A.B., McGill, 09, M.S., 10; Ph.D., Harvard, 14. Demonstrator chem., McGill, 09-11; instr., Montreal Tech. Inst., 10-11; Austin teaching fellow, Harvard, 11-12; instr. *chem.*, Vassar, 14-16, *asst. prof.*, 16-17; *Haverford*, 17- Chemist, mines branch, Can. Civil Service, summers, 09, 13, irrig. branch, summer, 15; C. W. S., 18-19; price sect., W. T. B., 19; geophys. lab., Carnegie Institution, 19; 1851 Exhibition scholar, 12-14. A.A.; Chem. Soc.; Ass. Harvard Chemists. Melting diagrams of binary and ternary mixtures; fused salt as electrolyte; application of nephelometer in study of solubility of slightly soluble salts.
- Melhus, Dr. Irving E**, Iowa State College, Ames, Iowa. *Plant pathology*. Creston, Ill., April 2, 80. B.S., Iowa State, 06; Ph.D., Wisconsin, 12. Teacher nat. science, high sch., Burlington, Iowa, 07-08; asst. bot., Wisconsin, 08-09, plant path., 09-10, instr., 10-11; plant pathologist, bur. plant indust., U. S. Dept. Agr., 12-16; *in charge plant path., Iowa State*, 16- A.A.; Bot. Soc.; Phytopath. Soc. Physiology and pathology of the Oomycetes and diseases of the Irish potato.
- Mell, C(layton) D(issinger)**, care C. H. Pearson, 29 Broadway, New York, N. Y. *Forestry*. Lebanon, Pa., Nov. 25, 75. A.B., Franklin and Marshall, 02; M.F., Yale, 05. Inst. bot., Albright, 98-00; asst. dendrologist, U. S. Forest Service, 05-14; *asst. pharmacog., bur. chem., U. S. Dept. Agr.*, 14- Investigator greenheart timber in British Guiana for Panama Canal, 13-14. Basket willows; American timbers; commercially important foreign woods.
- Mellencamp, Dr. F(rank) J(ohn)**, Milwaukee State Normal School, Milwaukee, Wis. *Electrochemistry*. Grass Lake, Mich., April 20, 71. A.B., Michigan, 03, A.M., 06, Ph.D., 09. Instr. physics, State Nor. Col., 03-04; asst., Michigan, 04-07, instr., 07-13; *head of dept., physics and math., Milwaukee State Nor. Sch.*, 13- Assoc. Physical Soc. Electrochemistry; concentration cells.
- Meller, Prof. H(arry) B(ertine)**, University of Pittsburgh, Pittsburgh, Pa. *Geology*. Altoona, Pa., May 26, 78. E.M., Pittsburgh, 10. Instr. *mining, Pittsburgh*, 09-11, asst. prof., 11-12, *prof.*, 12-, v. dean, sch. mines, 12-14, *dean*, 14- A.A.; Min. Eng.; Coal Min. Inst.; Eng. Educ. Mining geology; mine economics.
- Mellon, Prof. M(elvin) G(uy)**, Purdue University, La Fayette, Ind. *Chemistry*. Conneaut Lake, Pa., Oct. 25, 93. B.S., Allegheny, 15; M.S., Ohio State, 17, Ph.D., 19. Asst. instr. chem., Ohio State, 15-18, instr., 18-19; *asst. prof.*

- quant. anal, *Purdue*, 19- Chem. Soc. Physical, organic and analytical chemistry; ferments; lead standard cells; salts and amalgams.
- Mellor, Lewis L(eRoy)**, Bausch and Lomb Optical Co, Rochester, N. Y. *Optics*. Utica, N. Y., March 6, 89. A.B., Michigan, 12, A.M., 15. Asst. astron., Detroit Conservatory, Michigan, 12-17; asst. physicist, Nela Research Lab, 17-18; Bur. Standards, 18-19; *optical engineer, scientific bur, Bausch and Lomb Optical Co*, 19- A.A.; Optical Soc.; Astron. Soc. The measurement of transmission factor.
- Mellus, Dr. E(dward) Linton**, 12 Fuller St., Brookline, Mass. **Anatomy, Physiology*. Lubec, Maine, May 24, 48. M.D., Jefferson Med. Col., 78. In Obersteiner's lab, Vienna, 92, 93, 11; with Sir Victor Horsley, London, 94, 95. A.A.; Ass. Anat.; Physiol. Soc. Anatomy of the brain; cerebral cortex.
- Meloy, Dr. Carl R(idge)**, 61 Colorado Ave., Detroit, Mich. *Pathology*. Selma, Ohio, Sept. 4, 82. A.B., Wittenberg, 02, A.M., 05; M.D., Hopkins, 06. Instr. path., Virginia, 06-07; asst. Hopkins, 07-08; adj. prof., Virginia, 08-10; *director of laboratories, Grace Hosp, Detroit*, 16- Asst. pathologist, Hopkins Hosp, 07-08; pathologist, Bay View Asylum, Baltimore, 07-08. Ass. Path. and Bact. The ferments, catalase and lipase; variations in catalytic activity of the blood. [Died March 30, 21.]
- Melville, Prof. Carey E(yster)**, Clark University, Worcester, Mass. *Mathematics*. Baltimore, Md., April 4, 78. A.B., Northwestern, 01. *Assoc. prof. math, Clark*, 13- A.A.; Math. Ass.
- Melvin, Prof. G(eorge) Spencer**, 99 Albert St., Kingston, Ont., Can. *Physiology*. Montrose, Scotland, Oct. 7, 87. Ch.B., Aberdeen, 09, M.D., 12. Lecturer *physiol*, Aberdeen, 09-14, 19; *prof, Queen's (Can)*, 19- Physiol. Soc.; British Med. Ass. Blood pressure.
- Mendel, Prof. Lafayette B(enedict)**, Yale University, New Haven, Conn. **Physiological chemistry*. Delhi, N. Y., Feb. 5, 72. A.B., Yale, 91, Ph.D., 93; Breslau, 95-96; Freiburg, 96; hon. Sc.D., Michigan, 13. Asst. *physiol. chem, Sheffield Sci. Sch, Yale*, 92-94, instr., 94-97, asst. prof., 97-03, *prof. and mem. governing board*, 03-, *prof, Yale*, 19- Lecturer, Grad. Sch. Agr., Ass. Agr. Col., 08; research assoc., Carnegie Institution, 10- Director, Russel Sage Inst. Path.; ed., 'Jour. Biol. Chem.'; 'Physiol. Reviews'; mem. Commission Sci. Interallée du Ravitaillement. Nat. Acad.; A.A.; Soc. Nat.; Physiol. Soc. (sec'y, 06-08); Soc. Exp. Biol.; Soc. Biol. Chem. (treas., 07-10, pres., 11); Chem. Soc.; Gastro-Enterol. Ass.; Soc. Pharmacol.; Philos. Soc.; Am. Med. Ass.; Home Econ. Ass.; Conn. Acad.; Soc. Sci. de Bruxelles; Soc. de chim. biol. Physiological chemistry of digestion and nutrition; protein metabolism; physiology of growth; vitamins and accessory food factors.
- Mendenhall, Prof. C(harles) E(lwood)**, University of Wisconsin, Madison, Wis. **Experimental physics*. Columbus, Ohio, Aug. 1, 72. B.S., Rose, 94; Ph.D., Hopkins, 98. Aid, U. S. Coast Surv., 93, 94; asst. *physics*, Pennsylvania, 94-95; instr., Williams, 98-01; asst. prof., *Wisconsin*, 01-04, assoc. prof., 04-05, *prof*, 05- Asst., Smithsonian Astrophys. Observatory, 98, 00, 01; major science and research div., Sig. C. and Air Service, 17-19; scientific attaché, U. S. Embassy, London, 19; chairman, div. physical sciences, Nat. Research Council, 19-20. Nat. Acad.; A.A.; Physical Soc. Infra-red spectrum of absolutely black body; sensitive galvanometers for bolometric work; absolute value of gravity; high temperature measurements; luminous efficiencies; radiating constants of metals; constants of radiation.
- Mendenhall, Dr. T(homas) C(orwin)**, 329 N. Chestnut St., Ravenna, Ohio. **Physics*. Hanoverton, Ohio, Oct. 4, 41. Pub. schools; hon. Ph.D., Ohio State; LL.D., Michigan; Sc.D., Rose. Prof. physics, Ohio State, 73-78; Imp. Univ. of Japan, 78-81; Ohio State, 81-84; elec., U. S. Sig. Corps, 84-86; pres., Rose, 86-89; supt., U. S. Coast and Geod. Surv., 89-94; pres., Worcester, 94-01; *emer. prof. physics, Ohio State*. Supt. weights and measures and mem. U. S. Lighthouse Board, 89-94; mem. Bering Sea Commission, 91-92; Alaska Bound. Commission, 92-95; chairman, Mass. Highway Commission, 96-01. Medal, Paris Expos., 00; gold medal, Am. Geog. Soc., 01; Order of the Sacred Treasure, II Class, Japan, 11; gold medal, Nat. Educ. Soc., Japan, 11; gold medal, Franklin Inst., 18. Delegate, Int. Elec. Cong., 93. Nat. Acad.; A.A. (sec'y, A, 75, gen. sec'y, 76, v. pres., 82, pres., 89); Philos. Soc.; Am. Acad.; Antiq. Soc.; hon. fel. Am. Geog. Soc.; hon. fel. Franklin Inst.; etc. Terrestrial gravity; seismology; atmospheric electricity; electricity; the solar spectrum; new form of pendulum for absolute gravity.
- Mendenhall, W(alter) C(urran)**, U. S. Geological Survey, Washington, D. C. **Geology*. Marlboro, Ohio, Feb. 20, 71. B.S., Ohio Nor. Univ., 93; Harvard, 96-97; Heidelberg, 99-00. Asst. geologist, U. S. Geol. Surv., 94-01, *geologist*, 01-, *in charge ground water investigations*, 08-, *chief, land classification board*, 12- A.A.; Geol. Soc.; Min. and Metal. Eng.; Wash. Soc. Eng.; Wash. Acad.; Wash. Geol. Soc. (pres., 17). General geology; stratigraphy; physiography; geography and mineral resources of parts of Alaska; geology, physiography and hydrology of southern California, Oregon, Utah, Texas and Hawaii; classification of public lands.
- Mendenhall, Prof. Walter L(eslie)**, Bryn Mawr, Pa. *Physiology*. Garfield, Ill., M.D., Drake, 06. Lecturer, instr. and later prof. *physiol*, Drake, 08-13; teaching fellow, Harvard Med. Sch., 13-15; asst. prof. *pharmacol*, Dartmouth, 15-18, prof., 18-19; *physiol. and pharmacol*, Southern California, 19-20; *asst. prof. pharmacol, Pennsylvania*, 20- Lecturer and instr. *physiol*, Sargent Nor. Sch. Physical Educ., 14-15; physiologist, U. S. Pub. Health Service, 18. A.A.; Physiol. Soc.; Soc. Pharmacol. Pharmacology.
- Mendiola, Prof. N(emesio) B(lanco)**, Los Banos, Laguna, P. I. *Botany*. Rizal, P. I., Dec. 19, 90. B.S., Univ. Philippines, 14, M.S., 16; fellow, Cornell, 16-18, Ph.D., 18. Principal, intermediate sch., Pasay, P. I., 09-10; instr., Malabon, 10-11; asst. *agron. col. of agr, Univ. Philippines*, 11-14, asst. instr., 14-16, instr., 18-19, asst. prof., 19-20, *assoc. prof*, 21- Consulting plant breeder, Bur. Agr., 20- Genetics; agronomy; plant dis-

- eases; new varieties of economic plants; inheritance in chickweed, rice and corn; bast fiber; barny and manure; transpiration and nutrition in tobacco.
- Menge, Dr. G(eorge) A(lbert)**, 4598 Oakenwald Ave, Chicago, Ill. *Chemistry*. Buffalo, N. Y., Dec. 18, 74. Ph.B, Yale, 03, Ph.D, 06. Asst. chem, Yale, 03-06, instr, 06-07; chemist, div. pharmacol, hygienic lab, U. S. Pub. Health Service, and prof. chem, George Washington, 09-14; chemist, bur. animal indust, U. S. Dept. Agr, 14-17; director, dept. tech. service, Hire's Condensed Milk Co, 17-19; *administrative chemist, milk dept, Libby, McNeill and Libby*, 19- Consulting chemist; director and sec'y, Waynsboro Orchard Co; director, Delta Oil Co. A.A.; Chem. Soc; Pub. Health Ass; Chem. Gesell. Pseudo urcas; pyrimidines; solubilities; melting points and melting point methods; new compounds of choline type; chemistry of milk.
- Mengel, Levi W(alter)**, Public Museum and Art Gallery, Reading, Pa. *Entomology*. Reading, Sept. 27, 68. Phila. Col. Pharmacy, 91; Acad. Nat. Sciences, Phila, 91-93. Instr. nat. hist, Boys' High Sch, Reading, 94-02, v. principal, 02-15; *director, Reading Pub. Museum*, 04- A.A. Rhopalocera; the family Erycinidae.
- Menninger, Dr. Karl A(ugustus)**, Mulvane Building, Topeka, Kans. *Neuropsychiatry*. Topeka, July 22, 93. A.B, Wisconsin, 14, M.S, 15; M.D, Harvard, 17. Asst. neuropath, Harvard Med. Sch, 18-20; *abnormal psychol, Washburn (Kans)*, 20-; *psychiat, Iowa*, 20- Am. Med. Ass. Neuropsychiatry; relation of influenza to mental diseases.
- Menten, Dr. Maud Leonora**, University of Pittsburgh, Pittsburgh, Pa. *Biochemistry*. Lambton, Can, March 20, 79. B.A, Toronto, 04, M.B, 07, M.D, 11; Ph.D, Chicago, 16. Research asst, Western Reserve, 10-12, 13-14; pathologist, Elizabeth Steele Magee Hosp, 16-18; *instr. path, Pittsburgh*, 18- Physiol. Soc; Ass. Cancer Research. Chemical pathology; oxidase in tumor cells; surface tension.
- Menzies, Prof. Alan W(ilfrid) C(ranbrook)**, Princeton University, Princeton, N. J. *Chemistry*. Edinburgh, Scotland, July 31, 77. M.A, Edinburgh, 97, B.S, 98; Leipzig, 98; Aberdeen, 02-03; Ph.D, Chicago, 10. Asst. prof. chem, Heriot-Watt Col, Edinburgh, 98-01; prof, St. Mungo's Col, Glasgow, 02-08, sec'y, med. faculty, 07-08; research assoc, instr. and asst. prof. chem, Chicago, 08-12; prof. and head of dept, Oberlin, 12-14; *prof, Princeton*, 14- Vans Dunlop scholar, Edinburgh, 98-01, research fellow, Davy-Faraday lab, 01-02; organizer and director summer courses for science teachers, Dept. Agr. and Tech. Instruction for Ireland, 05-08; assoc. chemist, Bur. Standards, 18-19. A.A.; Chem. Soc; London Chem. Soc; fel. Royal Soc. Edinburgh. Vapor pressure and vapor density; molecular weights; removal of traces of water; equilibria in various binary and ternary systems; critical temperature of mercury; arsenic acid; arsenious oxid in acidimetry; ebullioscopy; hygrometry.
- Mercer, Dr. A(lfred) Clifford**, 324 Montgomery St, Syracuse, N. Y. *Medicine*. Syracuse, July 5, 55. M.D, Syracuse, 78; St. Thomas Hosp. and Med. Sch, London, 78-80; Great Ormond St. Hosp, London, 90-91. Lecturer path. and histol, *Syracuse*, 84-86, *prof. path*, 86-93, *pediat*, 04- Director, dispensary clinic, diseases of children, Syracuse. A.A.; Am. Med. Ass; Micros. Soc. (pres, 96); fel. Royal Micros. Soc. Pediatrics.
- Mercer, H(enry) C(hapman)**, Doylestown, Pa. *Anthropology, Pottery*. Doylestown, June 24, 56. A.M, Harvard, 79. Curator Am. and prehistoric anthrop, Pennsylvania, 93-97. Assoc. ed, 'Am. Naturalist,' 93-97. Grand prize, La. Purchase Expos, 04. Hon. mem. U. S. Commission to Expos. Historico-Am, Madrid, 92. A.A.; Philos. Soc; Phila. Acad; Phila. Numis. and Antiq. Soc; Phila. Geog. Soc. Antiquity of man; cave explorations in Central America and the United States; ethnology in implements of American pioneer; processes of forming, coloring and burning clay; printing in colors without a press; pottery.
- Mercer, Dr. W(illiam) F(airfield)**, Ohio University, Athens, Ohio. *Biology*. Mansfield, N. Y., Jan. 22, 64. Ph.B, Hillsdale, 90, Ph.M, 93; Ph.D, Cornell, 00. Instr. math, Hillsdale, 86-90; principal, acad, and supt. pub. schools, Waterford, Pa, 91-94; *prof. nat. science, Chamberlain Inst*, 95-98; *biol. and geol, Ohio (Athens)*, 00- Instr. histol. and embryol, Cornell, 99. A.A.; Soc. Zool; Ass. Anat; Micros. Soc; Wash. Biol. Soc; Ohio Acad; hon. fel. British Soc. Baet. Chem. Development of wings in Lepidoptera; comparative study of the soft palate; development of teeth and leg bones of the sheep.
- Merica, Dr. Paul D(yer)**, International Nickel Co, Bayonne, N. J. *Chemistry*. Warsaw, Ind, 89. A.B, Wisconsin, 08; Ph.D, Berlin, 14. Prof. chem, Chekiang Prov. Col, Hangchow, China, 09-11; special investigator, eng. exp. sta, Illinois, 14; asst. physicist, assoc. physicist, and physicist, Bur. Standards, 14-19; *physical metallurgist, Int. Nickel Co*, 19- Chem. Soc; Physical Soc; Min. Eng; Wash. Acad. Metallography and physical chemistry of ferrous and non-ferrous alloys and metals.
- Merigold, Prof. B(enjamin) S(hores)**, Clark University, Worcester, Mass. *Chemistry*. Taunton, Mass, July 24, 73. A.B, Harvard, 96, A.M, 97, Ph.D, 01. Instr. chem, Worcester, 00-03; asst. prof, *Clark Col*, 03-08, *prof*, 08- A.A.; Chem. Soc. Analytical and physico-chemical methods.
- Merrell, Dr. W(illiam) Dayton**, University of Rochester, Rochester, N. Y. *Biology*. Brooklyn, N. Y., Aug. 21, 69. A.B, Rochester, 91; fellow, Chicago, 97-98, Ph.D, 98. Instr. sciences, Wayland Acad, Beaver Dam, Wis, 91-94; Western Mil. Acad, Upper Alton, Ill, 94-95; asst. bot, Chicago, 96-99; instr. *biol, Rochester*, 99-05, asst. prof, 05-15, *prof*, 15- A.A.; Bot. Soc; Rochester Acad. Silphium.
- Merriam, Dr. C(linton) Hart**, 1919 16th St, Washington, D. C. *Zoology, Botany, Ethnology*. New York, N. Y., Dec. 5, 55. Sheffield Sci. Sch, Yale, 74-77; M.D, Col. Physicians and Surg, Columbia, 79. Naturalist, Hayden Surv. (Idaho, Wyo, Utah), 72; asst, U. S. Fish Commission, 75; chief, U. S. Biol. Surv, 85-10;

- research asst, *Smithsonian Inst. (Harriman Fund)*, 10- Bering Sea (fur-seal) commissioner, 91; chairman, U. S. Geog. Board. Nat. Acad; A.A.; Soc. Nat; fel. Ornith. Union (past pres); Anthropol. Ass; Soc. Mammal. (pres); Philos. Soc; Wash. Acad; Wash. Anthropol. Soc. (pres); Wash. Biol. Soc. (past pres); for. mem. London Zool. Soc. Mammals and birds of North America; geographic distribution of animals and plants; Indian basketry, mythology, distribution and linguistics of Pacific coast tribes.
- Merriam, Prof. Edmund S(awyer)**, 231 Fourth St, Marietta, Ohio. *Chemistry*. Easthampton, Mass, May 4, 80. A.B. Trinity (Conn), 02, A.M., 05; Ph.D. Göttingen, 05. Prof. chem, Marietta, 06-20; chief chemist, *Safe-Cabinet Co*, 20- Chem. Soc. Natural gas and gasoline derivatives.
- Merriam, Prof. John C(ampbell)**, Carnegie Institution, Washington, D. C. **Paleontology, Geology*. Hopkinton, Iowa, Oct. 20, 69. B.S., Lennox Col, 87; Ph.D. Munich, 93. Instr. paleont, California, 94-99, asst. prof, 99-05, assoc. prof, 05-12, prof, 12-20, dean of faculties, 20; pres, *Carnegie Institution*, 21- William Ellery Hale lecturer, 18; chairman, Nat. Research Council, 19- Nat. Acad; A.A. (pres, Pacific div, 19); Geol. Soc. (pres, 19); Paleont. Soc. (pres, Pacific Coast div, 13, 15, pres, 17); Philos. Soc; Wash. Acad; West. Soc. Nat; Calif. Acad; cor. mem. Phila. Acad. Ichthyopterygia and Phytonomorphs of western North America; Tertiary geology and vertebrate paleontology of eastern Oregon; Tertiary geology and paleontology of California; Triassic Vertebrata of California and Nevada; fossil Mammalia of eastern Oregon; Tertiary and Quaternary Carnivora of California; Miocene Mammalia of northern Nevada.
- Merrill, Prof. A(lyne) L(itchfield)**, Pleasant St, Arlington, Mass. *Mechanical engineering*. Malden, Mass, Aug. 8, 64. B.S. Mass. Inst. Tech, 85. Instr. mech. eng, *Mass. Inst. Tech*, 85-93, asst. prof. *mechanism*, 93-99, assoc. prof, 99-05, prof, 05- Eng. Educ.
- Merrill, C(harles) W(ashington)**, 121 Second St, San Francisco, Calif. *Metallurgy*. Concord, N. H., Dec. 21, 69. B.S. California, 91. Pres, *Merrill Co*; *West. Ore. Purchasing Co*. Chief, div. collateral commodities, Food Ad, 17-18. Min. Eng. (director, 12); Min. and Metal. Soc; Inst. Min. and Metal. Gt. Britain; Australian Inst. Min. Eng; S. African Ass. Eng. and Metal. Cyanid process in the treatment of precious metal ores.
- Merrill, Prof. D(ayton) E(ugene)**, New Mexico College of Agriculture and Mechanic Arts, State College, N. Mex. *Zoology*. Bear Grove, Iowa, April 11, 84. B.S. Iowa, 07, fellow, 09-11, M.S. 10. Instr. high sch, Boone, Iowa, 07-08; asst. prof. biol. N. Mex. Col. and entomologist, Exp. Sta, 11-14; in charge, dept, biol, 14-15; prof, 15-18; private study, 18- Asst. zool, Iowa, summers, 10, 11; field asst, U. S. Dept. Agr, 13. Ornith. Union; Ass. Econ. Entom; Iowa Acad. Ornithology; entomology.
- Merrill, Prof. Elmer D(rew)**, Bureau of Science, Manila, P. I. **Botany*. East Auburn, Maine, Oct. 15, 76. B.S. Maine, 98, M.S., 04; med. sch,
- George Washington, 00-01. Asst. nat. science, Maine, 98-99; asst. agrostologist, U. S. Dept. Agr, 99-02, botanist, insular bur. agr. and bur. forestry, Manila, 02-03, bur. of govt. laboratories, 03-05; *Bur. Science, P. I.*, 06-19, act. director, 19, *director*, 19-; assoc. prof. bot. and head of dept, *Univ. Philippines*, 12-17, prof, 17-19, *professorial lecturer*, 19- Ed, 'Philippine Jour. Sci.' A.A.; Bot. Soc; New Eng. Bot. Club. Systematic botany of China, Philippines, Borneo, Moluccas and Marianne Islands.
- Merrill, Dr. George P(erkins)**, U. S. National Museum, Washington, D. C. **Geology*. Auburn, Maine, May 31, 54. B.S. Maine, 79, M.S., 83, Ph.D., 89; Wesleyan, 79-80; Hopkins, 86-87; Sc.D. George Washington, 17. Asst. chem, Wesleyan, 79-80; asst. Fisheries Census, 80-81; connected with U. S. Nat. Museum, 81-97, *curator and head curator geol*, 87- Lecturer geol, Md. Col, 90-91; prof. geol. and miner, George Washington, 93-16. Geol. Soc. (v. pres, 20); Wash. Geol. Soc. (pres, 06). Petrography; meteorites; building stones; rock weathering; histories of American geology and state surveys.
- Merrill, Prof. Helen A(bbot)**, Wellesley College, Wellesley, Mass. *Mathematics*. Orange, N. J., March 30, 64. A.B. Wellesley, 86; Chicago, 96-97; Göttingen, 01-02; Ph.D. Yale, 03. Teacher, private schools, 86-89, 91-93; instr. *math, Wellesley*, 93-01, assoc. prof, 01-15, *prof*, 15- A.A.; Math. Soc; Math. Ass. (mem. council, 17-, v. pres, 20); Math. Verein. Differential equations.
- Merrill, Prof. Joseph F(rancis)**, University of Utah, Salt Lake City, Utah. *Physics, Electrical engineering*. Richmond, Utah, Aug. 24, 63. B.S. Michigan, 93; fellow, Hopkins, 98-99, Ph.D., 99; Cornell, summers, 93, 02; Chicago, summers, 94, 96, 97. Asst. prof. chem, *Utah*, 93-95; prof. physics and physical chem, 97-98, *director, state sch. mines*, 98-, *prof. physics and elec. eng*, 99- Mem. and sec'y, Utah State Conservation Commission, 09-14. A.A.; Physical Soc; Elec. Eng; Eng. Educ; Utah Acad; Utah Soc. Eng. (pres, 07-10). Effect of dielectric on electrical resistance; effect of temperature and pressure on electrolysis of silver nitrate; reliability and durability of commercial electric integrating meters; electric air heating; electrical measurements.
- Merrill, Dr. Joseph H(enry)**, Kansas State Agricultural College, Manhattan, Kans. *Entomology*. Danvers, Mass, Nov. 12, 81. B.S. Dartmouth, 05; Ph.D. Mass. Col, 14-. Gipsy and brown-tail moth suppression work, Danvers, Mass, 05-09; deputy state nursery inspector, Mass. Col, 10-11, lecturer plant path, 11; *assoc. prof. apicult*, *Kans. State*, and *asst. apiculturist*, *Exp. Sta*, 12- State apiarist, Kans, 18. A.A.; Ass. Econ. Entom. Fruit and shade tree insects; apiculture.
- Merrill, Prof. Lucius H(erbert)**, 178 Main St, Orono, Maine. *Biological chemistry*. Auburn, Maine, Oct. 1, 57. B.S. Maine, 83, hon. Sc.D., 08. Asst. U. S. Nat. Museum, 85-86; chemist, Maine Exp. Sta, 86-08, *prof. biol. chem*, *Maine*, 98-07, *biol. and agr. chem*, 07- A.A.; Chem. Soc; Soc. Prom. Agr. Sci. Nutrition of man; wheat and its milling products.
- Merrill, Prof. M(elvin) C(larence)**, Utah Agricultural College, Logan, Utah. *Horticulture*.

- Richmond, Utah, April 6, 84. B.S., Utah Col., 05; Cornell, 10-11; M.S., Chicago, 12; A.M., Harvard, 13; Ph.D., Washington (St. Louis), 15. Teacher nat. science, high sch., Springville, Utah, 05-06; agr. inspector, Bur. Agr., P. I., 06-08, supt., Exp. Sta., 08-10; asst. Mo. Bot. Garden, 13-15; director, dept. agr., Idaho Tech. Inst., 15-17; *prof. hort.*, Utah Col., 17- A.A.; Soc. Hort. Sci.; Phytopath. Soc.; Utah Acad. Distilled water and growing plants; exosmosis from plant tissues; tomato breeding; canning crops.
- Merrill, O (scar) C (harles)**, Federal Power Commission, Washington, D. C. *Civil engineering*. Manchester, Maine, July 30, 74. A.B., Bates, 99; B.S., Mass. Inst. Tech., 05. Instr. civil eng., California, 05-06; water power investigator, Wash., Oregon and Calif., 06-08; dist. engineer, U. S. Forest Service, 09-12, chief engineer, 12-20; *executive sec'y*, *Fed. Power Commission*, 20- Chairman, board of surveys and maps, Fed. Govt., 20- Civil Eng.; Wash. Acad.; Wash. Soc. Eng. (director, 19-). Water powers.
- Merrill, Dr. Paul W (illard)**, Mt. Wilson Observatory, Pasadena, Calif. *Astronomy*. Minneapolis, Minn., Aug. 15, 87. A.B., Stanford, 08; Ph.D., California, 13. Asst. and fellow, Lick Observatory, 09-13; instr. astron., Michigan, 13-16; asst. physicist and asst. physicist, Bur. Standards, 16-18; *mem. staff*, *Mt. Wilson Observatory*, *Carnegie Institution*, 19- A.A.; Astron. Soc.; Physical Soc.; Pacific Astron. Soc. Wave-lengths of spectrum lines; stellar spectroscopy.
- Merriman, Mansfield**, 1071 Madison Ave., New York, N. Y. *Civil engineering*, *Mechanics*. Southington, Conn., March 27, 48. Ph.B., Yale, 71, C.E., 72, Ph.D., 76; hon. Sc.D., Pennsylvania, 06; LL.D., Lehigh, 13. Asst. engineer, corps engineers, U.S.A., 73; instr. civil eng., Sheffield Sci. Sch., Yale, 74-78; *prof.*, Lehigh, 78-07; *consulting engineer*, 07- Acting asst., U. S. Coast and Geod. Surv., 80-85; *assoc. ed.*, 'Appleton's Cyclopedia,' 92-96; *ed-in-chief*, 'Am. Civil Eng. Pocket Book,' 08- A.A. (v. pres, 94); Math. Soc.; Civil Eng.; Eng. Educ. (pres, 96); Philos. Soc.; Int. Ass. Test. Mat. (pres, Am. sect, 99, 15). Mechanics and strength of materials; hydraulics; theory of equations; least squares.
- Merritt, Prof. Ernest (George)**, 39 East Ave., Ithaca, N. Y. *Physics*. Indianapolis, Ind., April 28, 65. Purdue, 81-82; M.E., Cornell, 86, 87-88; Berlin, 93-94. Instr. *physics*, Cornell, 82-92, asst. prof., 92-03, *prof.*, 03-, dean, grad. sch., 09-13. Assoc. ed., 'Physical Review.' Nat. Acad.; A.A. (see'y, B, 95, v. pres, 00); Physical Soc. (see'y, 99-12, ed., 'Bul.' v. pres, 13, pres, 14, 15); Am. Acad. Efficiency of glow lamps; infra-red dichroism; photography of manometric flame; conduction in arc gases; reflected cathode rays; photo-electric rays; conductivity of gases due to presence of incandescent carbon; luminescence.
- Merritt, Dr. John W (esley)**, Sapulpa Refining Co., Sapulpa, Okla. *Geology*. Atchison Co., Mo., Feb. 8, 85. B.S., Northwestern, 10, fellow, 11-12, M.S., 12; fellow, Wisconsin, 16-17, Ph.D., 17. Instr. geol., Dartmouth, 12-16; *geologist*, Roxana Petroleum Co., 16-18, *Sapulpa Ref. Co.*, 18- Mem. U. S. Geol. Surv., 13-14. Ass. Petrol. Geol. Petroleum geology; metamorphism.
- Morrow, Prof. Harriet Lathrop**, Morrow, Conn. *Botany*. Morrow, Sept. 8, 58. B.S., Wellesley, 86, A.M., 93; Michigan, 91-92. Teacher science, high sch., Plymouth, Mass., 87-88; Harecourt Place, Gambier, Ohio, 88-91; grad. asst., Michigan, 93-94; *prof. bot.*, *R. I. Col.*, 95- A.A.; Bot. Soc. Parasitic fungi.
- Mershon, Ralph D (avenport)**, 65 W. 54th St., New York, N. Y. *Electrical engineering*. Zanesville, Ohio, July 14, 68. M.E., Ohio State, 90; Sc.D., Tufts, 18. Student asst. physics, Ohio State, 90, asst. elec. eng., 90-91; engineer and designer, Westinghouse Elec. and Mfg. Co., Pittsburgh and N. Y. City, 91-97; chief engineer, Colo. Elec. Power Co., Cañon City and Cripple Creek, 97-98; engineer and designer, Westinghouse Elec. and Mfg. Co., 98-00; *consulting elec. and mech. engineer*, 00- Engineer, Victoria Falls Power Co., South Africa, 05-; major and lieutenant col., corps engineers, 17-19. John Scott medal, Franklin Inst. A.A.; Elec. Eng. (v. pres, 02-05, pres, 12); Mech. Eng.; Civil Eng.; Electrochem. Soc.; Franklin Inst.; Can. Soc. Civil Eng.; British Inst. Elec. Eng. Air losses occurring on transmission lines at high voltages.
- Merwin, B (ruce) Welch**, The University Museum, Philadelphia, Pa. *Archeology*. Iola, Kans., Feb. 27, 89. A.B., B.S., Kansas, 11. Instr., high sch., Paris, Tenn., 11-12; Jerome and Lewiston, Idaho, 12-13; supt. schools, Savonburg, Kans., 13-14; *asst. curator*, *univ. museum*, *Pennsylvania*, 15- Asst. director, Peabody Museum exped. to Ohio, 08, director, 11, Tenn., 13. Anthrop. Ass. (acting sec'y-treas, 18, mem. council, 19); Kans. Acad. Mounds of Henry County, Tenn., and vicinity.
- Merwin, Dr. H (erbert) E (ugene)**, Geophysical Laboratory, Washington, D. C. *Geophysics*. Newton, Kans., Feb. 20, 78. B.S., Harvard, 08, Ph.D., 11. Asst. physiog. and teaching fellow miner. and petrol., Harvard, 07-09; asst. petrologist, *geophys. lab.*, *Carnegie Institutions*, 09-17, *petrologist*, 17- Physical Soc.; Geol. Soc.; Wash. Acad.; Wash. Geol. Soc.; Wash. Philos. Soc. Glacial geology; mineralogy; petrology; physics.
- Merz, Albert R (onald)**, Bureau of Soils, Washington, D. C. *Chemistry*. Lynchburg, Va., Jan. 14, 87. B.S., Virginia, 09, M.S., 11. Chemist, Raymond Mining Co., 06; asst. chemist, exp. sta., Pa. State, 07; asst. chem., Virginia, 08-09, instr., 09-10; asst. chemist, South. Cotton Oil Co., 10-11; *scientist*, *bur. soils*, *U. S. Dept. Agr.*, 11- Abstractor, 'Chem. Abstracts,' 18- A.A.; Chem. Soc. Giant kelps; potash from cement mills and blast furnaces; collection of phosphoric acid; Russia's platinum.
- Merz, Eugene**, 338 Wilson Ave., Newark, N. J. *Mining engineering*. New York, N. Y., April 11, 69. B.S., Col. City of N. Y., 88; E.M., Columbia, 92. *Treas.*, *Heller and Merz Co.*; *pres*, *Ultra-marine Co.* Chem. Soc.; Soc. Chem. Indust.
- Meserve, Prof. Philip W (eston)**, 24 College St., Brunswick, Maine. *Chemistry*. Portland, Maine, Nov. 24, 88. A.B., Bowdoin, 11; A.M., Harvard, 15. Assoc. div. pharmacol., hygienic lab., U. S.

- Pub. Health Service, 13; instr. *chem*, Simmons, 13-14; *Bowdoin*, 15-16, *asst. prof.*, 16- Chem. Soc.
- Meservey, A(rthur) B(ond)**, Dartmouth College, Hanover, N. H. *Physics*. New Hampton, N. H., Nov, 17, 84. A.B., Dartmouth, 06; B.Sc., Oxford, England, 11. *Asst. physics*, Dartmouth, 07-08; demonstrator, Oxford, England, 10-11; instr. *Dartmouth*, 11-16, *asst. prof.*, 16- A.A.; assoc. Physical Soc. Sparking potentials at low pressures; X-rays from the impact of slow electrons; E.M.F. due to moving magnets.
- Messenger, Prof. J(ames) Franklin**, University of Idaho, Moscow, Idaho. *Psychology*. Benton Co, Iowa, Jan. 30, 72. A.B., Kansas, 95; A.M., Harvard, 01; fellow, Columbia, 01-02, Ph.D., 03. Instr. psychol., New Mexico, 99-00; asst., Harvard, 00-01; instr., Pratt Inst., 02-03; State Nor. Sch., Minn., 03-04; dean, Highland Park Nor. Col., 04-05; prof. psychol., State Nor. Sch., Farmville, Va., 05-09; educ., Vermont, 09-20; dean, sch. educ., and director, summer sch., Idaho, 20- Director, summer sch., Vermont, 09- A.A.; Psychol. Ass.; Nat. Ass. Col. Teachers Educ. Perception of numbers; principles in instruction.
- Messick, Prof. J(ohn) F(rederick)**, Emory University, Ga. *Mathematics*. Allen, Md., Sept. 2, 75. A.B., Randolph-Macon, 99; Hopkins, 02-06, fellow, 05-06, Ph.D., 06. Instr., Randolph-Macon Acad., 99-02; math., Williams, 06-07; prof., Randolph-Macon, 07-10; Ala. Polytech., 10-20; *Emory*, 20- Math. Soc.; Math. Ass. Geometry.
- Metcalf, Prof. C(lell) L(ee)**, Ohio State University, Columbus, Ohio. *Entomology*. Lakeville, Ohio, March 26, 88. A.B., Ohio State, 11, A.M., 12; Sc.D., Harvard, 19. Asst. zool. and entom., Ohio State, 11-12; asst. entomologist, N. C. Exp. Sta., 12-14; *asst. prof. entom.*, Ohio State, 14-20, *prof.*, 20- Consulting entomologist, Maine Exp. Sta., summers, 15-17; teacher biol., Cornell, summers, 18, 19. A.A.; Entom. Soc.; Ass. Econ. Entom. Economic entomology; Syrphidae.
- Metcalf, F(ranklin) P(ost)**, U. S. Department of Agriculture, Washington, D. C. *Botany*. Oberlin, Ohio, June 10, 92. A.B., Oberlin, 13; Cornell, 13-17. Asst. ornith., Oberlin, 12-13; asst. bot., Cornell, 13-16, instr., 16-17; *asst. biologist, biol. surv.*, U. S. Dept. Agr., 17- Bot. Soc.; mem. Ornith. Union; Wilson Ornith. Club; Wash. Bot. Soc.; Wash. Biol. Soc. Economic ornithology; systematic botany; aquatic vegetation.
- Metcalf, Dr. Haven**, U. S. Department of Agriculture, Washington, D. C. *Plant pathology*. Winthrop, Maine, Aug. 6, 75. Colby, 92-94; A.B., Brown, 96, A.M., 97, 97-98; Harvard, 99; Indiana, 00; Nebraska, 01-03, Ph.D., 03. Instr. bot., Brown, 96-99; prof. biol., Tabor, 99-01; assoc. prof. bot. and bacter., Clemson, and state botanist, S. C., 02-06; pathologist, U. S. Dept. Agr., 06-07, pathologist in charge investigations in forest path, 07- Demonstrator bot., Brown, 95-96; * lecturer, Marthas Vineyard Summer Inst., 96-99; plant life, S. C. State Summer Sch., 03-05; special agent, U. S. Dept. Agr., 04, 05. A.A.; Soc. Baet.; Bot. Soc.; Phytopath. Soc. (v. pres, 13, pres, 14); Wash. Bot. Soc. (pres); Wash. Biol. Soc.; New Eng. Bot. Club. A soft rot of the sugar-beet; *Bacterium tentium*; cultural studies of a nematode associated with plant decay; the rice blast in South Carolina; individuality of chromosomes; diseases of forest trees; immunity in plant diseases; scientific administration.
- Metcalf, Dr. Joel Hastings**, 7 Lewis Road, Winchester, Mass. **Photographic astronomy*. Meadville, Pa., Jan. 4, 66. Grad., Meadville Theol. Sch., 90, D.D., 20; Harvard, 91; Ph.D., Allegheny, 91; Oxford, England, 03. *Unitarian minister*. Astron. Soc.; Am. Acad.; Soc. Astron. de Mex. Minor planets; photographic doublets of large aperture.
- Metcalf, Dr. J(ohn) Trumbull**, George Washington University, Washington, D. C. *Psychology*. New Haven, Conn., March 21, 89. A.B., Yale, 10, A.M., 11, Ph.D., 13; Berlin and Munich, 13-14. Instr. psychol., Princeton, 14-16; Smith, 16-18, asst. prof., 18-19; psychologist, dept. pub. welfare, Ill. Div. Criminol., 19-20; *asst. prof. psychol.*, George Washington, 20- Lieut. Sanit. C., 17-19. Psychol. Ass. Experimental psychology.
- Metcalf, Leonard**, 14 Beacon St., Boston, Mass. *Civil engineering*. Galveston, Tex., Aug. 26, 70. B.S., Mass. Inst. Tech., 92. Engineer, Wheeler and Parks, 92-95; prof. math. and eng., Mass. Col., 95-97; consulting engineer, 97-07; *partner in firm, Metcalf and Eddy*, 07- Civil Eng. (v. pres); Water Works Ass. (past pres); Mech. Eng.; New Eng. Water Works Ass. (past pres); Boston Soc. Civil Eng. (past pres). Water works; water purification; sewerage; manufacturing wastes.
- Metcalf, Prof. Maynard M(ayo)**, Orchard Laboratory, Oberlin, Ohio. **Zoology*. Elyria, Ohio, March 12, 68. A.B., Oberlin, 89, Sc.D., 14; Ph.D., Hopkins, 93. Assoc. prof. biol., Goucher, 93-97, prof., 97-06; zool., Oberlin, 06-14; *private research*, 14- Instr. and trustee, Woods Hole. A.A.; Soc. Nat. (treas., 02, 03); Soc. Zool. (pres, 18, sec'y-treas., 02-09); Econ. Ass.; Acad. Polit. and Social Sci.; Nat. Econ. League (councilor); Nat. Munic. League; West. Econ. Ass.; Ohio Acad. (trustee, research fund, 16-18, pres, 18); Wash. Biol. Soc.; hon. life mem. Soc. Acad. d'Hist. Int. Protozoology; morphology of Tunicata, Mollusca; theory of evolution.
- Metcalf, Prof. Z(eno) P(ayne)**, West Raleigh, N. C. *Entomology*. Lakeville, Ohio, May 1, 85. A.B., Ohio State, 07. Instr. entom., Mich. Agr. Col., and asst. entomologist, Exp. Sta., 07-08; asst. entomologist, N. C. Dept. Agr., 08-12; *prof. zool. and entom.*, N. C. Col., and entomologist, Exp. Sta., 12- Mem. staff, lake lab., Ohio, 16, 18. A.A.; Entom. Soc.; Ass. Econ. Entom.; mem. Ornith. Union; Wilson Ornith. Club; Micros. Soc.; Ecol. Soc.; Ohio Acad.; N. C. Acad. (v. pres, 14, pres, 21). Economic entomology; morphology of Homoptera.
- Mettealf, Prof. W(ilmot) V(ernon)**, 227 Oak St., Oberlin, Ohio. *Chemistry*. Bangor, Maine, Sept. 2, 60. A.B., Oberlin, 83, A.M., 86; Ph.D., Hopkins, 90; Würzburg, 95-96; Leipzig, 03-05. Prof. nat. science, Whitman, 83-85; instr. chem. and physics, Carleton, 90-91, prof., 91-03; in business, 03-09; asst. prof. physics, Fisk, 09-14, retired, 14. Physical chemistry; van der Waals' equation; reaction of diazo-compounds

with alcohols; nitro-compounds; chemical change induced by surface tension.

Mettler, Dr. L(ee) Harrison, 25 E. Washington St, Chicago, Ill. *Neurology*. New York, N. Y., June 1, 63. A.B., Col. City of N. Y., 83, A.M., 86; Columbia, 83-84; M.D., Jefferson Med. Col., 86. *Prof. neur. and head of dept, med. col, Illinois, 14-* Neurologist, Cook Co. Hosp; Norwegian Lutheran Deaconess Home and Hosp. Am. Med. Ass; Chicago Neur. Soc. (pres). Diseases of nervous system.

Metz, Prof. A(braham) L(ouis), Tulane University, New Orleans, La. *Chemistry, Metallurgy, Toxicology*. Chicago, Ill., April 22, 64. Ph.G., N. Y. Col. Pharmacy, 87; hon. Ph.M., Tulane, 89, M.D., 93. Asst. chemist, Dept. Pub. Charities and Correction, N. Y. City, 85-87; instr. pharmacy, Tulane, 87-93, instr. and demonstrator, 93-96, *prof. chem. and med. juris, med. dept, 96-, chem. and toxicol, pharmaceut. dept, 08-, chem. and metal, dental dept, and head, dept. chem, 09-, sch. hygiene and tropical med, 14-* City chemist, New Orleans, 89-; chemist, State Board Health, La., 89-07; chemist, Board Health, New Orleans, 97-01, 05- A.A.; Chem. Soc. (past v. pres, La. branch); Pharmaceut. Ass; Pub. Health Ass; Am. Med. Ass.

Metz, Dr. C(harles) W(illiam), Carnegie Institution, Cold Spring Harbor, N. Y. *Zoology*. Sundance, Wyo., Feb. 17, 89. A.B., Pomona, 11; fellow, Columbia, 12-13, Ph.D., 16. *Research assoc, sta. for exp. evolution, Cold Spring Harbor, 14-* A.A.; Soc. Nat; Soc. Zool; Soc. Exp. Biol. Cytology and genetics of Diptera.

Metzger, Dr. F(loyd) J(ay), Columbia University, New York, N. Y. *Chemistry*. Akron, Ohio, Aug. 30, 77. Ph.B., Buchtel, 99; Ph.D., Columbia, 02. Tutor chem, Columbia, 05-07, instr., 07-11, asst. prof., 11-16, assoc. prof., 16-17; *manager chem. development, Air Reduction Co, 17-* Chem. Soc; Electrochem. Soc; Chem. Eng; Soc. Chem. Indust. Commercial gases.

Metzler, Dr. Geo(rge) F(rederick), Syracuse University, Syracuse, N. Y. *Mathematics*. Westbrook, N. Y., 53. B.A., Toronto, 80, M.A., 84; Ph.D., Hopkins, 91; Clark, 92; Chicago and Michigan, 93; Berlin and Göttingen, 94-95; B.D., Toronto, 00. Prof. math, Albert, 80-84; Marietta, 89-90; asst., Queen's (Can), 96; instr., Syracuse, 08-10; asst. prof., 10-13, assoc. prof., 13; *pastor, M. E. Church, Fair Haven, N. Y.* Invariants and covariants associated with the linear differential equations; surfaces of revolution and their representation on the hyperbolic plane; history of the teaching of mathematics; factorial 'N.'

Metzler, Prof. W(illiam) H(enry), R. F. D. 1, Fayetteville, N. Y. *Mathematics*. Odessa, Ont., Sept. 18, 63. B.A., Toronto, 88; Ph.D., Clark, 92. Instr. math, Mass. Inst. Tech., 92-94; assoc. prof., Syracuse, 95-96, *prof, 96-* Ed, 'The Math. Teacher.' A.A.; Math. Soc; Ass. Teachers Math. Middle States and Md. (pres. and ed, 10); fel. Royal Soc. Can; British Ass; London Math. Soc; British Math. Ass; fel. Edinburgh Royal Soc; Edinburgh Math. Soc; Am. Archeol. Inst; Math. Verein; Soc. math. de France; Circolo Mat. di Palermo. Symmetric

functions; vanishing aggregates; compound determinants.

van der Meulen, Dr. P(eter) A(ndrew), New Brunswick, N. J. *Physical chemistry*. Makum, Holland, Dec. 23, 91. B.Chem., Cornell, 13, Ph.D., 16. Acting asst. prof. miner, Cornell, 16-17; indust. chemist, 17-19; *asst. prof. chem, Rutgers, 19-* Chem. Soc.

Meyer, Dr. Adolf, Johns Hopkins Hospital, Baltimore, Md. *Psychiatry, Neurology*. Zürich, Switzerland, Sept. 13, 66. Staatsexamen, Zürich, 90; Paris, Edinburgh, London, Vienna and Zürich, 90-92; M.D., Zürich, 92; LL.D., Glasgow, 01; Clark, 09. Hon. fellow, Chicago, 92-93, docent, 93-95; pathologist, Ill. Eastern Hosp, 93-95; Worcester Insane Hosp, 95-02; docent psychiat, Clark, 95-02; director, Path. Inst. of State Hospitals of N. Y., 02-09; *prof. psychiat, med. col, Cornell, 04-09; Hopkins, and psychiatrist-in-chief, Hopkins Hosp, 10-* A.A.; Am. Physicians; Ass. Path. and Bact; Neur. Ass; Ass. Anat; Medico-Psychol. Ass; Psychol. Ass; Psychopath. Ass; N. Y. Psychiat. Soc. (pres, 05-07); fel. N. Y. Acad. (v. pres, 08); Harvey Soc; hon. mem. Boston Soc. Psychiat. and Neur. Comparative anatomy of forebrain, chiefly of reptiles; neurology; pathological anatomy of the nervous system; psycho-pathology; normal and pathological anatomy of the cerebrum; aphasia; habit disorganizations; formulation of psychobiology and psycho-pathology as objective sciences.

Meyer, Prof. Adolph F(rederick), University of Minnesota, Minneapolis, Minn. *Engineering*. Cedarburg, Wis., Feb. 23, 80. B.S., Wisconsin, 05, C.E., 09. Engineer, dept. at large, on river improvements, U. S. A., 05-12; *consulting engineer, Int. Joint Commission, 12-*; lecturer *hydraul, Minnesota, 13-14, assoc. prof, 14-* Civil Eng; Mech. Eng. Rainfall, runoff, evaporation, percolation and transpiration.

Meyer, Dr. A(rthur) W(illiam), 121 Waverley St, Palo Alto, Calif. *Anatomy*. Cedarburg, Wis., Aug. 18, 73. B.S., Wisconsin, 98, 99; M.D., Hopkins, 05. Instr. physics, St. John's Mil. Acad., 98-01; asst. anat., Hopkins, 05-06, instr., 06-07; asst. prof., Minnesota, 07-08; *prof, Northwestern, 08-09; human anat, Stanford, 09-* Research assoc., Carnegie Institution, 17-18. A.A.; Ass. Anat; Soc. Zool. Développement; technique; growth; variations; ante-natal pathology.

Meyer, Dr. Charles F(erdinand), P. O. Box 682, Baltimore, Md. *Physics*. Baltimore, Md., Jan. 15, 87. A.B., Hopkins, 06, fellow, 10-11, Ph.D., 12. Asst. applied elec., Hopkins, 11-12; instr. physics, Washington (St. Louis), 12-13, acting asst. prof., 13-14; *lecturer, Hopkins, 14-* A.A.; Assoc. Physical Soc. Vibration of telephone diaphragms.

Meyer, Dr. Erwin E(mil) A(lbert) G(eorge), 183 Iroquois St, Detroit, Mich. *Chemistry*. Hanover, Germany, Oct. 1, 73. Erlangen, 94-95; Ph.D., Berlin, 96-00; Tech. Hochschule, Hanover, 00-01. Chief chemist, St. Helen's Cable Co, Warrington, England, 02-05; *consulting chemist, The Rubber Goods Mfg. Co, 06-08; Morgan and Wright Co, 08-10; U. S. Rubber Co, 10-*

- Chem. Soc; Detroit Chem. Soc; Chem. Gesell. Organic chemistry; rubber.
- Meyer, Dr. Gustave M(orris)**, 14 Bullard Place, Flushing, N. Y. *Chemistry*. New York, Dec. 16, 75. B.S., C.E., N. Y. Univ, 96; Sc.D., Geneva, 01. Tutor biol. chem., Col. Physicians and Surgeons, Columbia, 07-08, assoc. prof., med. sch., Syracuse, 08-09; asst. chem., *Rockefeller Inst.*, 09-13, *assoc.*, 13- Chem. Soc; Soc. Exp. Biol; Soc. Biol. Chem; Harvey Soc. Biological chemistry; carbohydrates; tissue chemistry.
- Meyer, Dr. J(ohn) Franklin**, Bureau of Standards, Washington, D. C. *Physics*. Penn Hall, Pa, March 11, 75. A.B., Franklin and Marshall, 94, A.M., 97; Hopkins, 97-99; Ph.D., Pennsylvania, 04; Sc.D., Franklin and Marshall, 18. Principal, high sch., Alexandria, Pa, 94-96; instr. physics, Franklin and Marshall Acad, 96-97; prof. physics and chem, high sch., Lower Merion, 00-02; instr. physics, Pennsylvania, 02-05, asst. prof., 05-07; prof., Pa. State, 07-09; director physical research, Westinghouse Lamp Co, 09-13; assoc. physicist, *Bur. Standards*, 13-18, *physicist*, 18- A.A.; Physical Soc; Elec. Eng; Illum. Eng. Soc; Wash. Acad. (assoc. ed., 'Jour,' 18); Wash. Philos. Soc; Soc. de Physique. Electrical convection; thermoelectric forces; tungsten lamps; standards for electric service.
- Meyer, Prof. K(arl) F(riederich)**, Hooper Foundation for Medical Research, San Francisco, Calif. *Bacteriology*. Basel, Switzerland, May 19, 84. A.B., Zürich, 05, D.V.M., 09; Munich, 05-06; Bern, 08. Pathologist, Transvaal Dept. Agr, 08-10; asst. prof. path. and bacter. sch. vet. med., Pennsylvania, 10-11, prof., 11-13; director, lab. and exp. farm, Pa. Livestock Sanit. Board, Phila., 11-13; assoc. prof. bacter. and protozool., *California*, 13-14, prof., 14-15, *assoc. prof. trop. med.*, *Hooper Foundation for Med. Research*, 15- A.A.; Ass. Path. and Bact; Soc. Trop. Med. (v. pres, 18); Soc. Bact; Soc. Exp. Biol; Pub. Health Ass. Comparative pathology and bacteriology; protozoology; experimental typhoid infections; fecal flora of children; immunity; cutaneous hypersensitiveness; Malta fever; botulism.
- Meyer, Prof. Max**, Columbia, Mo. **Psychology*. Danzig, Germany, June 15, 73. Ph.D., Berlin, 96, 96-98. *Prof. exp. psychol.*, *Missouri*, 00- A.A.; Psychol. Ass; West. Philos. Ass. Physiological acoustics; psychological theory of music; psychology of painting and sculpture; rhythmical activities; comparative psychology; epistemology.
- Meyer, Prof. W(illiam) F(erdinand)**, Students' Observatory, Berkeley, Calif. *Astronomy*. Peru, Ill, Dec. 2, 80. B.S., Drake, 07; Ph.D., California, 19. Asst. astron., Drake, 06-07; California, 07-10, instr., 10-12; astronomer-in-charge, Int. Latitude Observatory, 12-18; Kellogg fellow, Lick Observaory, *California*, 18-19, *asst. prof. astron.*, 19- A.A.; Astron. Soc; Pacific Astron. Soc. Orbits of new comets and satellites; polarigraphic studies of nebulae.
- Meyer, Dr. Willy**, 700 Madison Ave, New York, N. Y. *Surgery*. Minden, Germany, July 24, 58. M.D., Bonn, 80. Prof. clin. surg., Woman's Med. Col. N. Y., 86-92; *surg.*, N. Y. *Post-Grad. Med. Sch. and Hosp.*, 92-19, *emer. prof.*, 19- Attending surgeon, Lenox Hill Hosp. of N. Y., 87-; consulting surgeon, N. Y. Skin and Cancer Hosp., N. Y. Infirm. for Women and Children, Mt. Moriah Hosp; Hosp. for Deformities and Joint Diseases; Montefiore Home and Hosp; Bronx Hosp; N. Y. Post-Grad. Med. Sch. Hosp. A.A.; Surg. Ass; Am. Med. Ass; Urol. Soc; Gastro-Enterol. Ass; Ass. Thoracic Surg; Soc. Cancer Research; N. Y. Acad. Med; N. Y. Path. Soc; N. Y. Surg. Soc; cor. mem. Urol. Gesell. Thoracic surgery; surgery of the lungs, esophagus and heart.
- Meylan, Prof. George L(ouis)**, Columbia University, New York, N. Y. *Anthropometry, Physiology*. Brassus, Switzerland, July 22, 73. M.D., N. Y. Univ, 96; B.S., Harvard, 02; A.M., Columbia, 04; hon. M.P.E., 19. *Prof. physical educ. and med. director*, *Columbia*, 03- Lecturer, summer sch., Harvard, 99-03; instr., Sargent Nor. Sch., 02-03. A.A.; Physical Educ. Ass. (pres, 07-11). Physiology of exercise; anthropometry; physical education.
- Mezes, Pres. S(idney) E(dward)**, College of the City of New York, New York, N. Y. *Education*. Belmont, Calif., Sept. 23, 63. B.S., California, 84, LL.D., 12; A.B., Harvard, 90, A.M., 91, Ph.D., 93; Tübingen, 90; LL.D., Southwestern (Tex.), 11; N. Y. Univ. and Cincinnati, 15. Lecturer philos., Bryn Mawr, 92-93; docent, Chicago, 93-94; adj. prof., Texas, 94-97, assoc. prof., 97-00, prof., 00-14; dean, 02-08, *pres.*, 08-14; *Col. City of N. Y.*, 14- Director in charge collecting data for American Commission to Negotiate Peace, 17-18, director, territorial section, Paris, 18-19, mem. Cent. Territorial Commission, 19. A.A.; fel. Tex. Acad. (past pres). Pleasure-pain; conscience; causes of crime; differences between man and other animals; education and scientific ethics.
- Michael, Prof. Arthur**, 219 Parker St, Newton Center, Mass. **Chemistry*. Buffalo, N. Y., Aug. 7, 53. Heidelberg, 72-74; Berlin, 75-78; École de Médecine, Paris, 79; hon. Ph.D., Tufts, 90, LL.D., 10; LL.D., Clark, 09. Prof. chem., Tufts, 81-90; Clark, 91; Tufts, 94-07, *emer. prof.*, 07-12; *prof. org. chem.*, *Harvard*, 12- Nat. Acad. Investigations in organic chemistry bearing on its fundamental laws and theory.
- Michel, Prof. C(hristy) W(illiam)**, Brookings, S. Dak. *Botany*. Mt. Sterling, Ohio, May 3, 81. A.B., Litt.B., Ohio Wesleyan, 04; A.M., Harvard, 12; fellow, Wisconsin, 12. *Prof. biol.*, De fiance, 06-12; *bot.*, *S. Dak. Col.*, 12- Bot. Soc; S. Dak. Acad. Plant pathology and physiology.
- Michelson, Prof. A(lbert) A(braham)**, University of Chicago, Chicago, Ill. **Physics*. Strelno, Germany, Dec. 19, 52. Grad., U. S. Naval Acad, 73; Berlin, 80; Heidelberg, 81; Col. de France, 82; hon. Ph.D., Western Reserve, 86; Stevens, 87; Sc.D., Cambridge, 99; LL.D., Yale, 01; Pennsylvania, 06; Physics D., Clark, 09; hon. Ph.D., Leipzig, 09; Göttingen, 11. Instr. physics and chem., U. S. Naval Acad, 75-79; prof. physics, Case, 83-89; Clark, 89-92; *prof. physics and head of dept.*, *Chicago*, 92- Exchange prof., Göttingen, 11; lieut. commander, U.S.N.R.F., 18; mem. Bur. Int. des Poids et Mesures, 92-93; mem. Int. Commission Weights and Measures, 97; Lowell lecturer, 99. Rumford

- medal, 89; grand prize, Paris Expos, 00; Copley medal, Royal Soc, 07; Nobel prize, 07; Cresson medal, Franklin Inst, 12; Draper gold medal, Nat. Acad, 16. Nat. Acad; A. A. (v. pres, 87, pres, 10); Physical Soc. (v. pres, 99, 00, pres, 01, 02, ed board, 15-17); Astron. Soc; Philos. Soc. (v. pres, 10, 11, 13); Am. Acad; hon. fel. London Physical Soc; for. mem. Royal Soc; hon. fel. Edinburgh Royal Soc; cor. mem. British Ass; fel. Royal Astron. Soc; hon. mem. Royal Inst; hon. mem. Royal Irish Acad; for. assoc. Paris Acad; for. assoc. Acad. des Sci; Soc. de Physique; Holland Soc. des Sci; for. mem. Accad. dei Lincei. Light.
- Michelson, Dr. Truman**, Smithsonian Institution, Washington, D. C. *Anthropology*. New Rochelle, N. Y., Aug. 11, 79. A.B., Harvard, 02, A.M., 03, Ph.D., 04, Parker fellow, at Leipzig and Bonn, 04-05; private student with Prof. Boas, Columbia, 09-10. Instr. Latin, Missouri, 05-06; *ethnologist*, *Bur. Am. Ethnol.*, 10- Clerk, physical div, U. S. Immigration Commission, 09; prof. ethnol, George Washington, 17- A.A.; Anthropol. Ass. (mem. council, 19); fel. Ethnol. Soc; Philol. Ass; Oriental Soc; Wash. Acad; Wash. Anthropol. Soc. (see'y, 11, v. pres, 18-20); Int. Cong. Americanists. Philology; Algonquian tribes of North America.
- Middlekauff, Dr. George W(iles)**, 1002 Oak Hill Ave, Hagerstown, Md. *Physics*. Leitersburg, Md, June 5, 69. A.B., Franklin and Marshall, 91, A.M., 94; Chicago, summer, 02; Ph.D., Hopkins, 03. Instr. math, Palatinate, 91-92; principal schools, Leitersburg, Md, 93-94; instr. science and math, high sch, Waynesboro, Pa, 94-99; lab. asst, *Bur. Standards*, 03-06, asst. physicist, 06-15, assoc. physicist, 15-17. Int. Elec. Cong, St. Louis, 04. A.A.; Physical Soc; Illum. Eng. Soc; Wash. Philos. Soc. Spectroscopy and photometry; effect of capacity and self-induction upon wave-lengths in the spark spectrum; direct-reading candle-power scale for precision photometers; equations of tungsten filament lamps and heterochromatic photometry; photometry of the gas-filled lamps; life testing of incandescent lamps; photometric comparison of glass screens and tungsten filament lamps.
- Middleton, Prof. A(rthur) R(enwick)**, Purdue University, La Fayette, Ind. *Chemistry*. Webster, N. Y., May 8, 71. A.B., Rochester, 91; Ph.D., Cornell, 04. Instr. chem, Cent. High Sch, St. Louis, Mo, 04-06; asst. prof, *Purdue*, 06-14, assoc. prof, 14-18, *prof. inorg. chem.*, 18- Chem. Soc; fel. Ind. Acad. Higher order compounds and their applications to analysis.
- Middleton, Prof. Austin R(alph)**, University of Louisville, Louisville, Ky. *Zoology*. Baltimore, Md, April 14, 81. A.B., Hopkins, 10, fellow, 14-15, Ph.D., 15, fellow by courtesy, 15-16. Asst. nat. hist, Hopkins, 10-12; assoc. prof. *biol.*, *Louisville*, 16-17, *director of dept.*, 16-, *prof. zool.*, 17- Mem. Hopkins scientific exped. to Jamaica, 10. A.A.; Soc. Zool; Ecol. Soc; fel. London Soc. Arts. Heredity of the fission rate in Protozoa.
- Miles, Dr. Egbert J**, 87 Marvel Road, New Haven, Conn. *Mathematics*. Bethlehem, Ind, Jan. 9, 86. A.B., Indiana, 06; A.M., Swarthmore, 07; fellow, Chicago, 07-10, Ph.D., 10. Asst. *math.*, Swarthmore, 06-07; instr., Cornell, 10-11; *Yale*, 11-16, *asst. prof.*, 16- A.A.; Math. Soc. Calculus of variations.
- Miles, Prof. W(alter) R(ichard)**, Nutrition Laboratory, Boston, Mass. *Psychology*, *Physiology*. Silverleaf, N. Dak, March 29, 85. B.S., Pacific (Oregon), 06; A.B., Earlham, 08; fellow, Iowa, 10-13, A.M., 10, Ph.D., 13. Prof. psychol, and educ, Penn (Iowa), 08-10; asst. psychol, Iowa, 10-13; asst. prof, Wesleyan, 13-14; *research psychologist, nutrition lab, Carnegie Institution*, 14- A.A.; Psychol. Ass; Physiol. Soc. Pitch singing; psychological effect of alcohol and of undernutrition; neuro-muscular changes from variations in metabolism; sensory thresholds.
- Milham, Prof. Willis I(sbister)**, Williamstown, Mass. *Astronomy*, *Meteorology*. Kinderhook, N. Y., Feb. 11, 74. A.B., Williams, 94, A.M., 95; Ph.D. Strasbourg, 01. Asst. physics, *Williams*, 95-96, instr. math. and physics, 96-98, asst. prof. math. sciences, 98-99, 01-02, *prof. astron.*, 02- A.A.; Astron. Soc; Meteorol. Soc; Physical Soc; Am. Geog. Soc; Soc. Belge. d'Astron; Soc. astron. de France. Meteorology; temperature variation over a limited area.
- Millar, Preston S(trong)**, 80th St. and East End Ave, New York, N. Y. *Physics*. Andover, N. J., March 9, 80. Gen. manager and see'y, Elec. Testing Laboratories; see'y, Ass. Edison Illum. Companies. Teacher photom, Hopkins, 10; lecturer illum, Pennsylvania, 16. A.A.; Physical Soc; Illum. Eng. Soc. (pres, 13); Elec. Eng. Lighting; illumination.
- Millard, Prof. E(arl) B(owman)**, Massachusetts Institute of Technology, Cambridge, Mass. *Physical chemistry*. Central City, Nebr, July 17, 88. A.B., Colorado, 10; A.M., Wisconsin, 11; Ph.D., Illinois, 14. Asst. chem, Wisconsin, 10-11; Illinois, 11-14; instr, *Mass. Inst. Tech.*, 14-16, *asst. prof. physical chem.*, 16- Chem. Soc.
- Millberry, Dean Guy Stillman**, First and Parnassus Avenues, San Francisco, Calif. *Chemistry*. Menominee, Mich, Nov. 3, 72. D.D.S., California, 01. Asst. metal, *dental col, California*, 04-07, instr, 07-08, *metal. and chem.*, 08-09, *prof.*, 09-, supt, *dental infirmary*, 06-14, *dean*, 14- A.A.; Chem. Soc; Pub. Health Ass; Sch. Hygiene Ass; Nat. Dental Ass. Dental metallurgy; dental economics.
- Miller, A(dam) M(arion)**, 335 Henry St, Brooklyn, N. Y. *Embryology*, *Histology*. Homewood, Pa, April 2, 79. A.B., Princeton, 01, fellow, 01-03, A.M., 02. Instr. histol. and embryol, Columbia, 03-09, *anat.*, 09-12, asst. prof, 12-14; *prof.*, *L. I. Col. Hosp.*, 14-, *assoc. dean*, 20- A.A.; Ass. Anat; N. Y. Acad. Embryology; venous system in birds; lymphatic system in birds; fiber tracts in cat; venous system in the sheep.
- Miller, Prof. Alfred S(tanley)**, Moscow, Idaho. *Mining*, *Metallurgy*, *Geology*. Normal, Pa, Oct. 20, 56. A.B., A.M., Stanford, 95; Ph.D., Heidelberg (Ohio), 95; E.M., Sch. of Practical Eng., San Francisco, 98. Principal, high sch, and supt. schools, E. Mauch Chunk, Pa, 80-82; prof. nat. science, Wichita (Kans), 89-92, pres, 92-93; prof. mining, metal. and geol, Idaho,

- 97-05. Chemical behavior of ammonia towards ferric chlorid and ferrous chlorid; metallurgy of gold.
- Miller, Dr. Alton L(ombard)**, 25 Clinton Road, Brookline, Mass. *Mathematics*. Somerville, Mass, April 10, 90. A.B, Harvard, 11, A.M, 13, Ph.D, 16; Turin, 15-16. Instr. math, Harvard, 11-13; Michigan, 13-17; Harvard, 17-19. Math. Soc. Projective differential geometry.
- Miller, Prof. Arthur M(cQuiston)**, 609 S. Limestone St, Lexington, Ky. *Geology*. Eaton, Ohio, Aug. 6, 61. A.B, Princeton, 84, A.M, 87, fellow, 88-89; Munich, 91-92. Principal, high sch, Eaton, Ohio, 85-88; *prof. biol. and geol.* Wilson, 89-91; *geol. Ky. State*, 92- Mem. Ky. Geol. Surv. A.A; Geol. Soc. Geology of petroleum; Kentucky geology.
- Miller, Prof. Benj(amin) L(eRoy)**, Lehigh University, South Bethlehem, Pa. *Geology*. Sabetha, Kans, April 13, 74. A.B, Kansas, 97; A.M, Penn (Iowa), 98; fellow, Hopkins, 01-03, Ph.D, 03. *Prof. biol. and chem.* Penn (Iowa), 97-00; *assoc. geol.* Bryn Mawr, 03-07; *prof. Lehigh*, 07- Asst. Kans. Univ. Geol. Surv, 96; Iowa Geol. Surv, 99; Md. Geol. Surv, 00-02, geologist, 02-11; field asst, U. S. Geol. Surv, 04-07, asst. geologist, 07-13; cooperating geologist, Pa. Geol. Surv, 19- A.A; Geol. Soc; Min. and Metal. Eng; Iowa Acad. Areal and economic geology; mineral resources of South America.
- Miller, Prof. B(essie) I(rving)**, Rockford College, Rockford, Ill. *Mathematics*. Baltimore, Md, 84. A.B, Goucher, 07, fellow, 07-08; fellow, Hopkins, 13-14, Ph.D, 14. Instr. math, Kemple Hall, Kenosha, Wis, 11-13; *head physics and math. departments, Rockford*, 15- A.A; Math. Soc; Math. Ass. Canonical form of elliptic integral.
- Miller, Dr. C(arl) D(anforth)**, University of Manitoba, Winnipeg, Man, Can. *Physics*. Minneapolis, Minn, Jan. 30, 88. B.S, Richmond, 10; Ph.D, Chicago, 16. Instr. physics, Chicago, 14-16; physicist, Westinghouse Elec. and Mfg. Co, 16-17; tech. adviser, Wm. Gaertner and Co, 19-20; *asst. prof. physics, Manitoba*, 20- Lieut. ordnance dept, U. S. A, 17-19. Physical Soc. X-rays.
- Miller, Dr. Carleton F(riend)**, 125 W. Main St, Newark, Del. *Chemistry*. Wallingford, Conn, June 13, 88. B.S, Wesleyan, 09; Ph.D, Cornell, 14. Asst. *chem.* Cornell, 09-14; instr, N. C. Col, 14-17, asst. prof, 17-19; *prof. Del. Col.*, 19- Electrolysis of inorganic salts; carborundum electric furnace.
- Miller, Charles W(inthrop)**, Jaffna College, Vadukoddai, Ceylon. *Ornithology*. Worcester, Mass, Nov. 18, 84. A.B, Clark, 05; A.M, Columbia, 13. Asst. to Director W. E. D. Scott, Worthington Soc. for the Investigation of Bird Life, 05-06, acting director, 05-08, director, 08-13; *missionary, Am. Board of Commissioners for foreign missions, Jaffna, Ceylon*, 14- A.A. Colonization of the house martin; larvae of certain parasitic flies in bird nests; methods of attracting and protecting wild birds; growth of birds; inheritance of coloration of eggs of the bluebird; hybridism; daily life of birds, especially during the breeding season; imitation and instinct in birds; the parasitic bird fly; increase of native birds; aviary methods.
- Miller, Dr. Clifton M(eredith)**, Stuart Circle Hospital, Richmond, Va. *Ophthalmology, Otolology, Rhinology*. Richmond, April 21, 73. M.D, Med. Col. of Va, 92. Demonstrator anat, *Med. Col. of Va*, 96-05, instr. diseases of eye and ear, 01-06, *prof. anat.*, 05-06, diseases of nose and throat, 06-14, *otol. and rhinol.*, 14- Laryngologist, rhinologist and ophthalmologist to various hospitals; mem. Richmond City Council. Laryngol. Rhinol. and Otol. Soc; Col. Surg; Acad. Ophthal; Am. Med. Ass; Richmond Acad. Med. and Surg. (pres, 08); S. Med. Ass.
- Miller, Prof. Dayton C(larence)**, Case School of Applied Science, Cleveland, Ohio. **Physics, Astronomy*. Strongsville, Ohio, March 13, 66. Ph.B, Baldwin, 86, A.M, 89; Sc.D, Princeton, 90. Prof. nat. science, Baldwin, 88-89; instr. math. and physics, *Case*, 90-93, asst. prof. physics, 93-95, *prof.*, 95- Trustee, Baldwin, 99-; Lowell lecturer, 94. A.A. (sec'y, B, 03, 04-07, v. pres, 07, sec'y council, 08, gen. sec'y, 09); Physical Soc. (sec'y, 18-); Astron. Soc; Eng. Educ; Cleveland Eng. Soc. (pres, 06); Am. Acad; Wash. Acad. Velocity of light in magnetic field; expansion of gases; Röntgen rays; relative motion of earth and ether; efficiency of incandescent gas light; interferometer applications; photographic registration of sound waves; quality of musical sounds.
- Miller, Prof. Dickinson S(ergeant)**, Lorillard Hall, Chelsea Square, New York, N. Y. *Philosophy, Psychology*. Philadelphia, Pa, Oct. 7, 68. Pennsylvania, 85-88; Clark, 89-90; A.B, A.M, Harvard, 92; Ph.D, Halle, 93; hon. Sc.D, Hobart, 09. Assoc. philos, Bryn Mawr, 93-98; instr, Harvard, 99-04; lecturer, Columbia, 04-07, *prof.*, 07-19; *Gen. Theol. Sem.*, 11- A.A; Philos. Ass; Psychol. Ass. Metaphysics; ethics; analytic psychology; philosophy of religion.
- Miller, Prof. E(dgar) C(alvin) L(eRoy)**, 2309 Park Ave, Richmond, Va. *Pathology*. Pelham, Mass, Aug. 24, 77. Oberlin, 88-90; M.D, Michigan, 94. Bacteriologist, research laboratories, Parke, Davis and Co, 00-10; *prof. bacter. and physiol. chem. Med. Col. of Va*, 11-, *dean*, 20- A.A; Soc. Bact; Ass. Immunol; Am. Med. Ass; Pub. Health Ass; Am. Acad. Med. Immunity; bacterial vaccines; opsonins; agglutination; tuberculin; keeping quality of antidiphtheria serum; administration of diphtheria toxin in collodion sac.
- Miller, Dr. E(dgar) G(rim)**, Jr, 437 W. 59th St, New York, N. Y. *Biochemistry*. Gettysburg, Pa, Feb. 22, 93. B.S, Gettysburg, 11; Ph.D, Columbia, 13. Asst. biochem, Columbia, 11-13; path. chem, Bellevue Hosp, 12-13; acting biochemist, Beth Israel Hosp, 13; instr. physiol. chem, med. dept, Illinois, 13-14; *assoc. biol. chem. Columbia*, 14- Chem. Soc; Harvey Soc. Pathological and physiological chemistry.
- Miller, Dr. Edwin Cyrus**, Experiment Station, Manhattan, Kans. *Plant physiology*. Baltimore, Ohio, Dec. 16, 78. A.B, Lebanon, 06; Yale, 07, Ph.D, 10. Instr. bot, *Kansas State*, 10-14, *asst. prof.*, 15-, *asst. plant pathologist, Exp. Sta.*, 11- A.A; Soc. Agron.

- Miller, Dr. Edwin M(orton)**, 122 S. Michigan Ave, Chicago, Ill. *Surgery*. Ida Grove, Iowa, June 10, 88. A.B, Illinois, 10; Senn fellow, Rush Med. Col, M.D, 13. Asst. instr. *surg*, *Rush Med. Col*, 15-17, *instr*, 17- Am. Med. Ass. *Surgery of bones and nerves*.
- Miller, Prof. Emerson R**, Auburn, Ala. *Chemistry*. Bascom, Ohio, June 2, 62. B.S, Michigan, 94, M.S, 95; Ph.D, Minnesota, 18. Principal, high sch, Arkansas City, Kans. 88-91; asst. qual. anal, Michigan, 94-95; adj. prof. pharmacy, Ala. Polytech, 95-96, prof, 96-05; chief, dept. chem, Cuban Exp. Sta, Santiago, 05-06; prof. pharmaceut. chem, Ala. Polytech, 06-13; acting asst. prof. plant chem. and chemist, pharmaceut. exp. sta, Wisconsin, 13-17; *prof. research chem. and research chemist, Ala. Polytech*, 18- A.A; Chem. Soc; Pharmaceut. Ass. Plant chemistry; alkaloids; glucosids; volatile oils; chemistry of the velvet bean.
- Miller, Prof. Ephraim**, 558 N. Lake Ave, Pasadena, Calif. *Mathematics, Astronomy*. Carrollton, Ohio, April 25, 33. A.B, Allegheny, 55, A.M, 58, hon. Ph.D, 95. Supt. schools, Findlay, Ohio, 59-70; Lawrence, Kans, 70-74; *prof. math. and astron*, Kansas, 74-10, *emer. prof*, 10-, dean, col. lib. arts and sciences, 95-04. Univ. librarian, Kansas, 74-86. A.A; Math. Soc; Astron. Soc; Pacific Astron. Soc; Kans. Acad. (pres, 91); Soc. Belge d'Astron; Circolo Mat. di Palermo. Differentials; determinants; moons of Mars; corona of the sun; the moon's surface; non-Euclidean geometry; variation in latitude.
- Miller, Eric R(oxford)**, U. S. Weather Bureau, Madison, Wis. *Meteorology*. Mount Pleasant, Mich, June 19, 78. Arizona, 96-99. Observer, U. S. *Weather Bureau*, 01-05, research observer, 06-08, local forecaster, 08-17, *meteorologist*, 18- Lecturer meteorol, Wisconsin, 08- A.A; Physical Soc; Am. Metal Soc. Terrestrial magnetism; correlation of atmospheric pressure distribution with subsequent weather conditions.
- Miller, Prof. Frank (Francis) G(arner)**, University of Idaho, Moscow, Idaho. *Forestry*. Lanark, Ill, June 2, 66. Ph.B, Iowa, 00; B.S.A, Iowa State, 01; M.F, Yale, 03. Supt. schools, Parkersburg, Iowa, 93-95; Dunlap, Iowa, 95-99; expert, bur. forestry, U. S. Dept. Agr, 01-12; prof, forestry, Nebraska, 03-07; prof. forestry and dean, sch. forestry, Washington (Seattle), 07-12; prof. forestry and head of dept, Wash. State, 15-17; *prof. forestry and dean, sch. forestry, Idaho*, 17- A.A; Soc. Foresters; Forestry Ass. The germination and growth of Leguminosae, with reference to large and small seed; the germination of forest tree seed; forest planting in eastern Nebraska, North Platte and South Platte valleys; forest taxation in Washington; timber resources of Idaho and Washington.
- Miller, Fred A**, Greenfield, Ind. *Botany*. Brooklyn, Ind, Sept. 5, 78. B.S, Purdue, 08, M.S, 12. Production supt, biol. dept, and later *director, med. plant garden, Eli Lilly and Co*, 08- A.A; Bot. Soc; Pharmacol. Soc; Ind. Acad. Cultivation and breeding of medicinal plants.
- Miller, Prof. F(rederick) R(obert)**, Western University, London, Can. *Physiology*. Toronto, Can. B.A, Toronto, 03, M.B, 07; M.D, Munich; Liverpool; Oxford. Asst. *physiol*, Cornell, 03-05; asst. demonstrator, Toronto, 05-07, demonstrator, 07-10; lecturer, McGill, 12-14; *prof, Western*, 14- Examiner in *physiol*, Can. Med. Council, 16-18. A.A; *Physiol. Soc*; London *Physiol. Soc*. Galvanotropism; muscle-nerve physiology of crustaceans; stomach; salivary reflexes; deglutition; cardio-inhibitory and mastication centers; cerebellum.
- Miller, Prof. G(eorge) A(ram)**, 1203 W. Illinois St, Urbana, Ill. **Mathematics*. Lynnville, Pa, July 31, 63. A.B, Muhlenberg, 87, A.M, 90; Ph.D, Cumberland, 93; Leipzig and Paris, 95-97. Principal schools, Greeley, Kans, 87-88; *prof. math*, Eureka, 88-93; *instr*, Michigan, 93-95; Cornell, 97-01; asst. prof, Stanford, 01-03, assoc. prof, 03-06; *Illinois*, 06-07, *prof*, 07- Instr, summer sch, Chicago, 98, prof, 12; California, 13. A.A. (sec'y, A, 01, 07-12); *Math. Soc.* (sec'y, San Francisco sect, 02-06, v. pres, 08, chairman, Chicago sect, 07-09); *Math. Ass.* (v. pres, 16); *Am. Acad*; London *Math. Soc*; *Math. Verein*; *Soc. math. de France*; cor. mem. *Spanish Math. Soc.* Theory of groups of finite order.
- Miller, Prof. George J**, 103 Parsons St, Mankato, Minn. *Geography*. Sturgis, Mich, Feb. 7, 80. B.S, Chicago, 07, M.S, 09, 09-13. Instr. geog, Chicago, 08-13; *head, dept. geog, State Nor. Sch, Mankato*, 13- A.A; Ass. Geog. Lake Superior iron ores; settlement and population of Michigan; boundaries of Michigan; education.
- Miller, Gerrit S(mith), Jr**, U. S. National Museum, Washington, D. C. **Zoology*. Peterboro, N. Y, Dec. 6, 69. A.B, Harvard, 94. Asst. curator, *div. of mammals*, U. S. *Nat. Museum*, 98-09, *curator*, 09-
- Miller, Dr. James Alex(ander)**, 379 Park Ave, New York, N. Y. *Medicine*. Roselle, N. J, March 27, 74. A.B, Princeton, 93, A.M, 94; M.D, Columbia, 99. *Prof. clin. med, Columbia*. Visiting physician, Bellevue Hosp; med. director, Rockefeller Commission Prev. Tuber. in France, 17-18. Am. Physicians; Climat. and Clin. Ass. (pres, 14); N. Y. Acad. Med; N. Y. Ass. Tuber. Clinics (pres). Internal medicine; tuberculosis.
- Miller, Prof. John A(nthony)**, Swarthmore College, Swarthmore, Pa. **Astronomy*. Greensburg, Ind, Dec. 16, 59. A.B, Indiana, 90; A.M, Stanford, 93; Ph.D, Chicago, 99. Instr. math, Indiana, 90; supt. schools, Rockville, Ind, 90-91; instr. math, Stanford, 91-94, asst. prof, 94-95; *prof. mech. and astron*, Indiana, 95-06; *math. and astron, Swarthmore*, 06-, v. pres, 13-, *director, Sproul Observatory*, 11- Chief, solar eclipse exped. to Spain, 05; Brandon, Colo, 18. A.A; Astron. Soc; Math. Soc; Philos. Soc. (sec'y); fel. Ind. Acad. Stellar parallax; solar corona; measures of double stars; elliptic modular functions of square rank.
- Miller, Prof. J(ohn) Craig**, Lincoln University, Pa. *Medicine, Chemistry*. Pittsburgh, Pa, Oct. 9, 48. M.D, Pennsylvania, 76. *Prof. chem, Lincoln (Pa)*, 87- A.A; Chem. Soc.
- Miller, Dr. John M(ilton)**, Bureau of Standards, Washington, D. C. *Radio engineering*. Han-

- over, Pa, June 22, 82. A.B, Yale, 04, A.M, 07, Ph.D, 15. Asst. physicist, assoc. physicist and later physicist, Bur. Standards, 07-19; *radio aid, bur. eng, U.S.N.*, 19- Physical Soc; Radio Eng. Three electrode vacuum tubes.
- Miller, Dr. J (oseph) L (eggett)**, 5315 Greenwood Ave, Chicago, Ill. *Medicine*. Kewanee, Ill, Nov. 24, 67. B.S, Michigan, 93; M.D, Northwestern, 95. Asst. prof. and later *prof. med, Rush Med. Col*, 05- Attending physician, Cook Co. Hosp; St. Luke's Hosp. A.A; Soc. Pharmacol; Soc. Clin. Invest; Am. Physicians; Am. Med. Ass. (sec'y, sect. med); Physiol. Soc. Internal medicine; detection of smegma bacillus; chlorid retention in nephritis; Kernig's sign; experimental production of arteriosclerosis; exudates and transudates; experimental pulmonary edema; non-specificity of vaccine therapy.
- Miller, Dr. J (oseph) W (arren)**, 306 Chestnut St, Harrisburg, Pa. *Mathematics, Mechanics*. Washington Boro, Pa, Oct. 30, 75. B.S, Pa. State, 97; fellow, Columbia, 98-00, A.M, 99, hon. fellow, 00-01, Ph.D, 01. Observer, U. S. Coast and Geod. Surv, 01; instr. math. and astron, *Lehigh*, 02-08, *asst. prof. math*, 08- Elastic properties of helical springs; calculus.
- Miller, Prof. Kelly**, Howard University, Washington, D. C. *Mathematics*. Winnsboro, S. C, July 23, 63. A.B, Howard, 86; Hopkins, 87-89. *Prof. math, Howard*, 90- Acad. Polit. and Social Sci; Am. Negro Acad. (v. pres). Euclid and his modern rivals; scales of denominate units; experimental geometry; negro problems.
- Miller, Prof. Loye Holmes**, Southern Branch, University of California, Los Angeles, Calif. *Biology*. Minden, La, Oct. 13, 74. B.S, California, 98, M.S, 03, Ph.D, 12. Instr. nat. science, Oahu Col. Honolulu, 99-03; *asst. zool*, California, 03-04; *prof. and head, dept. science*, State Nor. Sch, Los Angeles, 04-10, *dept. biol*, 10-20, *assoc. prof. biol, California (south. branch)*, 20- Instr. paleont, Scripps Inst, California, 10; *assoc. prof. comp. anat*, Col. Physicians and Surg, Los Angeles; *asst. U. S. Fish Commission*, 03; U. S. Biol. Surv, 07; California, summers, 08, 11, 13. A.A; Ornith. Union; Ecol. Soc; Cooper Ornith. Club; Paleont. Soc. Zoology; paleontology; land vertebrates; fossil birds of Pacific Coast; methods and curricula in biology.
- Miller, Prof. Newton**, 358 Douglas Ave, Salt Lake City, Utah. *Zoology*. Sharptown, Ind, March 20, 79. A.B, Indiana, 05, A.M, 06; Ph.D, Clark, 08. Instr. zool. and morphol, Clark Col, 08-11, *asst. prof*, 11-12; *prof. biol*, Wheaton, 12-15; *zool, Utah*, 15-20, *micros. anat*, 20- Collected fish in Guatemala for Indiana, 04. Systematic zoology; dynamic biology; the fishes of the Matagua river; biology of the American toad; activity and rate of reproduction of the brown rat; handling of chick embryos; heredity of white fore-lock.
- Miller, Prof. Robert Talbott**, 1226 Murray Hill Ave, Pittsburgh, Pa. *Surgery*. Covington, Ky, April 28, 78. A.B, Amherst, 99; M.D, Hopkins, 03. Instr. *surg*, Hopkins, 08-09; *assoc. prof*, Pittsburgh, 09-15, *prof*, 15- A.A; Surg. Ass; Ass. Path. and Bact; Ass. Prof. Tetanus; histogenesis of mesenteric cysts.
- Miller, Dr. Rolla W (oods)**, Mellon Institute, Pittsburgh, Pa. *Chemistry*. Aurora, Ind, Oct. 2, 92. A.B, Wabash, 13; M.S, Kansas State, 15; Ph.D, Pittsburgh, 17. Instr. chem, Kansas State, 13-15; research *asst, Mellon Inst*, 15-17, *fellow*, 19- Capt, C.W.S, A.E.F, 17-19. Chem. Soc; Ceramic Soc. Soil chemistry; ceramics; natural gas.
- Miller, Rudolph P (hilip)**, 100 Morningside Drive, New York, N. Y. *Civil engineering*. New York, July 5, 66. B.S, Col. City of N. Y, 85; C.E, Columbia, 88, hon. M.S, 14. Asst. engineer, bur. buildings, N. Y. City, 02-06; consulting engineer, 06-09; *supt. buildings*, N. Y. City, 10-15, chairman, board of appeals, 16-18; consulting engineer, 18-19; *supt. buildings*, N. Y. City, 20- Civil Eng; Soc. Test. Mat. Properties of building materials; fireproofing.
- Miller, Shirley P (utnam)**, Brookings, S. Dak. *Anatomy*. Rockwell, Iowa, June 17, 78. B.S, S. Dak. Col, 03; A.M, Minnesota, 04, fellow, 20-21; Berlin and Munich, 08-11; fellow, Chicago, 16. Asst. zool. and rural hygiene, S. Dak. Col, 05-08; demonstrator anat, Biol. Inst, Berlin, 09; *prof. zool. and rural hygiene*, S. Dak, Col, 11- Histogenesis of muscle; mitochondria of secreting cells.
- Miller, Spencer**, South Orange, N. J. *Engineering*. Waukegan, Ill, April 25, 59. B.S, Worcester, 79. *Chief engineer, Lidgerwood Mfg. Co, N. Y. City*. Mem. Naval Consulting Board. A.A; Mech. Eng; Civil Eng; Min. Eng; Naval Archit. and Marine Eng; hon. mem. Worcester Mech. Ass; Can. Min. Inst. Cableways; apparatus for life saving at sea; coaling warships in a seaway and in harbor.
- Miller, Dr. Sydney R (obotham)**, 900 St. Paul St, Baltimore, Md. *Medicine*. Newark, N. J, Aug. 9, 84. B.S, N. Y. Univ, 05; M.D, Hopkins, 10. Asst. med, *Hopkins*, 11-15, *instr. clin. med*, 15- Director, lab. internal med, Phipps Psychiat. Clinic, 13-15. A.A; Am. Med. Ass; Cong. Inst. Med; S. Med. Ass. Clinical medicine and pathology.
- Miller, W (aldron) DeW (itt)**, American Museum of Natural History, New York, N. Y. *Ornithology*. Brooklyn, N. Y, Feb. 4, 79. High sch. *Assoc. curator birds, Am. Museum Nat. Hist*, 03- Fel. Ornith. Union. Systematic ornithology.
- Miller, Willet G**, Bureau of Mines, Toronto, Can. *Geology*. Norfolk Co, Ont. B.A, M.A, Toronto, 90, 97, fellow, 90-93; Chicago; Harvard; Heidelberg; LL.D, Queen's (Can), 07; Toronto, 13. *Geologist, Ont. Bur. Mines*, 87-; *provincial geologist, Ont*, 02- Lecturer and *prof. geol*, Queen's (Can), 93-02. A.A; Geol. Soc; Min. Eng; Can. Min. Inst. (pres, 08-10); hon. mem. British Inst. Min. and Metal; fel. Royal Soc. Can. Pre-Cambrian and economic geology of Ontario.
- Miller, Prof. W (illiam) J (ohn)**, Smith College, Northampton, Mass. *Geology*. Red Bluff, Calif, April 26, 80. B.S, Pacific (Calif), 00, M.S, 02; Stanford, 00-01; fellow, Hopkins, 04-05, Ph.D, 05. Instr. geol. and chem, Pacific (Calif), 00-03; *prof. geol. and miner*, Hamilton, 05-14; *prof. geol. and head of dept, Smith*, 14- Field *asst, Md. Geol. Surv*, 04; U. S. Geol. Surv, 05-

- 06; field geologist, N. Y. Geol. Surv, 07- A.A.; Geol. Soc; Am. Acad. Pre-Cambrian geology of New York; petrology.
- Miller, Prof. W(illiam) Lash**, 50 St. Alban St, Toronto, Can. *Physical chemistry*. Galt, Ont, Sept. 10, 66. B.A., Toronto, 87, fellow, 90; Berlin, 87-89; Göttingen, 89; Ph.D., Munich, 90; Leipzig, 92. Demonstrator chem, *Toronto*, 91-99, assoc. prof. *physical chem*, 00-07, *prof*, 08- Mem. board of reviewers, 'Jour. Physical Chem,' 96-, assoc. ed, 10- A.A. (chairman, C, 13); Chem. Soc. (chairman, sect. physical chem, 06, assoc. ed, 'Jour,' 13-); Soc. Chem. Indust. (chairman, Can. sect, 10); Electrochem. Soc. (pres, 12); hon. mem. Electroplaters Ass; Wash. Acad; Royal Soc. Can. (pres, sect. III, 08); Can. Inst. Chem; London Chem. Soc. Chemical kinetics; electrochemistry; bactericidal action of phenol solutions containing salts; electrolysis with alternating and interrupted current; rates of reaction to test kinetic theory and catalysis theories.
- Miller, Prof. W(illiam) S(now)**, University of Wisconsin, Madison, Wis. **Anatomy, Histology*. Stirling, Mass, March 29, 58. M.D., Yale, 79; fellow, Clark, 90-92; Leipzig, 95-96; fellow, Hopkins, 05-06; Sc.D, Cincinnati, 20. Pathologist, City Hosp. and Mem. Hosp, Worcester, Mass, 89-92; instr. vert. anat, *Wisconsin*, 92-95, asst. prof, 95-04, assoc. prof. *anat*, 04-16, *prof*, 16- Lecturer, Mt. Holyoke, 89; med, Hopkins, 18-19; mem. ed. board, 'Anat. Record.' A.A.; Soc. Nat; Ass. Anat. (v. pres, 09); Soc. Zool; Am. Med. Ass; Wis. Acad. Anatomy and histology of the lungs; anatomical relations of a tubercle; medical history and biography.
- Miller, Dr. W(illiam) Tyler**, 1209 S. Crenshaw Boulevard, Los Angeles, Calif. *Horticulture*. King William Co, Va, Nov. 14, 69. A.B, Michigan, 92; A.M, Cornell, 97, Ph.D, 99. Assoc. ed, 'Cyc. of Am. Hort,' 99-02; mem. ed. staff, 'Country Life in America,' 01-12; ed, 'Garden Magazine,' 05-12. Asst. prof. landscape archit, Illinois, 12-16. Asst, Cornell Exp. Sta, summers, 96-98. Botany of cultivated plants; landscape architecture.
- Millikan, Prof. Robert A(ndrews)**, University of Chicago, Chicago, Ill. **Physics*. Morrison, Ill, March 22, 68. A.B, Oberlin, 91, A.M, 92, Sc.D, 11; fellow, Columbia, 93, Ph.D, 95, Sc.D, 17; Berlin and Göttingen, 95-96; Sc.D, Northwestern, 13; Pennsylvania, 14; Amherst, 17. Asst, instr. and asst. prof. *physics*, *Chicago*, 02-07, assoc. prof, 07-10, *prof*, 10- Joint ed, 'Univ. Chicago Science Series,' 15-; Hitchcock lecturer, California, 17; Clark lecturer, Amherst, 17; v. chairman, Nat. Research Council, 16-; lieut. col. and chief, science and research div, Sig. C, 17-19; Comstock prize, Nat. Acad, 13. Int. Solvay Cong, Brussels, 21. Nat. Acad. (ed, 'Proceedings,' 15-); A.A. (v. pres, 11); Physical Soc. (pres, 16-18, assoc. ed, 'Review,' 03-16); Philos. Soc; Am. Acad; hon. mem. Royal Inst; Soc. Batave de Philos. Exp. à Rotterdam. Polarization of light from incandescent surfaces; variation of dielectric constants with frequencies; effect of temperature on photo-electric discharge; the charge on the negative ion in gases; absorption of X-rays; isolation of an ion and a direct study of its properties; discharge potentials in high vacua; velocities of electrons discharged from metals under the influence of ultra-violet light; photo-electric determination of Planck's 'h'; exact values of e, n and related constants; Brownian movement in gases; viscosity coefficients of gases; contact E.M.F; valency in gaseous ionization; extension of ultra-violet spectrum; laws of reflection of gas molecules; X-rays from light atoms.
- Millis, Col. John, U. S. A**, Chief Engineer's Office, Washington, D. C. *Physics, Engineering*. Wheatland, Mich, Dec. 31, 58. Grad, U. S. Mil. Acad, 81. All grades from second lieut. to *col*, *corps engineers*, 81- Mem. board of examiners, Elec. Expos, Phila, 84; U. S. Lighthouse Board, 94-98. Nat. delegate, Congresses Navig, Elec. and Physics, Paris, 00. A.A; Physical Soc; Civil Eng; Soc. de Physique; Ass. Navig. Congresses. Gravitation and general physical theory; illumination; geology of the glacial period; river and harbor works.
- Mills, Prof. Cha(rlie)s K(arsner)**, 1909 Chestnut St, Philadelphia, Pa. *Neurology*. Falls of Schuylkill, Pa, Dec. 4, 45. Cent. High Sch, Phila, 60-64; M.D, Pennsylvania, 69, Ph.D, 71, LL.D, 16. Prof. diseases of the mind and nervous system, Phila. Polyclinic, 83-98; mental diseases and med. juris, *Pennsylvania*, 93-01, clin. prof. nervous diseases, 01-03, *prof. neur*, 03-15, *emer. prof*, 15- Clin. prof. nervous diseases, Women's Med. Col. of Pa, 91-02. Neur. Ass. (pres, 86); Am. Med. Ass. (chairman, sect. nervous and mental diseases, 93); Medico-Psychol. Ass; Phila. Neur. Soc. (pres, 93, 14); Royal Soc. Med; cor. mem. Gesell. Nervenärzte; Soc. de Neur. de Paris; Phila. Col. Physicians. The nervous system and its diseases; diseases of the brain and cranial nerves.
- Mills, Prof. C(lifford) N(ewton)**, 114 N. Washington St, Tiffin, Ohio. *Mathematics*. Carlos City, Ind, Aug, 86. B.S, Franklin, 10; A.M, Indiana, 14. Prof. *math*, Highland, 10-13; asst. prof, S. Dak. Col, 14-19; *prof. Heidelberg*, 19- Math. Soc. Applied mechanics.
- Mills, Prof. J(ames) E(dward)**, University of South Carolina, Columbia, S. C. **Chemistry*. Winnsboro, S. C, April 30, 76. A.B, Davidson, 96, A.M, 00; Ph.D, North Carolina, 01. Asst. *chem*, North Carolina, 00-01, instr, 01-03, assoc. prof, 04-10; lecturer, *South Carolina*, 10-13, *prof*, 13- Capt, corps engineers, 17, C.W.S, 18, major, 18. A.A; Chem. Soc; Electrochem. Soc; Soc. Chem. Indust. Molecular attraction; heats of vaporization of liquids; molecular attraction; specific heats.
- Mills, John, Wyoming, N. J.** *Electrical engineering*. Chicago, Ill, April 13, 80. A.B, Chicago, 01, fellow, 02-03; fellow, Nebraska, 03-04, A.M, 04; B.S, Mass. Inst. Tech, 09. Instr. physics, Western Reserve, 03-07; drawing, Mass. Inst. Tech, 07-09; *prof. physics and elec. eng*. Colo. Col, 09-11; in eng. dept, Am. Telephone and Telegraph Co, 11-15; *research dept*, *West. Elec. Co*, 16- Physical Soc; Elec. Eng; Radio Eng. Electrooptics; telephone transmission; radio communication.

- Mills, Prof. Ralph G(arfield)**, Peking Union Medical College, Peking, China. *Pathology*. Lincoln, Ill, March 4, 81. A.B, Illinois, 03; M.D, Northwestern, 07; Chicago, 12-13. Intern, St. Luke's Hosp, Chicago, 07-08; builder and in charge, Kennedy Hosp, Korea, 08-12; prof. path. and bacter. and in charge, clin. laboratories and research dept, Severance Union Med. Col, Korea, 13-18; *prof. path. and head of dept, Peking Union Med. Col*, 18- Asst. res. pathologist, Hopkins Hosp, 18-19; instr. path, Hopkins, 19-20. Ass. Path. and Bact; Soc. Bact.
- Mills, William C**, Ohio State University, Columbus, Ohio. **Archeology*. Pymont, Ohio, Jan. 2, 60. B.S, Ohio State, 89, M.S, 02. *Curator, dept. archeol, Ohio State, and curator and librarian, Ohio Archeol. and Hist. Soc*, 98- Director field explorations, Ohio Archeol. and Hist. Soc, 00; assoc. ed, 'Ohio Naturalist,' 00; in charge exhibit, Ohio State Archeol. and Hist. Soc, Pan-Am. Expos, 01; hon. supt. archeol, La. Purchase Expos, 04; supt. archeol, Jamestown, 07. A.A; Soc. Nat; Anthropol. Ass. (mem. council, 19); assoc. Ornith. Union; Ohio Acad. (librarian, 99-). Mounds and village sites; Ohio flint; Baum prehistoric village sites, Ross county, Ohio; microscopical sections of Ohio flint.
- Millsbaugh, Prof. C(harles) F(rederick)**, Field Museum of Natural History, Chicago, Ill. **Botany*. Ithaca, N. Y, June 20, 54. Cornell, 72-75; M.D, N. Y. Homeop. Med. Col, 81. Prof. bot, West Virginia, 91-92; *curator, dept. bot, Field Museum Nat. Hist*, 94-; *professorial lecturer econ. bot, Chicago*, 95-; *prof. med. bot, Chicago Homeop. Med. Col*, 96- Ed, 'Homeop. Recorder,' 89-90; mem. Pan-Am. Commission Med. Plants, 99-01; Advisory Board State of Ill. Museums; arboretum committee, Chicago Forest Reserve Commission. A.A; Soc. Nat; Bot. Soc; Wild Flower Preservation Soc. (pres, 14-18); Explorer's Club; Binghamton Acad; hon. fel. Mex. Med. Soc; Brazil Med. Soc. Flora of Yucatan; economic plants of American Indians; North American Euphorbiaceae; flora of the Bahamas; limits of the Greater Antillean floras.
- Milne, Dr. Lindsay Stephen**, University of Kansas, Rosedale, Kans. *Medicine*. Montrose, Scotland, May 8, 83. M.B.Ch.B, Edinburgh, 04, M.D, M.R.C.P, 08. Asst. prof. path, Edinburgh, 05-08; pathologist, Russell Sage Inst. Path, 08-11; *prof. med, Kansas*, 11- Lieut. col, M.C, 17-19. Attending physician, various hospitals, Kansas City. Ass. Path. and Bact; Am. Med. Ass; N. Y. Acad. Med; Harvey Soc; British Med. Ass; British Path. and Bact. Soc. Internal medicine; syphilis; liver diseases; anemia; diabetes; disorders in internal gland secretions.
- Milne, Prof. W(illiam) E(dmund)**, University of Oregon, Eugene, Oregon. *Mathematics*. Pendleton, Oregon, Jan. 19, 90. A.B, Whitman, 12; A.M, Harvard, 13, Ph.D, 15. Instr. math, Harvard, 13-15; Bowdoin, 15-16, asst. prof, 16-18; *prof, Oregon*, 19- Lieut. ordnance dept, 18-19. Math. Soc; Math. Ass. Theory of functions of real and complex variables.
- Minchin, Prof. Howard D(aniel)**, 17 Joslyn Park, Rochester, N. Y. *Physics, Electrochemistry*. Belleville, Ont, May 3, 68. B.S, Michigan, 99, A.M, 04, Ph.D, 06. Principal, high sch, Niles, Mich, 99-01; instr. physics, Detroit, 01-04; Rochester, 04-06, asst. prof, 06-19; *prof. applied optics, Ohio State*, 19- Optical engineer, corps engineers, U.S.A, 18-19. Mem. Committee on Course of Study in Chem. for Mich. Secondary Schools. Assoc. Physical Soc; Ass. Applied Optics (v. pres, 16); Optical Soc; Soc. de Physique. Radiation of metals; measurement of sound waves; reflection of light from colored papers; distillation and purification of mercury; coefficient of expansion of fused quartz; optics.
- Miner, Carl S(helley)**, 9 S. Clinton St, Chicago, Ill. *Chemistry*. State Center, Iowa, Aug. 5, 78. B.S, Chicago, 03. *Consulting chemist and proprietor, Miner Laboratories*. A.A; Chem. Soc; Soc. Test. Mat. Unfermentable residue of commercial glucose.
- Miner, H(arlan) S(herman)**, Gloucester City, N. J. **Chemistry*. Chester, Vt, June 29, 64. B.S, Lehigh, 88; hon. Sc.D, Pennsylvania, 19. *Chemist, Welsbach Co, Gloucester City, N. J*, 88- Trustee, Pennington Sem; Lehigh; advisory mem. for N. J, Naval Consulting Board. Gold medal and diploma, La. Purchase Expos, 04. A.A; Chem. Soc. (chairman, Phila. sect); Ceramic Soc; Min. Eng; Chem. Eng; Electrochem. Soc; Soc. Chem. Indust; Franklin Inst; N. Y. Chemists Club; Soc. de Chim. indust. Rare earths; radium; mesothorium; manufacture and development of incandescent gaslights.
- Miner, Prof. J(ames) B(urt)**, Carnegie Institute of Technology, Pittsburgh, Pa. *Psychology*. Berlin, Wis, Oct. 6, 73. B.S, Minnesota, 97, LL.B, 99, M.S, 01; fellow, Columbia, 02-03, Ph.D, 03. Instr. psychol, Illinois, 03-04; Iowa, 04-05, asst. prof. philos, 05-06; *psychol, Minnesota*, 06-15; *Carnegie Inst. Tech*, 15-18, *assoc. prof*, 18- A.A; Psychol. Ass. Deficiency and delinquency; personnel; rhythm.
- Miner, John Rice**, Towson, Md. *Biometry*. Chicago, Ill, April 10, 92. A.B, Michigan, 13. Asst. math, Michigan, 12-13; computer, Maine Exp. Sta, 13-17; biometrician, Food Ad, 17-19; *assoc. biometry and vital statist, sch. hygiene and pub. health, Hopkins*, 19- A.A. Vital statistics; curve fitting; milk production; suicide.
- Miner, R(oy) W(aldo)**, American Museum of Natural History, New York, N. Y. *Zoology*. North Adams, Mass, Feb. 24, 75. A.B, Williams, 97; grad, Gen. Theol. Sem, 00. Instr. Latin and biol, Berkeley Sch, N. Y. City, 00-04; assoc. head master and instr. Latin and biol, Kelvin Sch, 04-05; asst. curator *invert. zool, Am. Museum Nat. Hist*, 05-17, *assoc. curator*, 17- Mem. exped. to Lesser Antilles, 11, 14; biol. exped. to P. R, 14, 15. A.A; Mus. Ass. (councilor, 17-); Fisheries Soc; N. Y. Acad. (asst. sec'y, 05, sec'y, sect. biol, 07). Invertebrate morphology and ecology; Myriapoda; phylogeny and homologies of limb muscles.
- Minnich, Dr. Dwight E(lmer)**, University of Minnesota, Minneapolis, Minn. *Zoology*. Hutchinson, Kans, Jan. 28, 90. A.B, Miami, 10; fellow, Harvard, 16-17, Ph.D, 17. Traveling fellow, Harvard, 17-18; *instr. zool, Syracuse*, 19-20;

- Minnesota, 20- A.A.; Soc. Zool. Sensory physiology and animal conduct.
- Minor, Dr. Jessie E(lizabeth)**, Emerson Laboratory, Springfield, Mass. *Chemistry*. Belleville, Ill., April 17, 80. B.S. Drury, 04; fellow, Pennsylvania, 08-10; Ph.D. Bryn Mawr, 17. Substitute prof. chem, Drury, 06-08; prof. Huguenot, S. Africa, 10-14; assoc. prof. Goucher, 17-18; *chief chemist*, Hamersley Mfg. Co., 18-20; *head, pulp and paper dept., Emerson Lab.*, 20- Chem. Soc.; London Soc. Chem. Indust. Equilibrium reactions; cellulose; beater consistency changes.
- Minor, Dr. Ralph S(mith)**, University of California, Berkeley, Calif. *Physics*. Deposit, N. Y., April 29, 76. A.B. Hamilton, 98, Root fellow, 98, A.M. 01; Freiburg, 98-99; Ph.D. Göttingen, 02. Science teacher, high sch. Little Falls, N. Y., 02-03; instr. *physics*, California, 03-06; assoc. prof. Nevada, 06, prof. 07-09; assoc. prof. California, 09-19, *prof.*, 19- A.A.; Physical Soc.; Pacific Physical Soc. (sec'y, 16). Absorption and refraction of ultraviolet radiation.
- Minot, Dr. George R(ichards)** 188 Marlborough St. Boston, Mass. *Medicine*. Boston, Dec. 2, 85. A.B. Harvard, 08, M.D. 12. Med. house officer, Mass. Gen. Hosp, 12; asst. res. physician, Hopkins Hosp, 13-14; asst. *med.*, Hopkins, 14-15; Mass. Gen. Hosp, 15-18; Harvard Med. Sch., 15-18; *assoc. Mass. Gen. Hosp.*, 18-; *asst. prof.*, Harvard Med. Sch., 18- Asst. chem, Harvard, 15-16; physician, Huntington Mem. Hosp, 17- Am. Physicians; Soc. Clin. Invest; Am. Med. Ass; Ass. Tuber. Clinical investigation; blood diseases; conditions of the blood.
- Miser, H(ugh) D(insmore)**, U. S. Geological Survey, Washington, D. C. *Geology*. Pea Ridge, Ark, Dec. 18, 84. A.B. Arkansas, 08, A.M. 12. *Geologist*, U. S. Geol. Surv., 07- A.A.; Geol. Soc.; Wash. Acad; Wash. Geol. Soc. Areal and economic geology.
- Miser, Dr. Wilson L(ee)**, Armour Institute, Chicago, Ill. *Mathematics*. Pea Ridge, Ark, June 26, 86. A.B. Arkansas, 08; A.M. Yale, 11; fellow, Chicago, 12-13, Ph.D. 13. Principal, high sch. Portland, Ark, 08-10; instr. *math.*, Minnesota, 13-15; asst. prof. Arkansas, 15-19; *assoc. prof.*, Armour Inst., 19- A.A.; Math. Soc.; Math. Ass. Linear differential equations.
- Misner, Prof. E(dward) G(ardner)**, 312 University Ave, Ithaca, N. Y. *Agriculture*. Dairyland, N. Y., Jan. 23, 91. B.S. Cornell, 13, Ph.D. 18. Asst. prof. farm management, Cornell, 18-20, *prof. agr. econ. and farm management*, 20- Farm Econ. Ass. Farm management; economics of dairying.
- Mitchell, A(lexander) J(ordan)**, Weather Bureau Office, Jacksonville, Fla. *Meteorology*. Glennville, Ala. B.E. Ala. Polytech, 81. Observer and sect. director, U. S. Weather Bur, 82-14. Instr. meteorol, Florida, 03.
- Mitchell, Dr. C(laude) W(illiam)**, 32 Brownell St, New York, N. Y. *Zoology, Medicine*. Hiawatha, Kans, May 27, 89. A.B. Nebraska, 10, fellow, 10-13, A.M. 11, Ph.D. 13; M.D. Rush Med. Col. 16. Instr. *physiol. and pharmacol.*, Nebraska, 13-14; *pharmacologist*, bur. chem, U. S. Dept. Agr, 14-15; *prof. physiol. and pharmacol.*, Alabama, 16-17; *asst. surgeon*, U. S. Pub. Health Service, 17- A.A.; Am. Med. Ass; Ass. Study Int. Secretions. Pharmacology; heredity in rotifers; action of chemicals on the peristaltic movements of the intestines; Vincent's angina.
- Mitchell, Dr. David**, 160 W. 85th St, New York, N. Y. *Psychology*. Aldershot, Can, Oct. 13, 84. A.B. Toronto, 10; A.M. Pennsylvania, 11, fellow, 12-14, Ph.D. 13. Instr. *psychol.*, Pennsylvania, 14-17; director *psychol. research*, Bur. Ed. Experiments, 17-19. A.A.; Psychol. Ass. Psychophysics; the influence of distraction in lifted weight experiments; the constant time error; exceptional children; clinical psychology.
- Mitchell, Miss E(velyn) G(roesbeeck)**, Howard University, Washington, D. C. *Zoology, Entomology*. East Orange, N. J. A.B. Cornell, 02; M.S. George Washington, 06; M.D. Howard, 13. Instr. *zool.*, Cornell summer geol. camp, 02; lab. and field asst. and artist to Dr. Dupree, Louisiana, 04; asst. *zool.*, George Washington, 04-06; *zool. artist* (unofficial) in U. S. Nat. Museum, 04-12; asst. *histol. and physiol. chem.*, *med. col.*, Howard, 09-12, *lecturer, neur.*, 17-; *practising physician*, 14- Intern, Woman's Hosp. (Phila), 13-14; visiting neurologist, Freedmen's Hosp, 15- A.A.; Entom. Soc.; Wash. Biol. Soc. *Diptera*; *ichthyology*; morphology of fish and fossil insects; life histories of Culicidae and Chironomidae; reptiles; small mammals.
- Mitchell, Dr. Graham John, Warren, Ariz.** *Geology*. Chico, Calif, Sept. 4, 87. B.S. Oregon, 12; A.M. Columbia, 13, Ph.D. 18. Instr. *geol.*, Oregon, 12-13, asst. *prof.*, 13-15; asst. Columbia, 16-18; *geologist*, Calumet and Ariz. Mining Co., 18- Asst. *geologist*, Oregon Bur. Mines and Geol, 13-15. Geology of Porto Rico and Oregon.
- Mitchell, Prof. H(arold) H(anson)**, University of Illinois, Urbana, Ill. *Biochemistry*. Evanston, Ill, Jan. 22, 86. A.B. Illinois, 09, M.S. 13, Ph.D. 15. Asst. *chem. exp. sta.*, Illinois, 11-13, *assoc. animal nutrition*, 13-18, asst. *prof.*, 18-20, *assoc. prof.*, 20- Chem. Soc.; Soc. Biol. Chem. Animal nutrition; metabolism of nitrates and amino acids; nutritive value of proteins; statistical methods applied to metabolism.
- Mitchell, Prof. Henry Bedinger**, Columbia University, New York, N. Y. *Mathematics*. Long Island, N. Y., Aug. 12, 74. Columbia, 91-92, E.E. 98, A.M. 00. Asst. *math.*, Columbia, 98-00, tutor, 00-05, adj. *prof.*, 05-08, *prof.*, 08- Sec'y, faculty, Columbia, 07-09, chairman, committee on admissions, 08-09, committee on instruction, 09-10. A.A.; Math. Soc.; Circolo Mat. di Palermo. Philosophy of mathematics; problems of education; comparative religions.
- Mitchell, Prof. H(oward) H(awkes)**, University of Pennsylvania, Philadelphia, Pa. **Mathematics*. Marietta, Ohio, Jan. 14, 85. Ph.B. Marietta, 06; Ph.D. Princeton, 10. Instr. *math.*, Yale, 10-11; Pennsylvania, 11-14, *asst. prof.*, 14- Assoc. ed. 'Annals of math'; ballistician, Aberdeen Proving Grounds, 18. Math. Soc. Linear groups; theory of numbers.
- Mitchell, J(ohn) Alfred, U. S. Forest Service**, Washington, D. C. *Forestry*. Detroit, Mich, April 1, 86. B.S. Mich. Agr. Col, 09. Forest asst, U. S. Forest Service, 09-13, *forest econ-*

- iner, 13-, in charge silvical investigations, 11-14, Feather River Exp. Sta, 14-18, *inspector, state cooperation*, 18- Soc. Foresters. Brush disposal in California; incense cedar.
- Mitchell, Prof. J(ohn) Pearce**, Stanford University, Calif. *Chemistry*. Providence, R. I. June 4, 80. A.B. Stanford, 03, A.M. 04, Ph.D. 09; Leipzig, 04-05. Asst. chem. Stanford, 01-04, instr. 05-09, asst. prof. 09-16, assoc. prof. 16-20, *prof.*, 20- A.A.; Chem. Soc.; Chem. Eng.; Pub. Health Ass. Physical chemistry; methods and standards for water analysis; smoke damage to vegetation.
- Mitchell, Prof. O(liver) W(endell) H(olmes)**, Syracuse Medical College, Syracuse, N. Y. *Bacteriology*. Lancaster, Mo, Aug. 17, 86. M.D. Missouri, 08; Rush Med. Col. 09; Chicago, 10; Harvard, 13. Asst. path. and bacter. Missouri, 06-08, asst. path. and anesthetist to Hosp. 09-10, instr. path. and bacter. 10-12, asst. prof. 12-13, *assoc. prof.*, 13-14; *bacter. and hygiene*, Syracuse, 14- City bacteriologist, Syracuse, 14-18. A.A.; Ass. Path. and Bact.; Am. Med. Ass. Skin disinfection; pneumonitis of rodents; viability of *Bacillus typhosus*; disinfectant action of wood; pneumococcus.
- Mitchell, Prof. Philip H(enry)**, Arnold Laboratory, Providence, R. I. *Physiology*. Southbury, Conn, Dec. 13, 83. Ph.B. Yale, 04, Ph.D. 07. Instr. *physiol.*, Brown, 07-11, asst. prof. 11-20, *assoc. prof.*, 20-; *director, biol. sta. Bur. Fisheries, Woods Hole*, 14- Soc. Biol. Chem. Utilization of carbohydrates; enzymes concerned with carbohydrate metabolism in the embryo; purin metabolism in the embryo; distribution of purin enzymes; creatinin metabolism; nutrition of oysters; oxygen requirements of shellfish; selective absorption of potassium by animal cells.
- Mitchell, Prof. R(obert) V(incent)**, College Station, Pullman, Wash. *Animal husbandry*. Mahaffey, Pa, July 23, 84. B.S. Missouri, 13. Poultryman, Pa. State, 08-09, asst. *poultry husbandry*, 11-12; Missouri, 12-13; *prof.*, N. H. Col. 13-17; Del. Col. 17-18; *head of dept.*, Wash. State, 18- With food research bur. U. S. Dept. Agr, summer, 18. A.A.; Int. Ass. Instructors and Investigators Poultry Husbandry. Poultry husbandry; egg production.
- Mitchell, Prof. S(amuel) A(lfred)**, University, Va. *Astronomy*. Kingston, Can, April 29, 74. A.M. Queen's (Can), 94; Ph.D. Hopkins, 98. Research asst, Yerkes Observatory, 98-99; tutor *astron.*, Columbia, 99-06, instr. 06-08, adj. prof. 08-13; *prof. Virginia, and director, McCormick Observatory*, 13- Astronomer, U. S. Naval Observatory eclipse exped, Ga, 00; Sumatra, 01; Spain, 05; Oregon, 18; asst. Astrophys. Observatory, Smithsonian Institution, 04; astronomer, Yerkes Observatory, 07, 09, 10-13; Ernest Kempton Adams research fellow, Columbia, 14-A.A.; Astron. Soc.; hon. mem. Ass. Var. Star Observers; fel. Royal Astron. Soc; hon. mem. Soc. Astron. de Mex. Stellar photometry, spectroscopy and parallax; variable stars; flash spectra.
- Mitchell, Prof. U(lysses) G(rant)**, 1313 Massachusetts St, Lawrence, Kans. *Mathematics*. Nashua, Iowa, Nov. 26, 72. A.B. Kansas, 06, A.M. 07; Ph.D. Princeton, 10. Principal and supt, pub. schools, 98-04; instr. hist, Kansas, 05-06, instr. *math.*, 06-08; teaching fellow, Princeton, 08-10; asst. prof. *Kansas*, 10-15; *assoc. prof.*, 15-20, *prof.*, 20- Assoc. ed, 'Math. Monthly,' 14- A.A.; Math. Soc.; Math. Ass.; Ass. Prof. Projective geometry; history of mathematics.
- Mitchell, Prof. W(alter) A(lfred)**, Mukden, China. *Physics*. Hartford, Conn, Jan. 13, 81. A.B. Trinity (Conn), 01; A.M. Columbia, 10. Tutor physics, Maine, 02-03; instr. R. I. Col. 03-04; asst. Columbia, 04-05, 09-10; *prof.*, Imp. Polytech. Col, Shanghai, China, 05-08; Soochow Univ, 08-12; *eng. and commercial work*. Lecturer physics and chem, Fuh Tan Col, 08-09. A.A.; Physical Soc; Ass. Chinese and Am. Eng.
- Mitchell, Dr. Walter M(ann)**, 209 Kent Road, Ardmore, Pa. *Metallurgy, Engineering*. Philadelphia, Pa, April 5, 80. B.S. Pennsylvania, 02; Ph.D. Princeton, 05. Asst. Allegheny Observatory, 06; director, observatory, Haverford, 07-09; asst. prof. astron, Michigan, 10-13; mech. engineer, Midvale Steel Co, 15-18; *supt, metal. and testing lab, Standard Roller Bearing Co*, 19- Aeronautical mech. engineer in charge of inspection, Bur. Aircraft Production, War Dept, 18-19. A.A.; Astron. Soc; Steel Treat. Soc; Phila. Eng. Club. Solar spectroscopy; history of solar observations; alloy steels.
- Mitke, Cha(rle)s A.**, Box 2051, Bisbee, Ariz. *Mining*. Dorrance, Pa, Aug. 14, 81. A.B. Yale, 08, Ph.B. 10. Mining engineer, Phelps Dodge and Co, 10-16; *consulting mining engineer*, 16- A.A.; Min. Eng; Min. Cong; Chem. Eng; London Inst. Min. and Metal. Mine ventilation.
- Mix, Prof. A(rthur) J(ackson)**, University of Kansas, Lawrence, Kans. *Plant pathology*. Bolivar, N. Y, Sept. 30, 88. A.B. Hamilton, 10; fellow, Cornell, 11-15, Ph.D. 16. Asst. botanist, N. Y. Exp. Sta, Geneva, 15-16; instr. plant path, *Kansas*, 16-18, *assoc. prof. bot.*, 19- A.A.; Bot. Soc; Phytopath. Soc. Non-parasitic plant diseases.
- Mixer, Fred(erick) K(nowlton)**, Delaware and Edward St, Buffalo, N. Y. *Geology, Paleontology*. Buffalo, June 24, 60. Yale, 80; Hopkins, 87-88. Instr. geol. and miner, Hobart, 85-86; curator, Buffalo Soc. Nat. Sci, 92-99. A.A.; Soc. Nat; Colo. Sci. Soc; Buffalo Soc. Nat. Sci. Inorganic geology; mineralogy; microscopical examinations of eruptive rocks of Colorado and New Mexico.
- Mixer, Prof. W(illiam) G(ilbert)**, 250 Edwards St, New Haven, Conn. *Chemistry*. Dixon, Ill, Sept. 23, 46. Ph.B. Yale, 67, A.M. 87; Bunsen's Lab, 72-73; Hofmann's Lab, 73-74. Asst. chem, *Sheffield Sci. Sch.*, Yale, 67-72, instr. 74-75, *prof.*, 75- Chem. Soc; Chem. Gesell. Inorganic chemistry; thermal chemistry.
- Moak, Dr. Harris**, 360 Park Place, Brooklyn, N. Y. *Bacteriology*. Albany Co, N. Y, Aug. 13, 75. M.D. Albany Med. Col, 99. Asst. prof. bacter, L. I. Col. Hosp, 06-10; instr. Columbia, 10-12. Bacteriologist, milk commission, Kings Co. Med. Soc, 04- Ass. Path. and Bact; Am. Med. Ass; Ass. Med. Milk Commissions; Pub. Health Ass.

- Modjeski, Ralph**, 220 S. Michigan Ave, Chicago, Ill. *Civil engineering*. Cracow, Poland, Jan. 27, 61. C.E., Illinois, 85, D.Eng., 11. *Consulting civil engineer*. Potts gold medal, Franklin Inst; silver medal, Paris Expos, 00; grand prize, La. Purchase Expos, 04. Civil Eng; West. Soc. Civil Eng; Franklin Inst; Can. Inst. Eng; British Inst. Civil Eng. Structural steel; compression members.
- Moenkhaus, Prof. W(illiam) J**, Indiana University, Bloomington, Ind. **Physiology*. Huntingburg, Ind, Jan. 6, 71. A.B., Indiana, 94, A.M., 95; Harvard, 96-98; Chicago, 99-01, Ph.D., 03. Instr. zool, Indiana, 95-96; asst. director, State Museum, São Paulo, Brazil, 98-99; asst. prof. zool, Indiana, 01-04, assoc. prof. *physiol*, 04-05, junior prof, 05-08, *prof*, 08- Instr. zool, Williams, 99; embryol, Rush Med. Col., 00. A.A.; Soc. Nat. (sec'y, 03-08); Soc. Zool; fel. Ind. Acad. (treas, 10). Variations of North American fishes; the development of the hybrids between *Fundulus heteroclitus* and *Menidia notata* with especial reference to the behavior of the maternal and paternal chromatin; selective fertilization among fishes; cross-fertilization of fishes; effects of inbreeding and selection on fertility and sex ratio; some factors influencing longevity; effects of thyroid feeding.
- Moerk, Prof. Frank X(avier)**, 145 N. Tenth St, Philadelphia, Pa. *Chemistry*. Philadelphia, July 3, 63. Ph.G., Phila. Col. Pharmacy, 84, Ph.M., 05. Asst. chem, *Phila. Col. Pharmacy*, 84-92, theoret. chem, 86-99, *prof. anal. chem*, 99- A.A.; Pharmaceut. Ass; Chem. Soc. Analytical and pharmaceutical chemistry; quantitative methods in pharmaceutical chemistry.
- Moffatt, M(iles) R(ees)**, Amoskeag Manufacturing Co, Manchester, N. H. *Chemistry*. West Stockbridge, Mass, June 2, 77. A.B., Columbia, 99, B.S., 01. Asst. physics, Columbia, 01-02; research chemist, Mallinckrodt Chem. Works, 02-03; instr. gen. chem, Lowell Textile Sch, 03-05; chemist, Atlantic Mills, Providence, R. I., 05-09; instr. anal. and org. chem, Lowell Textile Sch, 09-12; *asst. supt. dyeing*, Amoskeag Mfg. Co, 12- Chem. Soc. Industrial chemistry.
- Moffit, Fred H(oward)**, U. S. Geological Survey, Washington, D. C. *Geology*. Princeville, Ill, April 2, 74. A.B., Williams, 95; A.M., Lafayette, 99; fellow, Columbia, 02-03. Instr. math. and graphics, Lafayette, 99-02; asst. geologist, U. S. Geol. Surv, 01-10, *geologist*, 10- A.A.; Geol. Soc; Min. Eng; Wash. Acad; Wash. Geol. Soc; Wash. Soc. Eng. Geology and mineral resources of Alaska; aero-photographic mapping.
- Moffitt, Dr. G(eorge) W(ilber)**, 3 Kodak Park, Rochester, N. Y. *Physics*. Pleasantville, Iowa, March 28, 87. A.B., Iowa, 10; Ph.D., Stanford, 13. Asst. physics, Stanford, 10-13; instr., Washington (St. Louis), 13-15, asst. prof, 15-17; *research physicist*, Eastman Kodak Co, 17- Asst., Lick Observatory, 11. Assoc. Physical Soc; Optical Soc. Contact potentials of liquids; refractometer; spherometry; geometrical optics.
- Moffitt, Dr. Herbert C(harles)**, University of California, 1818 Broadway, San Francisco, Calif. *Medicine*. San Francisco, Dec. 9, 67. B.S., California, 89, LL.D., 19; M.D., Harvard, 94.
- Prof. med, California, 00- Am. Physicians. Internal medicine.*
- Mohler, Dr. F(red) L(oomis)**, Bureau of Standards, Washington, D. C. *Physics*. Wilbraham, Mass, Aug. 23, 93. A.B., Dickinson, 14; Ph.D., Hopkins, 17. Instr. physics, Hopkins, 14-17; *assoc. physicist*, Bur. Standards, 17- Physical Soc; Optical Soc; Wash. Philos. Soc. Resonance radiation in sodium vapor; electron currents in metallic vapors and low voltage arcs.
- Mohler, Prof. John Frederick**, 127 S. College St, Carlisle, Pa. **Physics*. Boiling Springs, Pa, Oct. 30, 64. A.B., Dickinson, 87, A.M., 90; fellow, Hopkins, 96, Ph.D., 97. Instr. math. and science, Wilmington Conf. Acad, Dover, Del, 87-90; math, Wesleyan Acad, Wilbraham, Mass, 90-94; *prof. physics*, Dickinson, 96- Asst., observatory, Hopkins, 95-96. A.A.; Physical Soc. Effect of pressure on wave-length of light; pressure in the electric spark; capillary action below zero; the Doppler principle in spark discharges; quantitative spectrum analysis.
- Mohler, Dr. John R(obbins)**, 1620 Hobart St, N. W, Washington, D. C. *Pathology, Bacteriology*. Philadelphia, Pa, May 9, 75. A.B., Temple, 93; V.M.D., Pennsylvania, 96; Milwaukee Med. Col, 99; hon. Sc.D., Iowa State, 20. Asst. inspector, *bur. animal indust, U. S. Dept. Agr*, 97-99, vet. inspector, 99-01, zoologist, 01-02, chief, path. div, 02-14, asst. chief of bur, 14-17, *chief of bur*, 17- Mem. remount board, U.S.A.; advisory board, hygiene lab, U. S. Pub. Health Service; V. C., U.S.A. Bact. Soc; Soc. Exp. Biol; Vet. Med. Ass; Pub. Health Ass; D. C. Vet. Med. Ass; Wash. Acad. Tuberculosis, anthrax, rabies and other diseases of animals communicable to man; comparative pathology of the pancreas; comparative study of tubercle bacilli; meat inspection.
- Mohler, Prof. Robert Ellsworth**, College Place, McPherson, Kans. *Agriculture*. Red Cloud, Nebr, March 13, 86. A.B., Mt. Morris, 12; M.S., Kansas State, 16. *Prof. agr*, Mt. Morris, 12-13; *McPherson*, 13- Instr. agr, State Nor. Sch, Kans, summer, 18. Kans. Acad. Plant breeding.
- Mohlman, Dr. F(loyd) W(illiam)**, Sanitary District of Chicago, Chicago, Ill. *Chemistry*. Beardstown, Ill, March 6, 90. B.S., Illinois, 12, M.S., 14, Ph.D., 16. Asst. chemist, Ill. State Water Surv, 12-15, chemist and bacteriologist, 15-16; instr. sanit. chem, Illinois, 16-17; chemist and engineer, New Haven Sewage Exp. Sta, 17-18; Conn. State Dept. Health, 18-19; *chief chemist*, Sanit. Dist. of Chicago, 19- Chem. Soc; Chem. Eng; Pub. Health Ass; Ill. Acad; Conn. Soc. Civil Eng. Sanitary engineering; sewage treatment; water purification; stream pollution.
- Moisseiff, Leon S**, 148 E. 57th St, New York, N. Y. *Engineering*. Riga, Latvia, Nov. 12, 72. Baltic Polytechnic Inst, 88-90; C.E., Columbia, 95. Private eng. firms, 95-97; engineer of design, dept. of bridges, N. Y. City, 97-14; *consulting designing engineer*, Del. River Bridge Commission. Civil Eng; Soc. Test. Mat. Bridges; structures; foundations; reinforced concrete; financial reports.

- Molby, Dr. Fred A.**, University of West Virginia, Morgantown, W. Va. *Physics*. Linn, Kans, Jan. 5, 78. A.B., Baker, 04; A.M., Cornell, 08, Ph.D., 10. Asst. physics, Baker, 02-04; *physics*, Cornell, 06-08, instr., 08-12; asst. prof., Indiana, 12-18; Cincinnati, 18-20; *assoc. prof. West Virginia*, 20- Magnetic observer, summers, U. S. Coast and Geod. Surv., 06-10. Assoc. Physical Soc; Eng. Educ. Rotatory powers of optically active substances at low temperatures; refractive indices.
- Moldenke, Dr. Richard**, Watchung, N. J. *Metalurgy*. Watertown, Wis., Nov. 1, 64. E.M., Columbia, 85, Ph.D., 87. Prof. mech. eng, Mich. Col. Mines, 90-91; sec'y-treas., Am. Foundrymen's Ass., 99-13; v. pres. manager, N. J. State Village, 09-10; *consulting metallurgist*. Medal, La. Purchase Expos., 04. Min. Eng. and other eng. societies. Gray and malleable cast iron; foundry work.
- Moler, Prof. George S(gylvanus)**, 408 University Ave, Ithaca, N. Y. **Physics*. Columbus, Ohio, Oct. 4, 51. B.M.E., Cornell, 75; A.B., Hedding, 82. Instr. *physics*, Cornell, 75-80, asst. prof., 80-11, prof., 11-17, *emer. prof.*, 17- A.A.; Physical Soc.
- Molitor, Prof. David (A.)**, 1596 Berwick Ave, Detroit, Mich. *Civil engineering*. Detroit, Mich., Aug. 16, 66. B.C.E., Washington (St. Louis), 87; hon. C.E., George Washington, 08. Engineer, Weizen-Immendingen Ry, Baden, Germany, 87-90; asst. engineer, Memphis bridge over Miss. River, 90-92; engineer, eng. corps, U.S.A., 92-99; U. S. Board of Eng. on Deep Waterways, 98-99; consulting engineer, 00-06; designing engineer, Panama Canal, 06-08; prof. in charge, dept. topog. and geod. eng, Cornell, 08-11; designing bridge engineer, Waddell and Harrington, 11-12; designing engineer, Toronto Harbor Commission, 13-16; *consulting engineer*, 16- A.A.; Civil Eng; Wash. Acad; Can. Inst. Eng. Landslides; distortion of a framed structure; distortion of steel lock gates; properties of concrete under compressive stress; precise spirit levelling; design of bridges; three hinged masonry arches; hydraulics of rivers, weirs and sluices; kinetic theory of engineering structures; the Panama canal; metric system of weights and measures.
- Monfort, Prof. W(ilson) F(orsyth)**, 506 N. Vandeventer Ave, St. Louis, Mo. *Chemistry*. Greensburg, Ind., June 24, 63. A.B., Marietta, 90, A.M., 96; Bonn, 92-93. Prof. chem, Marietta, 94-06; acting prof. sanit. chem, Illinois, 17-19. Chem. Soc; Soc. Baet; Water Works Ass; Pub. Health Ass; New Eng. Water Works Ass. Bacteriology; water supplies; sanitation.
- Monroe, Prof. Joseph E(aton)**, Dillon, Mont. *Physics, Chemistry*. Xenia, Ohio, Nov. 26, 64. A.B., Kans. Nor. Col, 87; Glasgow, 92-93. Instr. nat. science, Kans. Nor. Col, 87-92, prof. physics and chem, 94-97; Mont. State Nor. Col, 97-18; *with State Bank, Dillon*. A.A.; Chem. Soc; Mont. Acad. Elasticity and tenacity of copper and German silver wire; electrolysis of copper salts; petroleum bearing shales of Beaverhead County, Montana; meteorological conditions of southwestern Montana.
- Monroe, Dr. Kenneth P(otter)**, Jackson Laboratory, E. I. duPont de Nemours and Co, Wilmington, Del. *Chemistry*. Mt. Vernon, Ind., Sept. 27, 91. B.S., Chicago, 13; Ph.D., Columbia, 17. Physical chemist, color lab, bur. chem, U. S. Dept. Agr; *research chemist, dyestuffs*, E. I. duPont de Nemours and Co. Chem. Soc. Viscosity; phase rule of aromatic organic compounds.
- Monroe, Prof. Will(iam) S(eymour)**, Montclair, N. J. *Psychology, Pedagogy*. Hunlock Creek, Pa., March 22, 63. A.B., Stanford, 94; Jena, Leipzig and Paris, 94-95; Grenoble and Leipzig, 00-01. *Prof. psychol. and pedag.*, State Nor. Sch., Westfield, Mass., 96-08; *psychol.*, State Nor. Sch., Montclair, N. J., 09- Assoc. ed, 'Pedag. Seminary.' Gold medal, Paris Expos., 00. A.A.; Psychol. Ass; Anthropol. Ass; Nat. Educ. Ass. (pres, child study dept, 99); hon. mem. Ass. Med. Officers of Am. Institutions for the Idiotic and Feeble-Minded. Social sense of the child; defective and normal children.
- Montague, Prof. W(illiam) P(epperrell)**, Columbia University, New York, N. Y. *Philosophy*. Chelsea, Mass., Nov. 24, 73. A.B., Harvard, 96, A.M., 97, Ph.D., 98. Docent *philos.*, Harvard, 98-99; instr., California, 99-03; lecturer, Columbia, 03-04, tutor, 04-05, instr., 05-07, adj. prof., 07-10, assoc. prof., 10-20, *prof.*, 20- A.A.; Philos. Ass. (v. pres, 08); Psychol. Ass; N. Y. Acad. Time-perception; verification of Fechner's law; energistic theory of consciousness; realism.
- Montgomery, Prof. E(dward) G(errard)**, Cornell University, Ithaca, N. Y. *Agronomy*. Milan, Mo., May 10, 78. B.S., Nebraska, 06, A.M., 08. Adj. prof. *agron.*, Nebraska, 06-10, *prof.*, 10-11; Cornell, 11- A.A.; Soc. Agron. (treas, 07, v. pres, 14). Plant breeding; crop culture; corn crops; examining and grading grain.
- Montgomery, Dr. George R(edington)**, Yale University, New Haven, Conn. *Logic, Psychology*. Marash, Turkey, June 17, 70. A.B., Yale, 92, LL.B., 94, B.D., 00, Ph.D., 01. Lecturer *philos.*, Yale, 00-04; prof., Carleton, 04-05; lecturer, N. Y. Univ., 11-16; *asst. prof. French*, Yale, 19- Philos. Ass; Psychol. Ass. Logic; language; psychology.
- Montgomery, Prof. Jack P(ercival)**, University of Alabama, University, Ala. *Chemistry*. Columbus, Miss., July 18, 77. A.B., Southwestern Presbyterian, 99, hon. A.M., 04; Ph.D., Virginia, 03. Instr. science, high sch., Birmingham, Ala., 01-02; asst. state chemist, Miss., 02-05; *assoc. prof. chem.*, Miss. Agr. Col., 05-11, instr. dyeing, 08-11; *prof. org. chem.*, Alabama, 11- Chem. Soc; Agr. Chem; British Chem. Soc. Compounds of urea with acids and salts; estimation of nickel as the sulphid; methods of qualitative analysis; economic products of Mississippi; relation between boiling points, heats of vaporization and densities of liquids and vapors; density of a liquid at boiling-point determined by value of *b* in van der Waals' equation; adsorption of the 'assistant' by the fiber in dyeing of cotton yarn; relations of the physical constants of solutions at boiling-point; effect of dissolved substances on precipitation of lead chlorid; production of xylose and furfural; dyes.

- Montgomery, Dr. John A(rthur)**, 256 Ashland Ave, River Forest, Ill. *Chemistry*. Boone, Iowa, Nov. 24, 89. A.B., Missouri, 12; M.S., Iowa State, 17; Ph.D., Wisconsin, 19. *Chief chemist*, Structural Materials Lab, 19-20; *Borromite Co*, 20- Chem. Coc. Foods; aluminum alloys; cement and concrete; water.
- Moodie, Prof. Roy L(ee)**, College of Medicine, University of Illinois, Chicago, Ill. *Paleontology, Anatomy*. Bowling Green, Ky, July 30, 80. A.B., Kansas, 05; Ph.D., Chicago, 08. Prof. biol. State Nor. Sch., Warrensburg, Mo, 08; instr. zool., Kansas, 08-09; *asst. prof.*, 09-14; *anat. med. dept.*, Illinois, 14- Paleont. expeditions to western states for various institutions. A.A.; Paleont. Soc.; Ass. Anat.; Soc. Zool. Paleopathology; development of skeleton; coal measures Amphibia; history of anatomy.
- Moody, Dr. Agnes M(ary) (Claypole)**, 2826 Garber St, Berkeley, Calif. **Zoology, Geology*. Bristol, England, 70. Ph.B., Buchtel, 92; M.S., Cornell, 94; Ph.D., Chicago, 96. Instr. zool., Wellesley, 96-98, asst. histol. and embryol., Cornell, 98-00; zool. and geol., Throop, 00-01, instr., 01-03; *lecturer sociol.*, Mills, 18- Dept. cytol., embryol. and micros. methods. 'Jour. Applied Microscopy.' A.A.; fel. S. Calif. Acad. Histology of Cayuga Lake lamprey; embryology of *Anurida maritima*.
- Moody, Prof. H(erbert) R(aymond)**, College of the City of New York, New York, N. Y. *Chemistry*. Chelsea, Mass., Nov. 19, 69. B.S., Mass. Inst. Tech., 92; A.M., Columbia, 00, Ph.D., 01. Asst. chem., Mass. Inst. Tech., 92-94, instr. anal. chem., 94-95; science, Gilbert Sch., Winsted, Conn., 95-99; prof. chem., Hobart, 01-05; asst. prof. anal. and applied chem., *Col. City of N. Y.*, 05-06, assoc. prof. and later *prof. indust. chem.*, 06- A.A.; Chem. Soc. (chairman, N. Y. sect., 14); Electrochem. Soc.; N. Y. Chemists Club (chairman, bur. employment, trustee); London Soc. Chem. Indust. Fixation of nitrogen; electric furnace products; special petroleum purifications; aluminum sulfate; bread and other food products; technical fibres and straws.
- Moody, Prof. H(oward) W(ilson)**, Agricultural College, Miss. *Physics*. Garrison, Iowa, Oct. 24, 77. A.B., Cornell (Iowa), 02; Chicago, 08-10, fellow, 10-12, Ph.D., 12. Instr. *physics*, Lafayette, 12-13; and acting head of dept., Williams, 13-14; *prof. and head of dept.*, Miss. Agr. Col., 14- Physical Soc. Thermodynamics; the ratio of the specific heats for air and carbon dioxide.
- Moody, Prof. Julia E(leanor)**, 15 Appleby Road, Wellesley, Mass. *Zoology*. Canton, N. Y. B.S., Mt. Holyoke, 94, A.M., 09; Ph.D., Columbia, 12. Instr. zool., Mt. Holyoke, 05-11; *Wellesley*, 13-16, *assoc. prof.*, 16- A.A.; Soc. Zool.; Ass. Prof. Protozoology; anatomical origin of cranial nerves.
- Moody, Dr. Robert Orton**, University of California, Berkeley, Calif. *Anatomy*. Buffalo, N. Y., Oct. 18, 64. B.S., Cornell, 91; M.D., Yale, 94. Instr. histol., Yale, 91-93, asst. path., 96-00; *anat.*, Cornell, 00-01; *California*, 01-05, instr., 05-06, asst. prof., 06-14, *assoc. prof.*, 14- A.A.; Ass. Anat.; Micros. Soc. The muscular tunic of the large and small intestine in man and in the cat; histogenesis of the thyroid gland of pig; diaphragm; position of stomach and large intestine in man.
- Moody, Walter S(herman)**, 155 Dawes Ave, Pittsfield, Mass. *Electrical engineering*. Chelsea, Mass., Sept. 20, 64. Mass. Inst. Tech., 84-87. Instr. elec. eng. and physics, Mass. Inst. Tech., 88; asst. engineer, Thomson Elec. Welding Co., 89-92; designing engineer, Thomson-Houston Co., 92-93; *chief engineer, transformer dept.*, Gen. Elec. Co., 93- Fel. Elec. Eng.; Nat. Elec. Light Ass. Static transformers.
- Moody, Prof. W(illiam) M(Albion)**, 60 Federal St, Brunswick, Maine. *Mathematics*. Kennebunkport, Maine, July 31, 60. A.B., Bowdoin, 82, A.M., 85; Harvard, 90-91. Teacher, secondary schools, 80-84; instr. *math.*, Bowdoin, 84-87, *prof.*, 87- A.A.; Math. Soc.
- Mooers, Prof. C(harles) A(nsel)**, University of Tennessee, Knoxville, Tenn. *Chemistry, Agronomy*. Solon, Maine, Dec. 8, 69. B.S., Tennessee, 93. Asst. chemist, Tenn. Exp. Sta., 93-98; chemist, North La. Exp. Sta., 98-99; *Tenn. Exp. Sta.*, 99-05, *chemist and agronomist*, 05-, *prof. agron., Tennessee*, 07-11, *v. director*, 19- A.A.; Soc. Agron. (v. pres, 11, pres, 21); Ass. S. Agr. Workers (sec'y, 19). Soil nitrogen; change in content; lysimeter experiments.
- Mook, Dr. Charles C(raig)**, American Museum of Natural History, New York, N. Y. *Geology*. Metuchen, N. J., May 7, 87. B.S., Columbia, 12, A.M., 14, Ph.D., 15. Lecturer *geol.*, *Barnard, Columbia*, 15-16, *instr.*, 16-; *research asst. to Prof. H. F. Osborn, Am. Museum Nat. Hist.*, 12- Instr. *geol.*, Rutgers, summer, 15, 16. A.A.; Paleont. Soc.; fel. N. Y. Acad. (sec'y, sect. *geol.* and *miner.*, 18-20). Morrison foundation; sauropod dinosaurs; fossil crocodiles.
- Moon, Prof. Franklin F(rederick)**, New York State College of Forestry, Syracuse, N. Y. *Forest engineering*. Easton, Pa., July 3, 80. A.B., Amherst, 01; Harvard, 02-04; M.F., Yale, 09. N. Y. Forest, Fish and Game Commission, 09-10; *prof. forestry*, Mass. Col., 10-12; *forest eng.*, N. Y. State Col. Forestry, Syracuse, 12-20, acting dean, 17-18, *dean*, 20- A.A.; Soc. Foresters; N. Y. State Forestry Ass. (exec. sec'y). Forest reconnaissance; woodlots in New York.
- Moon, Dr. V(irgil) H(olland)**, Indiana University School of Medicine, Indianapolis, Ind. *Pathology*. Craig, Ind., July 31, 79. A.B., Kansas, 10, M.S., 11; fellow, Rush Med. Col., 13-14, M.D., 13. Research pathologist, McCormick Inst. for Infectious Diseases, Chicago, 11-14; *assoc. prof. path. and bacter.*, Indiana, 14- Freer medal, Rush Med. Col., 12, 13. Experimental immunity in typhoid; hydrophobia.
- Mooney, James**, Bureau of American Ethnology, Washington, D. C. **American anthropology*. Richmond, Ind., Feb. 10, 61. Pub. schools. Teacher; printer, 80-85; *ethnologist*, *Bur. Am. Ethnol.*, 85- Ethnol. expert, Columbian Expos, 93; Nashville, 96; Omaha, 98; La. Purchase, 04. Medals from various expositions. Anthropol. Ass.; Wash. Anthropol. Soc. (v. pres, 07-09, pres, 14); Wash. Gaelic Soc. (pres, 07-10). American anthropology, particularly of south Atlantic coast tribes, southern plains tribes (Kiowa, Cheyenne, etc) and Cherokee; Cherokee myths

and sacred formulas; Peyote intertribal ritual; Kiowa calendar history and heraldry; Indian population.

Moore, Prof. Addison W(ebster), 5744 Blackstone Ave, Chicago, Ill. *Philosophy*. Plainfield, Ind, July 30, 66. A.B. De Pauw, 90, A.M. 93; Cornell, 93-94; fellow, Chicago, 94-95, Ph.D. 98; Berlin, 01-02. Principal, high sch, Marion, Ind, 90-91; instr. English, De Pauw, 92-93; asst. *philos*, Chicago, 95-97, assoc, 97-98, instr, 98-01, asst. prof, 01-04, assoc. prof, 04-09, *prof*, 09- *Philos. Ass.* (pres); *Psychol. Ass.*; *Ass. Prof.* Modern logic; sensory and motor forms of reaction-time; representational versus functional logic in Locke; logical significance of the categories of existence, meaning and reality; pragmatism; creative intelligence.

Moore, Prof. Andrew C(harles), Columbia, S. C. *Botany*. Spartanburg Co, S. C, Dec. 25, 66. A.B. South Carolina, 87, LL.D. 09; fellow, Chicago, 98-99. Supt. city schools, Spartanburg, S. C, 87-88; Camden, S. C, 88-90; principal, high sch, Birmingham, Ala, 90-98; asst. bot, Chicago, 00; *prof. biol. and geol*, South Carolina, 00-05, *biol*, 05-, dean, 09-13. Lab. asst, Woods Hole, 02-03; acting pres, South Carolina, 08-09. A.A.; Bot. Soc. The mitoses in the spore mother cell of *Pallavicinia*; sporogenesis in *Pallavicinia*.

Moore, Prof. Arthur R(ussell), Rutgers College, New Brunswick, N. J. *General physiology*. Furnas Co, Nebr, Nov. 10, 82. A.B. Nebraska, 04; Ph.D. California, 11. Asst. *prof. physiol*, California, 11-13; assoc. *prof*, Bryn Mawr, 13-16; *prof*, Rutgers, 16- *Mem. physiol. staff*, Woods Hole, 16- A.A.; *Physiol. Soc.*; *Soc. Exp. Biol.* Tropic response; invertebrate central nervous system; respiration of nervous tissue.

Moore, Barrington, 925 Park Ave, New York, N. Y. *Forestry*. Ossining, N. Y, Sept. 25, 83. A.B. Yale, 06, M.F. 08. Forest asst, U. S. Forest Service, N. Mex, 09-11; examiner, Washington, D. C, 11-14; assoc. curator woods and forestry, Am. Museum Nat. Hist, 17, research assoc. forestry, 19. Capt. and major, corps engineers, 17-18. *Mem. ed. board*, 'Jour. Forestry,' 13-; ed, 'Ecol,' 20- A.A.; *Soc. Foresters*; *Bot. Soc.*; *Ecol. Soc.* (pres, 19-20); *Torrey Bot. Club*; *Am. Geog. Soc.*; *fel. N. Y. Acad.* Forest management; silvics; silviculture; forest ecology.

Moore, Prof. Burton Evans, 1900 Euclid Ave, Lincoln, Nebr. **Physics*. Westerville, Ohio, April 8, 66. A.B. Otterbein, 88; A.M. Cornell, 90; Strasbourg, 93; Berlin, 94; Ph.D. Göttingen, 07. Instr. *physics*, Lehigh, 91-92; Illinois, 94-95; *Nebraska*, 95-03, *prof*, 03- A.A.; *Physical Soc.* Viscosity of certain salt solutions; polarization and resistance of the Leclanche cell; the lead cell; the copper voltameter; absorption spectra of ferric chlorid and of colloidal ferric hydrate; absorption spectra of permanganates and of copper and cobalt solutions; magnetic separation of the spectral lines of barium, thorium, yttrium, zirconium and osmium; excitation stages in the spectra of the open arc light.

Moore, Dr. Carl R(ichard), University of Chicago, Chicago, Ill. *Zoology*. Brookline, Mo, Dec. 5, 92. B.S. Drury, 13, A.M. 14; fellow, Chicago, 14-15, Ph.D. 16. Teaching fellow, Drury, 13-14; asst. *zool*, Chicago, 15-16, assoc, 16-18, instr, 18- A.A.; *Soc. Zool.* Fertilization; modification of sexual conditions; internal secretions of gonads.

Moore, Prof. Charles N(apoléon), University of Cincinnati, Cincinnati, Ohio. **Mathematics*. Cincinnati, Nov. 14, 82. A.B. Cincinnati, 03; M.S. George Washington, 05; Ph.D. Harvard, 08. Computer, U. S. Naval Observatory, 03-05; instr. *math*, Cincinnati, 08-09, asst. *prof*, 09-17, *assoc. prof*, 17- On faculty, Chicago, summer, 14. *Math. Soc.* (assoc. ed, 'Trans,' 17-, *councilor*, 19-); *Math. Ass.* (mem. committee on math. requirements); *Soc. Math. de France*; *Circolo Mat. di Palermo*. Divergent series and integrals; developments in Bessel's functions; double Fourier's series; generalized limits.

Moore, C(hester) N(ewell), General Electric Co, Schenectady, N. Y. *Physics*. Amity, Mo, April 25, 83. B.S. Dartmouth; Leipzig. *Research engineer*, Gen. Elec. Co, 07- *Physical Soc.* X-ray tubes and apparatus.

Moore, C(larence) (Bloomfield), 1321 Locust St, Philadelphia, Pa. **Archeology*. Philadelphia, Jan. 14, 52. A.B. Harvard, 73. A.A.; *Anthrop. Ass.*; mem. hon. mem. and cor. mem. various societies of United States, Europe and South America. Explorations in aboriginal mounds in southern United States.

Moore, Prof. C(larence) L(eander), 87 Coburg Road, Halifax, N. S. Can. *Botany*. Tatamagouche, N. S, Sept. 12, 69. B.A. Dalhousie, 91, M.A. 07; Hopkins, 96-97; Harvard, 09-10. Science master, Picotou Acad, 92-07; supt, city schools, Sydney, 07-10; *prof. bot. and pharmacog*, N. S. Col. of Pharmacy, 11- *Roy. Soc. Can.*; *N. S. Inst.* Rusts; myxomycetes; aquatic fungi.

Moore, Dr. C(larence) L(emuel) E(lisha), Massachusetts Institute of Technology, Cambridge, Mass. **Mathematics*. Ross Co, Ohio, May 12, 76. B.S. Ohio State, 01; A.M. Cornell, 02, Ph.D. 04. Instr. *math*, Mass. Inst. Tech, 04-09, asst. *prof*, 09-16, assoc. *prof*, 16-20, *prof*, 20- *Math. Soc.*; *Am. Acad.* Geometry of the sphere; geometry of the circle in space; differential geometry of hyperspace.

Moore, D(aniel) McFarlan, General Electric Co, Harrison, N. J. *Electrical engineering*. Northumberland, Pa, Feb. 27, 69. Lehigh, 90. Engineer, Gen. Elec. Co, 90-94; *inventor and gen. manager*, Moore Elec. Co, 94- Scott medal, Franklin Inst. *Fel. Elec. Eng.*; *Illum. Eng. Soc.* Electric lighting; current control; vacuum phenomena; the 'Moore Electric Light'; light without heat; wireless telegraphy; cold filament lamp.

Moore, Prof. Edward J(ames), University of Buffalo, Buffalo, N. Y. *Physics*. Chili, N. Y, June 13, 73. A.B. Oberlin, 03, A.M. 06; fellow, Chicago, 09-10, Ph.D. 13. Tutor *math*, Oberlin Acad, 03-07, instr, 07-08, assoc. *prof. physics* and *astron*, Oberlin, 10-19; *prof. physics*, Buffalo, 19- Instr. *physics*, exten. div, Chicago, 10-

- 14, asst. prof, 14-, instr, summer, 15; Colorado, summer, 14. A.A.; assoc. mem. Physical Soc; Ohio Acad. X-rays; discharge of electricity from points in gases; specific heats; effects of magnetism on the period of a pendulum; focal lengths of lenses.
- Moore, Prof. E(liakim) H(astings)**, 5607 Kenwood Ave, Chicago, Ill. **Mathematics*. Marietta, Ohio, Jan. 26, 62. A.B, Yale, 83, Ph.D, 85, hon. Sc.D, 09; Berlin, 85-86; hon. Ph.D, Göttingen, 99; LL.D, Wisconsin, 04; Math.D, Clark, 09. Instr. math. acad, Northwestern, 86-87; tutor, Yale, 87-89; asst. prof, Northwestern, 89-91, assoc. prof, 91-92; prof. math. and acting head of dept, Chicago, 92-96, *prof. and head of dept*, 96- Nat. Acad. (assoc. ed, 'Proc,' 15-); A.A. (pres, 21, v. pres, A, 10); Math. Soc. (v. pres, 98-00, ed, 'Trans,' 99-07, pres, 00-02); Math. Ass; Am. Acad; Philos. Soc; cor. mem. British Ass; London Math. Soc; Math. Verein; Circolo Mat. di Palermo (assoc. ed, 'Rendiconti,' 08-). Group theory and theory of numbers with applications; improper definite integrals; functions of real variables; foundations; general analysis; linear integral equations.
- Moore, Prof. E(lwood) S**, State College, Pa. *Geology*. Clarksburg, Ont, Aug. 3, 78. B.A., Toronto, 04, M.A., 07; fellow, Chicago, 07-09, Ph.D, 09; Paris, 15. Science and house-master, Pickering Col, 04-05; science master, Collingwood Collegiate Inst, 06; *prof. geol. and miner, Pa. State*, 09-, *acting dean, sch. of mines*, 18- Field asst, Ont. Bur. Mines, 04-05, field geologist, 06-10; Can. Geol. Surv, 12; econ. geologist, exped. to Hudson Bay, 16; Cuba, 17; Pa. Topog. and Geol. Surv, 18. A.A.; Geol. Soc; Seismol. Soc; Min. Eng; Coal Min. Inst; British Ass; Soc. française de Miner. Pre-Cambrian, metamorphic and economic geology and petrography.
- Moore, Prof. F(orris) J(ewett)**, 372 Charles River Road, Cambridge, Mass. *Chemistry*. Pittsfield, Mass, June 9, 67. A.B, Amherst, 89; Ph.D, Heidelberg, 93. Lab. asst, Amherst, 89-90; instr. gen. chem, Cornell, 93-94; asst. anal. chem, *Mass. Inst. Tech*, 94-95, instr, 95-02, asst. prof, 02-04, *org. chem*, 04-10, assoc. prof, 10-12, *prof*, 12- Chem. Soc; Am. Acad; Chem. Gesell. Organic chemistry; color and chemical constitution; oxidation of uric acid.
- Moore, Dr. George Dunning**, 201 Salisbury St, Worcester, Mass. *Chemistry*. Louisville, Ky, June 14, 62. A.B, Harvard, 84; Ph.D, Bonn, 87. Asst. to Prof. Aug. Kekulé, director of chem. lab, Bonn, 86-87; instr. chem, Worcester, 89-90, asst. prof, 90-94; *chem. engineer*, 94- Chem. Soc; Soc. Chem. Indust; Am. Acad; Chem. Gesell. Organic chemistry.
- Moore, Dr. George T(homas)**, Missouri Botanical Garden, St. Louis, Mo. **Applied botany*. Indianapolis, Ind, Feb. 23, 71. B.S, Wabash, 94; A.B, Harvard, 95, A.M, 96, Ph.D, 00. Asst, crypt. lab, Harvard, 97-99, instr. crypt. bot, Radcliffe, 98-99; in charge, bot. dept, Dartmouth, 99-01; physiologist and algologist, bur. plant indust, U. S. Dept. Agr, 01-02, in charge, lab. plant physiol, 02-05; prof. plant physiol. and applied bot, Shaw Sch. of Bot, and plant physiol, *Mo. Bot. Gardens*, 09-12, *director*, 12-, *Engelman prof. bot, Washington (St. Louis)*, 12- Instr. crypt. bot, Woods Hole, 96-07, 13, head, dept. bot, 07-18; lecturer contamination of water supplies, Thayer Sch. of Eng, 00-02; econ. bot, Dartmouth, 01-02. A.A.; Soc. Nat; Bot. Soc. (sec'y, 10-14, v. pres, 16); Soc. Bact; Philos. Soc; Wash. Acad; St. Louis Acad. Morphology and physiology of the Algae; contamination of water supplies by Algae.
- Moore, Dr. H(enry) F(rank)**, Bureau of Fisheries, Washington, D. C. *Zoology*. Philadelphia, Pa, June 4, 67. A.B, Cent. High Sch, Phila, 85; A.B, Pennsylvania, 92, Ph.D, 95. Asst. biol, Pennsylvania, 92-95; lecturer, Hahnemann Med. Col, 93-96; naturalist, Int. Fish Commission, 93-96; chief naturalist, 'Albatross,' 97-02; scientific assistant, *U. S. Bur. Fisheries*, 02-11, asst. in charge, div. scientific inquiry, 11-14, *deputy commissioner*, 14- Mem. Nat. Research Council, 17-; two prizes, Int. Fishery Cong, 08; U. S. representative and v. pres, Rome, 11; medal, K. K. Oester. Fischerei Gesell, 08. Fisheries Soc; Ass. Geog; Wash. Biol. Soc; Phila. Acad; hon. mem. K. K. Oester. Fischerei Gesell. Invertebrate zoology; zoology applied to the fisheries, especially mollusks and sponges; Oligochaeta; Isopoda.
- Moore, Prof. Henry Thomas**, Hanover, N. H. *Psychology*. Ansonville, N. C, June 27, 86. A.B, Missouri, 03; Ph.D, Harvard, 14. Asst. prof. psychol, Dartmouth, 15-17; Minnesota, 17-19; *prof, Dartmouth*, 19- A.A.; Psychol. Ass; N. H. Acad. Psychology of music; instinct; emotion.
- Moore, Prof. H(erbert) F(isher)**, University of Illinois, Urbana, Ill. *Mechanical engineering*. Panacook, N. H, July 10, 75. B.S, N. H. Col, 98; M.E, Cornell, 99, M.M.E, 03. Teacher science and math, Colby Acad, New London, N. H, 99-00; instr. machine design, Cornell, 00-03; mech. engineer, Riehle Bros. Test. Machine Co, Phila, 03-04; instr. and asst. prof. mech, Wisconsin, 04-07; asst. prof. theoret. and applied mech, *Illinois*, 07-14, *prof. eng. materials*, 14- Mem. Nat. Research Council. Soc. Test. Mat; Eng. Educ. Lubrication of bearings; appliances and machines for testing materials; strength of built-up structures and of materials; fatigue of metal under repeated stress.
- Moore, Hugh K(elsea)**, Brown Co, Berlin, N. H. *Chemistry*. Andover, Mass, Jan 3, 72. Mass. Inst. Tech, 93-96. Chemist, Am. Electrolytic Co, 00-02; Burgess Sulphate Fiber Co, 03-10; *chief chem. engineer, Brown Co*, 10- Treas, Naval Con. Board, N. H; mem. chem. eng. committee, Council Nat. Defence; trustee, Nat. Research Council. Chem. Soc; Electrochem. Soc; Chem. Eng. (director); Mech. Eng; Ass. Pulp and Paper Indust; N. H. Acad. (v. pres). Electrolytic cells; evaporation and conduction of heat; hydrogenation of oils; low temperature refrigeration; recovering of soda salts from block liquor.
- Moore, Prof. James G(arfield)**, 2125 West Lawn Ave, Madison, Wis. *Horticulture*. Shepherd, Mich, Oct. 22, 81. B.S, Mich. Agr. Col, 03, M.S, 05. Instr. hort, *Wisconsin*, 05-07, asst. prof, 07-10, assoc. prof, 10-15, *prof*, 15- A.A.; Soc. Hort. Sci. Vegetable production; pomology.

- Moore, Prof. J(ohn) Percy**, Media, Pa. **Zoology*. Williamsport, Pa, May 17, 69. A.B. Cent. High. Sch, Phila, 86; B.S., Pennsylvania, 92, Ph.D, 96. Asst. instr. zool, *Pennsylvania*, 90-92, instr, 92-07, asst. prof, 07-12, prof, 12-; asst. curator, *Acad. Nat. Sciences, Phila*, 02- Sci. asst, U. S. Bur. Fisheries, intermittently, 90-; instr. biol, Hahnemann Med. Col, 96-98; zool, Woods Hole, 01-02; lecturer, Ludwick Inst, 02- A.A.; Soc. Nat; Soc. Zool; Ecol. Soc; Philos. Soc; Phila. Acad. (cor. sec'y, 02-); Soc. zool. de France. Systematic morphology of annelids and vertebrates; economic biology of fishes; polychaete fauna of New England, Japan and Alaska; Polychaeta of North Pacific; life histories, habits and adaptations of annelids; biological factors in the control of mosquitoes and leaches.
- Moore, Dr. J(oseph) H(aines)**, Mt. Hamilton, Calif. **Astronomy, Astrophysics*. Wilmington, Ohio, Sept. 7, 78. A.B. Wilmington, 97; Ph.D, Hopkins, 03. Asst. spectroscopist, *Lick Observatory*, 03-06, asst. astronomer, 06-09, acting astronomer in charge, D. O. Mills exped. to Chile, 09-13, asst. astronomer, 13-18, *assoc. astronomer*, 18- A.A.; Astron. Soc; Physical Soc; Am. Geog. Soc; Pacific Astron. Soc. (ed. committee, 18-, pres, 20). Spectroscopy; absorption and fluorescent spectrum of sodium vapor; spectrum of Nova Aquilae No. 2; orbits of two cepheid variables; spectroscopic binaries; radial velocities of stars of Secchi's fourth type; radial velocities and internal motions of gaseous nebulae; spectrophotographic determination of rotation of planetary nebulae.
- Moore, Dr. J(osiah) J(ohn)**, 5636 Drexel Ave, Chicago, Ill. *Pathology*. Anaconda, Mont, Aug. 26, 86. B.S., Montana, 07; fellow, Chicago, 09-10, M.S., 15, M.D., Rush Med. Col, 12. Asst. biol, Montana, 05-07; path, Chicago, 12, fellow, Sprague Mem. Inst. 12-13; instr. exp. med, *med. dept, Illinois*, 13-15, *asst. prof. path. and bacter*, 15- Field worker Rocky Mt. spotted fever, summers, 07, 08, 10; mem. McCormick Inst. for Infectious Diseases, 10-11. Ass. Path. and Bact; Soc. Bact; Am. Med. Ass. (sec'y, sect. path. and physiol, 19-). Bacteriology; serology.
- Moore, Prof. Lewis E(ugene)**, Massachusetts Public Utilities Department, Boston, Mass. *Civil engineering*. Amboy, Ill, Jan. 24, 80. B.S.(M.E.), Wisconsin, 00; C.E., 06; Mass. Inst. Tech, 01-02. Master mechanic, Champion Iron Mine, 00-01; draftsman, Phoenix Bridge Co, 02-03; instr. structural drawing and mech, Wisconsin, 03-04; theoret. and applied mech, Illinois, 04-07; asst. prof. civil eng, Mass. Inst. Tech, 07-13, *assoc. prof*, 13-14; *consulting engineer*, 07- Capt. and major, corps engineers, A.E.F., 17-18. With various construction companies; asst. bridge engineer, Mass. R. R. Commissioners, 07-; consulting engineer on foundations, Suffolk Co. Court House, Mass. Assoc. mem. Civil Eng. Boston Soc. Civil Eng. Strength of materials; strength of chain links; strength of angles in compression; design of plate girders.
- Moore, Dr. Lillian M(ary)**, 2534 Ridge Road, Berkeley, Calif. *Biology*. Las Vegas, N. Mex, Feb. 14, 87. B.S., California, 14, M.S., 15, Ph.D, 18. Asst. *physiol*, California, 15-16, *instr*, 16- A.A.; *Physiol. Soc*. Temperature centers in the brain; regulation of body temperature.
- Moore, Philip N(orth)**, 611 Laclede Building, St. Louis, Mo. *Geology, Mining, Metallurgy*. Connerville, Ind, July 8, 49. Miami, 70, LL.D, 20; sch. mines, Columbia, 70-72. Asst. Mich. Geol. Surv, 72; Mo. Geol. Surv, 73; Ky. Geol. Surv, 73-77; metallurgist, Leadville, Colo, 78-81; mine manager and operator, Slate Creek Iron Co, Ky, 82-89; organizer and director, Conrey Placer Mining Co, 97-06; pres, Admiralty Zinc Co, 17-18; *consulting geologist and mining engineer*, 89- Mem. Eng. Council, 17-20; War Minerals Relief Commission, 19-20. Min. Eng. (pres, 17); hon. mem. St. Louis Eng. Club.
- Moore, Prof. Ransom A(sa)**, University of Wisconsin, Madison, Wis. *Agronomy*. Kewaunee, Wis, June 5, 61. Wisconsin. Teacher, pub. schools, 82-90; county supt. schools, 90-95; asst, instr, asst. agriculturist and later *prof. agron, Wisconsin*, 95- Breeding of farm crops; forage plants; oat and barley smut; soy beans.
- Moore, Prof. Raymond C(ecil)**, University of Kansas, Lawrence, Kans. *Geology, Paleontology*. Roslyn, Wash, Feb. 20, 92. A.B., Denison, 13; Ph.D, Chicago, 16. Instr. geol, Chicago, 16; asst. prof. *geol. and paleont, Kansas*, 16-18, *assoc. prof*, 18-19, *prof*, 19- Mem. U. S. Geol. Surv; Mo. Bur. Geol. and Mines; asst. prof, Chicago, summer, 17; state geologist, Kans, 17- Paleont. Soc. Stratigraphy of Mississippian of Missouri; oil and gas of Kansas; paleontology of Pennsylvanian of Texas.
- Moore, Dr. R(ichard) B(ishop)**, U. S. Bureau of Mines, Washington, D. C. **Chemistry*. Cincinnati, Ohio, May 6, 71. Univ. Col, London, 86-90; British Museum, 93-95; B.S., Chicago, 96; hon. Sc.D., Colorado, 16. Instr. chem, Birkbeck Inst, London, 91-93; Missouri, 97-05; prof, Butler, 05-11; with bur. soils, U.S. Dept. Agr, 11-12; physical chemist, U. S. Bur. Mines, 12-19, *chief chemist*, 19- A.A.; Chem. Soc; Min. Eng; Colo. Sci. Soc. Reaction between carbon dioxide and soluble nitrites; radioactivity of Missouri waters; chemical separation of radioactive types of matter; radioactivity of waters of Yellowstone Park; separation of iron from manganese; atomic weights of krypton and xenon; occurrence and properties of rare gases of the atmosphere; change of thorium emanation to helium; commercial extraction of radium; metallurgy of rare metals, especially tungsten, vanadium and uranium; commercial recovery of helium from natural gas; liquefaction of gases and properties of matter at low temperatures.
- Moore, Prof. Robert Lea**, University of Texas, Austin, Tex. **Mathematics*. Dallas, Tex, Nov. 14, 82. B.S., A.M., Texas, 01, fellow, 01-02; Chicago, 03-05, Ph.D, 05. Asst. prof. *math*, Tennessee, 05-06; instr, Princeton, 06-08; Northwestern, 08-11; Pennsylvania, 11-16, asst. prof, 16-20; *assoc. prof, Texas*, 20- Math. Soc. (assoc. ed, 'Trans,' 13-, mem. council, 17-19). Foundations of mathematics; analysis situs; point sets; functions of real variables.
- Moore, Robert Thomas**, Onawa, Maine. *Ornithology*. Haddonfield, N. J, June 24, 82. A.B., Pennsylvania, 03; A.M., Harvard, 04. Ed, 'Cassinia,' 11-16; pres, *East. Finance Co*, 14-; owner, *Bare-*

- stone Mt. Black Fox Ranch. Director several industrial institutions. Mem. Ornith. Union; Forestry Ass; Del. Valley Ornith. Club. Bird music; the ornithological scale.
- Moore, Russell W(ellman)**, 44 W. 77th St, New York, N. Y. *Chemistry*. Brooklyn, N. Y., Dec. 21, 61. Sch. mines, Columbia, 79-82; A.B., Princeton, 83, M.S., 85, A.M., 86. Chemist, N. Y. State Dairy Commission, 85-88; chemist and examiner, U. S. Appraiser, N. Y., 88-98, chemist in charge lab, 98-10; manager, U. S. Conditioning and Test. Co., 10-12; explosives commissioner, N. Y. City, 12-15, consulting chemist, Fire Dept., 15-18. Chem. Soc; Soc. Chem. Indust. (v. chairman, 04, chairman, 05); N. Y. Chemists Club (pres, 11). Fats; oils; paints; drugs.
- Moore, Dr. Thomas V(erner)**, St. Paul's College, Brookland, D. C. *Experimental psychology*. Louisville, Ky., Oct. 22, 77. Ph.D., Catholic, 03; Leipzig, 04-05; California, 06-09, fellow, 09; Munich, 13-14; M.D., Hopkins, 15. Lecturer *psychol.*, inst. pedag, *Catholic*, 03-04, instr., 10-16, *assoc. prof.*, 16- Lecturer *biol.*, Trinity (D. C.), 12-13. Psychol. Ass; S. Soc. Philos. and Psychol. Reaction time; sensibility of the skin; imagery and concept; memory; ethics; pathology of memory and perception.
- Moore, Dr. V(ernanus) A(lva)**, Cornell University, Ithaca, N. Y. *Pathology, Bacteriology*. Jefferson Co., N. Y., April 13, 59. B.S., Cornell, 87; M.D., George Washington, 90; hon. V.M.D., Pennsylvania, 11; Sc.D., Syracuse, 19. Chief, div. animal path. bur. animal indust, U. S. Dept. Agr., 95-96; *prof. comp. path. bacter. and meat inspection*, N. Y. State Vet. Col., Cornell, 96-, *director*, 08- A.A.; Ass. Path. and Bact. (v. pres, 09); Ass. Tuber.; Vet. Med. Ass; Soc. Bact.; Am. Med. Ass; Pub. Health Ass. Tubercle bacilli in milk; bovine tuberculosis; fowl typhoid; diphtheria in chickens; swine plague; rabies; laboratory methods and apparatus; pathology of infectious diseases of animals.
- Moore, Prof. William**, 1466 Hythe St, St. Paul, Minn. *Entomology*. Phoenixville, Pa., Jan. 29, 87. A.B., Ursinus, 07; Ph.D., Cornell, 20. Lecturer entom. and zool. Potchefstroom Agr. Sch., Potchefstroom, S. Africa, 10-13; asst. *prof. entom.*, Minnesota, 13-17, *assoc. prof.*, 17- A.A.; Entom. Soc; Ass. Econ. Entom. Lice; insecticides.
- Moore, Dr. William C(abler)**, 4110 Fernhill Ave, Baltimore, Md. *Physical chemistry*. Nashville, Tenn., Feb. 10, 84. B.S., Nashville, 03; fellow, Chicago, 07-09, Ph.D., 10. Asst. and instr. chem. and physics, Nashville, 01-06; instr. chem., Columbia, 09-13; research chemist, Nat. Carbon Co., 13-19; *assoc. immunol. sch. hygiene and pub. health*, Hopkins, 19-20; *research chemist*, U. S. Indust. Alcohol Co., 20- Instr. chem., Nashville, summers, 02-09; Chicago, 11. Chem. Soc. (chairman, Cleveland sect, 15); Physical Soc; Electrochem. Soc; Illum. Eng. Soc. Organic amalgams; aqua regia; carbon; flame arc; immunology.
- Moore, Prof. Willis L(uther)**, Cosmos Club, Washington, D. C. **Meteorology*. Scranton, Pa., Jan. 18, 56. Pub. schools and private instruction; LL.D., Norwich, 96; St. Lawrence, 06. Observer, U. S. Weather Bur, 76, local forecast official, 91-04, *prof. meteorol.*, 94-95, chief, 95-13; *prof. George Washington*, 12- A.A.; Wash. Acad. (v. pres, 08, 09); hon. mem. Royal Meteor. Soc; Austrian Meteor. Soc.
- Moorehead, Warren K(ing)**, Andover, Mass. *American archeology*. Scena, Italy, March 10, 66. Denison, 86; hon. A.M., Dartmouth, 01. *Curator, museum*, Ohio State, and State Archeol. Soc., 94-97; *Phillips Acad.*, 01- Asst. dept. anthrop., Smithsonian Inst., 89-90; Columbian Expos., 91-93; ed., 'Archeologist,' 94-95; mem., U. S. Board Indian Commissioners, 09- Medal, Madrid Expos., 92; Columbian Expos., 93. A.A. (sec'y, H., 93); Anthropol. Ass; Wash. Acad. Primitive man in Ohio; Ohio Valley Indians; prehistoric implements; the stone age; fort ancient; the American Indian; stone ornaments.
- Moran, Prof. John F(rancis)**, 2426 Pennsylvania Ave, Washington, D. C. *Medicine*. Washington, D. C., June 8, 64. M.D., Georgetown, 87, A.B., 94. Demonstrator anat., Georgetown, 91-96, clin. *prof. obstet.*, 96-00, *prof.*, 00-06; obstetrician, Columbia Hosp., 96-00; Georgetown Univ. Hosp., 00-06. A.A.; Col. Surg.; S. Surg. and Gynec. Soc; Wash. Acad. Obstetrics.
- More, Prof. Charles C(hurch)**, University of Washington, Seattle, Wash. *Civil engineering*. Rock Island, Ill., Jan. 21, 75. C.E., Lafayette, 98, M.S., 01; M.C.E., Cornell, 99. Acting *prof. civil eng.*, Washington (Seattle), 00-01; engineer, Am. Bridge Co. and other companies, 01-04; asst. *prof. civil eng.*, Washington (Seattle), 04-06, *assoc. prof.*, 07-11, *prof.*, 12-, *head of dept.*, 17- Capt., E.R.C. and O.R.C., 17; major, ordnance dept., 18. Civil Eng; Eng. Educ. (mem. council, 19-22).
- More, Prof. Louis T(renchard)**, University of Cincinnati, Cincinnati, Ohio. **Physics*. St. Louis, Mo., April 9, 70. B.S., Washington (St. Louis), 92; fellow, Hopkins, 94-95, Ph.D., 95. Instr. *physics*, Worcester, 96; demonstrator and asst. *prof.*, Nebraska, 96-00; *prof. Cincinnati*, 00-, *dean*, col. liberal arts, 10-13, *grad. sch.*, 16- A.A.; Physical Soc; Soc. de Physique; Ohio Acad. (v. pres, 16). Electrical stress in the ether; double refraction of light; binaural audition; discharge of electricity through gases; physical theory; magnetic effect of currents in gases; history and limitations of science.
- Morecroft, Prof. John H(arold)**, Columbia University, New York, N. Y. *Electrical engineering*. England, Sept. 19, 81. E.E., Syracuse, 04, B.S., 07. Asst. instr. *elec. eng.*, Syracuse, 05-07; instr., Pratt, 07-09; instr., asst. *prof.* and later *assoc. prof.*, Columbia, 09- Elec. Eng; Physical Soc; Eng. Educ. Alternating current phenomena; vacuum tubes.
- Morehead, Prof. J(ames) C(addall)**, Carnegie Institute of Technology, Pittsburgh, Pa. *Mathematics*. Pulaski Co., Va., March 25, 77. A.B., Roanoke, 98, A.M., 99; M.S., Princeton, 00, fellow, 00-03; Ph.D., Yale, 05. Instr. *math.*, Northwestern, 05-09, asst. *prof.*, 09-13; instr. *math. and descriptive geom.*, Carnegie Inst. Tech., 15-16, *asst. prof.*, 16- Math. Soc. Theory of numbers; differential geometry; higher algebra; analytic mechanics.

- Morehouse, Prof. D(aniel) W(alter)**, 1430 30th St, Des Moines, Iowa. *Astronomy, Astrophysics*. Mankato, Minn., Feb. 22, 76. B.S., Drake, 00, M.S., 02; B.S., Chicago, 02; Ph.D., California, 14. *Prof. physics and astron, Drake, 00-* Volunteer research asst, Yerkes Observatory, summer, 09; instr. astron, California, 11-12. Donohoe comet medal, Pacific Astron. Soc. Astron. Soc; fel. Iowa Acad; Soc. Astron. de France. Stellar photography; comet C, 1908.
- Moreno, Dr. H(alcott) C(adwalader)**, Stanford University, Calif. *Mathematics*. Gainesville, Ga, Nov. 2, 73. A.B., Georgia, 93, A.M., 94, B.L., 96; scholar and fellow, Clark, 97-00, Ph.D., 00. Tutor math, Georgia, 93-97; asst, Clark, 00-01; instr. *applied math, Stanford*, 01-04, asst. prof, 04-09, assoc. prof, 09-18, *prof, 18-* A.A.; Math. Soc. Ruled loci in n -fold space; non-Abelian groups in which every sub-group is Abelian.
- Morey, George W(ashington)**, Geophysical Laboratory, Washington, D. C. *Physical chemistry*. Minneapolis, Minn., Jan. 9, 88. B.S., Minnesota, 09. Asst. chem, Minnesota, 07-09; asst. chemist, Bur. Standards, 09-12; *asst. physical chemist, geophys. lab, Carnegie Institution, 12-* Manufacturer optical glass, W. I. B., 17-18; gen. manager, optical glass plant, Spencer Lens Co, 18-20. Chem. Soc; Optical Soc; Ceramic Soc; Wash. Acad. Acidimetric, alkalimetric and calorimetric standards; gas at low temperatures; physics and chemistry of high temperatures and pressures; hydrothermal silicate synthesis; optical glass.
- Morgan, Prof. Agnes Fay**, University of California, Berkeley, Calif. *Chemistry*. Peoria, Ill., May 4, 84. B.S., Chicago, 04, M.S., 05, Ph.D., 14. Instr. chem, Washington (Seattle), 10-13; asst. prof. nutrition, *California, 15-16, household science, 16-19, assoc. prof, 19-* A.A.; Chem. Soc. Chemistry of food and nutrition; nut proteins; metabolism of creatin.
- Morgan, A(lfred) C(ookman)**, P. O. Box 346, Clarksville, Tenn. *Entomology*. Near Seaford, Del, Jan. 19, 76. B.S.A., Cornell, 04. *With bur. entom, U. S. Dept. Agr, 04-* A.A.; Entom. Soc; Ass. Econ. Entom. Tobacco insects; Thysanoptera.
- Morgan, Dr. Ann Haven**, Mt. Holyoke College, South Hadley, Mass. *Zoology*. Waterford, Conn., May 6, 82. A.B., Cornell, 06, fellow, 11-12, Ph.D., 12. Asst. zool., Mt. Holyoke, 06-07, instr, 07-09; asst. and instr. Cornell, 09-11; assoc. prof, *Mt. Holyoke, 12-13, prof, 14-* Mem. staff, Woods Hole. A.A.; Soc. Nat; Soc. Zool; Entom. Soc. Ecology of insects; experimental zoology; aquatic insects; May flies.
- Morgan, Arthur E(rnest)**, Ludlow Building, Dayton, Ohio. *Hydraulics*. Cincinnati, Ohio, June 20, 78. Colorado, 98. Asst. city engineer, St. Cloud, Minn., 01-02; consulting engineer, 02-07; supervising engineer, drainage investigations, U. S. Dept. Agr, 07-09; *pres, Morgan Eng. Co, 09-*; *chief engineer, Miami Conservancy Dist, 15-* V. pres, Moraine Park Sch, Dayton, 17-; pres, Antioch, 20- A.A.; Civil Eng. Flood prevention; plant breeding.
- Morgan, Dr. F(rank) M(illett)**, Hanover, N. H. *Mathematics*. A.B., Cornell, 09, A.M., 10, Ph.D., 12. Instr. math, Sturgis Prep. Sch, 07-12; asst. instr, Cornell, 11-12; instr, *Dartmouth, 12-15, asst. prof, 15-* Math. Soc. Transformations.
- Morgan, Dr. Herbert R(ollo)**, U. S. Naval Observatory, Washington, D. C. *Astronomy, Mathematics*. Medford, Minn., March 21, 75. Fellow, Virginia, A.B., 99, Ph.D., 01. Prof. math, Pantops Acad, Va, 00-01; computer, Naval Observatory, 01-05; prof. astron. and higher math, Pritchett, and director, Morrison Observatory, 05-07; *asst. astronomer, U. S. Naval Observatory, 07-* Astron. Soc. Satellites of Saturn; comet orbits; transit circle observations.
- Morgan, Prof. Jerome J(ohn)**, 67 Salter Place, Maplewood, N. J. *Chemical engineering*. Russell, Pa, April 22, 80. B.S., Pa. State, 05, M.S., 10; Ph.D., Columbia, 19. Asst. chem, Md. Col, 05-06, asst. prof, 06-08; asst. chemist, bur. chem, U. S. Dept. Agr, 08; prof. chem, Col. of Hawaii, 08-09; instr, Stevens, 09-11, *asst. prof, 11-19; chem. eng, Columbia, 19-* Chem. Soc; Soc. Chem. Indust. Industrial chemical analysis; vapor pressures at high temperatures; volatilization of potash.
- Morgan, Prof. (John) H(arcourt) A(lexander)**, University of Tennessee, Knoxville, Tenn. *Zoology, Entomology*. Strathroy, Ont, Aug. 31, 67. B.S.A., Ont. Agr. Col, and Toronto, 89; Cornell, 92, 98; Woods Hole, 95. Prof. entom. and zool, Louisiana, and entomologist, Exp. Sta, 89-05; director, Gulf Biol. Sta, 00-05; prof. zool. and entom, *Tennessee, and director, Exp. Sta, 05-19, pres, 19-*; state entomologist, Tenn, 05-19. Asst. commissioner for La, Atlanta Expos, 95; entomologist and sec'y, La. Crop Pest Commission, 04-05; Administrator for Tenn, Food Ad, 17. Ass. Econ. Entom. (pres, 07); Soc. Prom. Agr. Sci; La. Nat. Soc. (pres, 00). Louisiana and Tennessee insects; mosquitoes of Louisiana; American ixoids.
- Morgan, Prof. John J(acob) B(rooke)**, University of Iowa, Iowa City, Iowa. *Psychology*. Norristown, Pa, Aug. 23, 88. A.B., Taylor, 11; A.M., Columbia, 13, Ph.D., 16, Cutting traveling fellow, at Hopkins, 16-17; B.D., Drew Sem, 14. Asst. psychol, Columbia, 14-16; instr, Princeton, 17; asst. prof, Minnesota, 19-20; *director psychol. clinic, Iowa, 21-* With Sanit. C, U.S.A., 18-19. Psychol. Ass. Attention; movement; memory; perception.
- Morgan, Prof. J(ohn) Livingston R(utgers)**, Columbia University, New York, N. Y. *Physical chemistry*. New Brunswick, June 27, 72. B.S., Rutgers, 92, hon. Sc.D., 16; Ph.D., Leipzig, 95. Asst. chem, Stevens, 95-96; instr. quant. anal, Brooklyn Polytech, 96-97; tutor *physical chem, Columbia, 97-01, adj. prof, 01-05, prof, 05-* A.A.; Physical Soc; Chem. Soc; Electrochem. Soc; fel. London Chem. Soc. Molten hydrated salts as solvents; relationship between the volume and weight of a falling drop and the other constants of the liquid; calculation of critical temperatures of associated liquids from their surface tensions; photochemistry.
- Morgan, Prof. O(ra) S(herman)**, Columbia University, New York, N. Y. *Agronomy*. Hampshire, Ill, Aug. 11, 77. A.B., Illinois, 05; M.S.A., Cornell, 07, Ph.D., 09. Director, N. Y. State Sch. Agr, Alfred, 08-12; *prof agr, Columbia, 11-* Agr. adviser, N. Y. Draft Board. A.A.; Soc.

- Agron. Soils; fertilizers; availability of plant food constituents; testing soils for production factors.
- Morgan, Prof. T(homas) H(unt)**, Columbia University, New York, N. Y. **Biology*. Lexington, Ky, Sept. 25, 66. B.S., Ky. State, 86, M.S., 88, LL.D.; Ph.D., Hopkins, 90, Bruce fellow, 90-91, LL.D., 15. *Prof. biol.* Bryn Mawr, 91-04; *exp. zool.* Columbia, 04- Jesup lecturer, Columbia, 12, 13; Vanuxem lecturer, Princeton, 16; Hitchcock lecturer, California, 16. *Nat. Acad.*; A.A.; Soc. Nat. (pres, 09); Soc. Zool.; Soc. Exp. Biol.; Philos. Soc.; for. mem. Royal Soc.; London Linnean Soc.; Belgian Soc. Zool. and Malacol.; Soc. des Sci. Méd. et Nat. de Bruxelles. Experimental embryology and regeneration; evolution and adaptation; experimental zoology; heredity and sex; the mechanism of Mendelian heredity; a critique of the theory of evolution; the physical basis of heredity.
- Morgan, Dr. W(illiam) Conger**, University of California, Southern Branch, Los Angeles, Calif. *Chemistry*. Albany, N. Y., June 21, 74. A.B., Yale, 96, Silliman fellow, 96-99, Ph.D., 99. *Prof. chem.* Washburn, 00-02; instr. California, 02-06, asst. prof., 06-13; *prof.* Reed, 13-20; *southern branch, California*, 20- A.A.; Chem. Soc. Stereochemistry of nitrogen; origin of bitumens; analytical methods; alleged complexity of tellurium.
- Morgan, Prof. Wm. Gerry**, 1006 16th St., N. W., Washington, D. C. *Medicine*. Newport, N. H., May 2, 68. Dartmouth; M.D., Pennsylvania, 93. *Prof. gastro-enterol.* Georgetown, organizer and chief med. officer, clinic for diseases of the digestive organs. Asst. surgeon, N.R.C. Am. Med. Ass.; Gastro-Enterol. Ass.; N. Y. Acad. Med.; Wash. Acad. Diseases of the digestive organs.
- Morgulis, Prof. Sergius**, Creighton University, Omaha, Nebr. *Biochemistry*. Balta, Russia, July 6, 85. A.B., Ananieff, Russia, 04; A.M., Columbia, 07; Ph.D., Harvard, 10. Austin teaching fellow, Harvard, 09, traveling fellow, 10-12; assoc. animal metabolism, nutrition lab, Carnegie Institution, 12-13; instr. and assoc. biochem., Columbia, 13-16; *prof. biochem. and physiol.* Creighton, 16- Bowdoin prize and medal, Harvard, 11; prize, Fisheries Soc., 18. A.A.; Soc. Biol. Chem.; Biochem. Ass.; Physiol. Soc.; Soc. Zool.; Fisheries Soc. Regeneration; inanition; metabolism.
- Moritz, Prof. Robert E(douard)**, University of Washington, Seattle, Wash. *Mathematics, Astronomy*. Christianthal, Germany, June 2, 68. B.S., Hastings, 92; Ph.M., Chicago, 96; Ph.D., Nebraska, 01; Ph.N.D., Strasbourg, 02. *Prof. math. and physics*, Hastings, 93-98; *instr. math.* Nebraska, 98-02, adj. prof., 02-03, asst. prof., 03-04; *prof.* Washington (Seattle), 04- A.A.; Math. Soc.; Math. Ass. (mem. council, 16). General theory of cyclic harmonic curves.
- Mork, Harry Solomon**, Chemical Products Co., Boston, Mass. *Chemical engineering*. Boston, Mass., April 10, 78. B.S., Mass. Inst. Tech., 99. Chemist, City Wastes Disposal Co., 99; Mass. State Board of Health, 99-00; Cellulose Products Co., 00-01; with Little and Walker and Arthur D. Little Co., Inc., 01-, v. pres., 09-; sec'y and treas., Chem. Products Co., 03-; v. pres., Lustron Co., 19- Chem. Soc.; Boston Eng. Club. Cellulose chemistry.
- Morley, Prof. Edward W(illiams)**, West Hartford, Conn. **Chemistry, Physics*. Newark, N. J., Jan. 29, 38. A.B., Williams, 60, A.M., 63; LL.D., 01; Western Reserve, 91; Lafayette, 07; Pittsburgh, 12; hon. Ph.D., Wooster; Sc.D., Yale, 09. *Prof. chem.* Western Reserve, 69-06, emer. prof., 06- *Prof. chem.* Cleveland Med. Col., 73-88. U. S. delegate, Third Conf. Gén. des Poids et Mesures, 01; Davy medal, Royal Soc., 07; Cresson medal, Franklin Inst., 12; Gibbs medal, 16. *Nat. Acad.*; A.A. (sec'y, subsect. micros, 76, v. pres., 79, 83, pres., 95); Astron. Soc.; Chem. Soc. (pres., 99); Philos. Soc.; Am. Acad.; for. mem. London Chem. Soc.; cor. mem. British Ass.; hon. mem. Royal Inst. Atomic weight of oxygen; densities of oxygen and hydrogen; variations in amount of oxygen in air; vapor density of mercury from 0° to 100°; repetition of Michelson-Morley experiment in view of Lorentz-Fitzgerald suggestion that form of bodies may depend on translation through luminiferous ether.
- Morley, Prof. F(rank)**, 2032 Park Ave., Baltimore, Md. **Mathematics*. Woodbridge, England, Sept. 9, 60. B.A., Cambridge, 83, M.A., 87, D.Sc., 97. *Instr. math.* Haverford, 87-88, *prof.*, 88-00; *Hopkins*, 00- Ed., 'Am. Jour. Math.', 00- Math. Soc. (pres, co-editor, 'Bul'); Math. Ass.; Philos. Soc.; Am. Acad.; London Math. Soc.; Circolo Mat. di Palermo. Geometry; theory of functions.
- Morley, Prof. Raymond K(urtz)**, Worcester Polytechnic Institute, Worcester, Mass. *Mathematics*. Templeton, Mass., Oct. 28, 82. A.B., A.M., Tufts, 04; Ph.D., Clark, 10. *Instr. math.* Maine, 04-07; Worcester, 10-11; Illinois, 11-12; asst. prof., Worcester, 12-17, *prof.*, 17- Algebraic invariants; calculations for the Maya calendar.
- Morley, Sylvanus G(riswold)**, Carnegie Institution, Washington, D. C. **Anthropology*. Chester, Pa., June 7, 83. C.E., Pa. Mil. Col., 04; A.B., Harvard, 07, A.M., 08, fellow, 08. Fellow Cent. Am. archeol. Archeol. Inst. of 'Am, 09-14; research assoc. *Am. archeol.* Carnegie Institution, 14-17, assoc., 17- Field expeditions to Mex., Guatemala, Honduras, British Honduras, Nicaragua, Salvador, Costa Rica and Panama. Anthropol. Ass.; Archeol. Inst.; Maya Soc.; Wash. Acad. American archeology; Maya archeology and the Maya hieroglyphic writing.
- Morningstar, Helen**, 1275 Franklin Ave., Columbus, Ohio. *Geology*. Columbus, Sept. 23, 91. A.B., Ohio State, 13, A.M., 15; Bryn Mawr, 15-17, European fellow, 16-17. *Instr. geol.* Ohio State, 17- A.A.; Ohio Acad. Fauna of Pottsville of Ohio.
- Morrey, Dr. Cha(rie)s B(radfield)**, Ohio State University, Columbus, Ohio. *Bacteriology*. Chesterhill, Ohio, Nov. 5, 69. A.B., Ohio State, 90; M.D., Starling Med. Col., 96; Vienna and Pasteur Inst., Paris, 97-99. Asst. Latin, Ohio State, 90, Latin and physiol., 91-92, physiol., 92-97, asst. prof., 99-02, assoc. prof., 02-03, *bacter.*, 03-04, *prof.*, 04- Lecturer physiol., Starling Med. Col., 99-03, prof., 04-07, acting prof. chem., 96-97. A.A.; Chem. Soc.; Soc. Bact.; Ohio Acad. Fun-

- damentals of bacteriology; accuracy of the glance and localization on the periphery of the retina; bacterial enzymes; nitrogen nutrition of green plants; vaccination in colds and in hay fever.
- Morrill, Prof. A(lbro) D(avid)**, Clinton, N. Y. **Zoology*. Northfield, N. H., Aug. 29, 54. B.S., Dartmouth, 76, M.S., 79; Michigan, 76-77. Teacher science and math, acad, Lewiston, Pa, 78-83; *prof*, Belmont Col, College Hill, Ohio, 83-88; *biol. and geol*, Ohio (Athens), 88-91; *chem. and biol*, *Hamilton*, 91-96, *biol*, 96- Soc. Nat; Soc. Zool; Nature Study Soc; Boston Soc. Nat. Hist. Nerve endings in pectoral appendages of *Prionotus*; nerve endings in auditory epithelium of *Galeus*; histogenesis of the auditory nerve; regeneration of nerve tissue in planarians.
- Morrill, Dr. A(ustin) W(infield)**, 382 W. Ave. 53, Los Angeles, Calif. *Entomology*. Tewksbury, Mass, Sept. 11, 80. B.S., Mass. Col. and Boston, 00, Ph.D., Mass. Col, 03. Field agent, bur. entom., U. S. Dept. Agr, 03-06, in charge white fly investigations, 06-09; state entomologist, Ariz. and consulting entomologist, Ariz. Agr. Exp. Sta, 09-19; *managing entomologist*, *Southwest Cotton Protective Service*, 20- A.A.; Entom. Soc; Ass. Econ. Entom. (v. pres. and chairman, Pacific Slope branch, 17); Wash. Entom. Soc. Greenhouse and strawberry white flies; citrus white fly; fumigation of citrus trees; insects injurious to cotton.
- Morrill, Dr. C(harles) V**, Cornell Medical College, New York, N. Y. *Anatomy*. New York, March 9, 84. A.B., Col. City of N. Y, 03; A.M., Columbia, 06, Ph.D., 10. Asst. zool, Columbia, 06-08; lecturer histol. and embryol, col. med, Syracuse, 08-10; *instr. anat*, Univ. and Bellevue Hosp. Med. Col, 10-15; *med. col*, *Cornell*, 15-19, *asst. prof*, 19- A.A.; Ass. Anat; Soc. Zool. Regeneration in fish and Amphibia; sex determination in insects; development of mammalian heart; symmetry in monsters.
- Morrill, Dr. W(arren) P(earl)**, Shreveport, La. *Hospital administration*. Benton Harbor, Jan. 20, 77. Ph.B., Michigan, 98; M.D., Hopkins, 08. Res. physician and supt, Sydenham Hosp, Baltimore, 08-12; *assoc. med*, *Col. Physicians and Surgeons*, Baltimore, 09-12; *supt*, *Winnipeg Gen. Hosp*, Man; with M.C, 17-18, *lieut. col*, 18-19, *supt*, *Univ. Hosp*, Augusta, Ga, 20; *Charity Hosp*, *Shreveport, La*, 20- Soc. Biol. Chem. Infant metabolism; military hygiene.
- Morris, Prof. Clyde T(ucker)**, 2043 Iuka Ave, Columbus, Ohio. *Engineering*. Morrow Co, Ohio, April 19, 77. C.E., Ohio State, 98. With New Columbus Bridge Co, 98-99; draftsman, Youngstown Bridge Co, 99-01; King Bridge Co, 01-02; principal asst. engineer, Puget Sound Bridge and Dredging Co, 02-04; asst. engineer, King Bridge Co, 04-06; *assoc. prof. structural eng*, *Ohio State*, 06-08, *prof*, 08- Deputy commissioner in charge, bur. bridges, Ohio State Highway Commission, 11-12. Civil Eng; Eng. Educ; Soc. Test. Mat. Steel structures; stresses; reinforced concrete.
- Morris, Dr. Frank Edward**, Connecticut College, New London, Conn. *Psychology*. New Brunswick, N. J., June 23, 89. A.B., Yale, 13, Ph.D., 16. *Instr. psychol*, Texas, 16-17; *Conn. Col. for Women*, 17- Mental testing; college entrance tests.
- Morris, Dr. Frank R(ay)**, University of California, Berkeley, Calif. *Mathematics*. Pekin, Ind, June 18, 85. B.S., Valparaiso, 07, B.Ped, 08; A.B., Indiana, 12, A.M., 13; Ph.D., California, 18. Asst, commercial dept, Valparaiso, 07-08; teaching fellow *math*, Indiana, 12-13; *California*, 16-18, *instr*, 18- Math. Soc; Math. Ass. Perpetual calendars; geometry of space.
- Morris, Dr. H(arold) H(ulett)**, 1112 Shallersoss Ave, Wilmington, Del. *Chemistry*. Racine, Wis, March 12, 89. A.B., Wisconsin, 11, A.M., 16, Ph.D., 17. *Instr. chem*, Mich. Agr. Col, 11-12; *asst. chemist*, Mont. Exp. Sta, 12-14; *asst. chem*, Wisconsin, 14-17; research chemist, Nat. Carbon Co, 17-18; *exec. chemist*, *E. I. duPont de Nemours and Co*, 18- Chem. Soc; Wis. Acad. Pigments; heavy chemicals; selenic acid; gold.
- Morris, Dr. Harry**, 648 Boyd Ave, Baton Rouge, La. *Pathology*. Bloomingburg, Ohio, Sept. 17, 81. D.V.M., Ohio State, 10. *Bacteriologist and asst. veterinarian*, *La. Exp. Sta*, 11- A.A.; Vet. Med. Ass. Animal pathology; anthrax.
- Morris, H(arry) E(lwood)**, Bozeman, Mont. *Botany*, *Bacteriology*. Virginia City, Mont, April 17, 86. B.S., Montana, 09. *Asst. botanist and bacteriologist*, *Mont. Exp. Sta*, 09- Phytopath Soc; Mont. Hort. Soc. Plant pathology and physiology.
- Morris, Dr. J(ames) Cheston**, Fern Bank, West Chester, Pa. *Medicine*, *Biology*. Philadelphia, May 28, 31. A.B., Pennsylvania, 51, A.M., M.D., 54. Physician, Moyamensing House of Indust, Phila, 54-58; *asst. surgeon*, Prot. Epis. Hosp, 57-58, attending physician, 58-72; pres, Va. Mining and Improv. Co, 72-05. Physician, Foster Home for Children, 55-60; contract surgeon, U. S. A, 62-64; pres, med. board, The Sheltering Arms, 70-20. Am. Acad. Med. (treas, 90-92); Philos. Soc. (curator, 89-01); Phila. Acad. (director, biol. and micros. dept, 56-05); Col. Physicians. Food, water and milk supply.
- Morris, Prof. J(ames) Lucien**, 1353 E. Ninth St, Cleveland, Ohio. *Biological chemistry*. Corydon, Ind, Sept. 23, 85. B.S., Hanover, 07; A.M., Harvard, 11, Ph.D., 14. Asst. sciences, Park, 07-08; *prof. nat. sciences*, Hillsdale, 08-11; Austin teaching fellow, Harvard Med. Sch, 11-12, *asst. biol. chem*, 13-14; *assoc*, Washington (St. Louis), 14-17; *physiol. chem*, med. dept, Illinois, 17-18; *asst. prof. biochem*, *Western Reserve*, 18- A.A.; Chem. Soc; Soc. Biol. Chem. Metabolism; tumors; creatinin and creatin; uric acid; purins.
- Morris, Prof. O(scar) M(atison)**, Pullman, Wash. *Horticulture*. Highland, Kans, June 26, 74. B.S., Okla. Col, 96; Cornell, 97-98; M.S., Wash. State. *Asst. hort*, Okla. Col, 98-03, *prof*, 03-10; *prof. and head of dept*, *Wash. State*, 11- Life mem. Pomol. Soc; Soc. Hort. Sci. Fruit growing and storage; berry breeding.
- Morris, Prof. Richard**, Rutgers College, New Brunswick, N. J. *Mathematics*. Keyport, N. J., Nov. 9, 68. B.S., Rutgers, 99, M.S., 02; Ph.D., Cornell, 07. *Instr. math. and graphics*, *Rutgers*,

- 99-05, assoc. prof, 05-09, *prof*, 09- A.A; Math. Soc; Math. Ass. Automorphic functions.
- Morris, Prof. Roger S(yvester)**, 3646 Washington Ave, Avondale, Cincinnati, Ohio. *Medicine*. Ann Arbor, Mich, Sept. 24, 77. A.B, Michigan, 00, M.D, 02. Instr. internal med. and demonstrator clin. med, Michigan, 03-05; asst. res. physician, Hopkins Hosp, 05-07; asst. *med*, Hopkins, 06-08, assoc, 08-15; *prof*, *Cincinnati*, 15- Major, M.C, 17-18, lieut. col, M.C, A.E.F, 18-19. Ass. Path. and Bact; Am. Physicians; Soc. Trop. Med; Soc. Clin. Invest. The action of X-rays on the blood; hemolysins in urine; changes in internal organs in experimental anemia; experimental lipemia; leucocytic ferments.
- Morris, Dr. S(eth) M(abry)**, Galveston, Tex. *Chemistry*. Austin, Tex, June 15, 67. B.S, Texas, 88; M.D, Columbia, 91. Prof. chem. and toxicol, *med. dept*, Texas, 91-08, *clin. prof*. *ophthal*, 08- Am. Med. Ass.
- Morrison, Prof. Edwin**, Michigan Agricultural College, East Lansing, Mich. *Physics*. Bloomington, Ind, March 5, 61. B.S, Earlham, 88, M.S, 91; Indiana, 90; Chicago, 00-01, 04. *Prof*. science, Pacific Col, 91-01; physics and chem, Penn (Iowa), 01-06; *physics*, Earlham, 06-19; *Mich. Agr. Col*, 19- Affiliated research prof, Indiana. A.A; Physical Soc; fel. Ind. Acad. Mechanics; surface tension; phosphorescence; energy losses in impacts.
- Morrison, Prof F(rank) B(arron)**, 1937 Arlington Place, Madison, Wis. *Animal husbandry*. Fort Atkinson, Wis, May 19, 87. B.S, Wisconsin, 11. Asst. and instr. agr. chem, *Wisconsin*, 11-13, asst. prof. *animal husbandry*, 13-17, assoc. prof, 17-19, *prof*, 19-, asst. director, *Exp. Sta*, 15- Soc. Animal Production (see'y, 15-17, pres, 19). Animal feeding and nutrition.
- Morrison, Harold**, U. S. Department of Agriculture, Washington, D. C. *Entomology*. McCordsville, Ind. A.B, Cornell, 14; A.M, Stanford, 15. Asst. state entomologist's office, Ind, 11-16; inspector, fed. hort. board, *U. S. Dept. Agr*, 16-17, entom. explorer, *bur. entom*, 17-20, asst. *entomologist*, 20- A.A; Entom. Soc; Ass. Econ. Entom; Ind. Acad; Wash. Entom. Soc. Coccidae.
- Morrison, Montford**, 236 S. Robey St, Chicago, Ill. *Physics*. Bainbridge, Ga, Dec. 11, 83. France, Germany and Italy. Research worker, Ga. Tech. and private lab, 05-14; *consulting engineer*, Scheidel-West. X-ray Co, 14-17; *Victor Elec. Corp*, 17- Physical Soc; Math. Soc; Elec. Eng; Civil Eng; Mech. Eng; Radio Eng; Chem. Eng; Min. and Metal. Eng; Illum. Eng. Soc; Chem. Soc; Electrochem. Soc. Electricity; magnetism; electric and magnetic fields; mathematical interpretation of X-ray theory.
- Morrison, Prof. R(oger) L(eroy)**, Clark Building, Birmingham, Ala. *Highway engineering*. Winnetka, Ill, Aug. 28, 83. A.B, Illinois, 11, B.S, 12; A.M, Columbia, 14. Instr. civil eng, Tennessee, 11-12; junior engineer, Ill. Highway Commission, 12-13; highway engineer, United Gas Improv. Co, 13-14; *prof. highway eng*, Tex. Col, 14-19; *engineer of tests*, *Pittsburgh Test. Lab*, Birmingham, Ala, 19- Field and office positions on railroad construction work, S. Pacific and West. Pacific Rys, 05-09. A.A; Civil Eng; Int. Ass. Road Congresses. History of broken stone road construction.
- Morrow, Prof. Clarence A(ustin)**, University Farm, St. Paul, Minn. *Biochemistry*. Near Morrow, Ohio, Feb. 11, 81. B.S, Ohio Wesleyan, 06; A.M, Oberlin, 09; Ph.D, Minnesota, 18. Asst. chem, Oberlin, 06-08; acting head, departments physics and chem, Doane, 09-10; *prof. chem*, Nebr. Wesleyan, 11-17; asst. soil chem, *Minnesota*, 14-15, asst. *prof. agr. biochem*, 17- A.A; Chem. Soc. Agricultural biochemistry; organic matter of soil.
- Morse, Albert P(itts)**, 10 Upland Road, Wellesley, Mass. *Zoology*. Sherborn, Mass, Feb. 10, 63. Summer sch. of entom, Cornell, 90; Woods Hole, 93. Asst. zool. lab, *Wellesley*, 88-08, *curator*, *zool. museum*, and *lecturer econ. entom*, 90-; instr. zool, Teachers' Sch. Science, Boston, 01-10; *curator nat. hist*, *Peabody Mus*, Salem, Mass, 11- Research asst, Carnegie Institution, 03, 05. Boston Soc. Nat. Hist; Cambridge Entom. Club (pres, 02). Orthoptera, especially Acrididae of North America; New England entomology and ornithology.
- Morse, Dr. Arthur (Henry)**, 71 College St, New Haven, Conn. *Obstetrics*. Salem, Mass, Dec. 13, 80. A.B, Tufts, 02; M.D, Hopkins, 06. Instr. obstet, Hopkins, and res. obstetrician, Hopkins Hosp, 10-11; obstet. and gynec, California, 13-15; asst. prof, Yale, 15-20; asst. obstetrician and gynecologist, New Haven Hosp, 15-20, *obstetrician and gynecologist-in-chief*, *New Haven Hosp. and Dispensary*, 20- A.A; Am. Med. Ass; Col. Surg; Gynec. Soc. Mechanism and pathology of labor; creatin metabolism in pregnancy; gynecology.
- Morse, Dr. Edward S(yvester)**, Peabody Academy of Science, Salem, Mass. *Zoology, Ethnology, Japanese ceramics*. Portland, Maine, June 13, 38. Lawrence Sci. Sch, Harvard, 59-62, A.M; special student under Prof. Agassiz; hon. Ph.D, Bowdoin; hon. Sc.D, Yale. Prof. comp. anat. and zool, Bowdoin, 71-74; zool, Tokyo, 77-80; *director*, *Peabody Acad*, 80-; *keeper Japanese pottery*, *Museum of Fine Arts*, Boston, 92- Mem. jury of awards, Columbian Expos, 93; Pan-Am. Expos, 01; La. Purchase Expos, 04. Commander, Order of the Rising Sun, Japan. Nat. Acad; A.A. (gen. sec'y, 72, sec'y, B, 75, v. pres, 76, pres, 86); Soc. Nat; Soc. Zool; Anthropol. Ass; Am. Acad; Philos. Soc; Antiq. Soc; Oriental Soc; cor. mem. Numis. and Antiq. Soc; cor. mem. Am. Inst. Archit; Micros. Soc; Ass. Mus; cor. mem. Buffalo Soc. Nat. Sci; cor. mem. N. Y. Acad; Essex Inst; cor. mem. Phila. Acad; Boston Soc. Nat. Hist. (pres, 19); Boston Malacol. Soc. (pres, 10); hon. mem. Boston Soc. Archit; cor. mem. British Ass; fel. London Soc. Arts; cor. mem. Berlin Anthropol. Gesell; for. mem. Soc. Astron. de France; Soc. Belge d'Astron; London Japan Soc; Swedish Soc. Anthropol. and Geog; hon. mem. Japan Aquatic Ass. Brachiopoda; New England Mollusca.
- Morse, Prof. Fred W(inslow)**, Amherst, Mass. *Chemistry*. Berlin, Mass, Dec. 6, 65. B.S, Worcester, 87, M.S, 00. Asst. chem, Mass. Exp. Sta, 87-88; N. H. Exp. Sta, 88-89, chem-

- ist, 89-09, v. director, 96-09; prof. chem, N. H. Col, 90-92, org. chem, 92-09. Research chemist, Mass. Exp. Sta, 10. A.A.; Chem. Soc.; Agr. Chem. Agricultural chemistry; phosphates of iron and alumina; fermentation of corn silage; effect of cold storage on fruits; respiration of apples; humus in soils; availability of soil potash; effect of lime compounds on root development; relation of temperature to plant growth; sulphate of ammonia and soils; chemistry of asparagus and cranberry plants.
- Morse, Dr. Harold M (arston)**, Cornell University, Ithaca, N. Y. *Mathematics*. Waterville, Maine, March 24, 92. A.B, Colby, 14; A.M, Harvard, 15, Sheldon traveling fellow, 17, Ph.D, 17. *Instr. math*, Harvard, 19-20; *Cornell*, 20- Second lieut, C.A.C. Math. Soc. Dynamical systems; geodesic motion on a surface of negative curvature; function theory.
- Morse, Dr. H (arry) W (heeler)**, Stanford University, Calif. **Physics, Physical chemistry*. San Diego, Calif, Feb. 25, 73. A.B, Stanford, 97; Ph.D, Leipzig, 02. *Instr. physics*, Harvard, 02-10, asst. prof, 10-12; lecturer chem, California, 12-13; in charge scientific work, Western Precipitation Co, 13-18; tech. manager, Am. Trona Corp, 18-20; *consulting chemist and metallurgist*, 20- Chem. Soc; Min. Eng; Chem. Eng; Am. Acad. Luminescence spectra; storage batteries; electrical precipitation; hydrometallurgy of copper; recovery of potash and borax from desert brines.
- Morse, Dr. John Lovett**, 70 Bay State Road, Boston, Mass. *Medicine*. Taunton, Mass, April 21, 65. A.B, Harvard, 87, A.M, M.D, 91. Asst. clin. med, *Harvard Med. Sch.*, 96-00, *instr. pediat*, 00-06, asst. prof, 06-15, *prof*, 15- Visiting physician, Children's Hosp; consulting physician, Infants' Hosp; Floating Hosp. Emer. mem. Am. Physicians; Am. Med. Ass; *Pediat. Soc*; New Eng. *Pediat. Soc*. Diseases of children.
- Morse, Prof. Josiah**, University of South Carolina, Columbia, S. C. *Psychology*. Richmond, Va, Feb. 17, 79. A.M, Richmond Col, 00; Ph.D, Clark, 04. Lecturer and *instr. psychol*, Clark, 04-05; psychol. and educ, Texas, 05-06; *prof. philos. and educ*, Peabody Col. Teachers, 08-11; *psychol. and philos*, South Carolina, 11- Research asst. to Pres. G. Stanley Hall; *prof. summer schools*, Kans. State Nor. Sch; Davis and Elkins; Summer Sch. of South; *Cornell*. A.A; *Psychol. Ass*; S. Soc. Philos. and Psychol. (v. pres, 14). Race and religious psychology.
- Morse, Dr. Leighton B**, Columbia University, New York, N. Y. *Physics*. Iowa Co, Iowa, Jan. 14, 82. Ph.B, Grinnell, 03; fellow, Nebraska, 03-05; Ph.D, Columbia, 08. Asst. *physics*, Grinnell, 02-03; Columbia, 06-08, lecturer, 08-09, *instr*, 09-18; *asst. prof*, *Col. City of N. Y.*, 18- A.A; *Physical Soc*. Electric double refraction in carbon disulphid at a temperature near the boiling point; test of Kerr's law; the selective reflection of bivalent carbonates in the infra-red spectrum; the selective reflection of salts of oxygen acids.
- Morse, Dr. Mary Elizabeth**, Homewood Apartments, Baltimore, Md. *Pathology*. Montpelier, Vt, Feb. 16, 78. A.B, Goucher, 99; M.D, Hopkins, 03. Asst. pathologist, Worcester State Hosp, 13-15; pathologist, Boston State Hosp, 15-17. Ass. Path. and Bact; Medico-Psychol. Ass. Bacteriology; neuropathology.
- Morse, Prof. (Max) Withrow**, P. O. Drawer 861, Morgantown, W. Va. *Biochemistry*. Dayton, Ohio, May 7, 80. B.S, Ohio State, 03; A.M, 04; Ph.D, Columbia, 09. Asst. zool, Ohio State, 03-05; asst. Bur. Fisheries, 05-08; *instr. biol*, *Col. City of N. Y.*, 08-10; J. Pierpont Morgan prof, Trinity (Conn), 10-13; *instr. physiol. chem*, Wisconsin, 13-15; asst. prof. biochem, Nebraska, 15-16; in charge chem, Nelson Morris Mem. Inst, 16-18; assoc. prof. physiol, *West Virginia*, 18-19, *prof. biochem. and sec'y, sch. of med*, 19- Asst. physiol. chem, med. sch, *Cornell*, 06; *instr*, Woods Hole, 07; abstractor, 'Chem. Abstracts,' and 'Physiol. Abstracts.' A.A; Soc. Biol. Chem; Soc. Exp. Biol; London Soc. Biol. Chem. Intracellular enzymes.
- Morse, Dr. W (arner) J (ackson)**, Agricultural Experiment Station, Orono, Maine. *Plant pathology, Bacteriology*. Waterbury, Vt, Oct. 30, 72. B.S, Vermont, 98, M.S, 03; Ph.D, Wisconsin, 12. Teacher nat. science, Montpelier Sem, 99-01; *instr. bot*, Vermont, 01-05, asst. prof. bacter, 05-06, asst. botanist, Vt. Exp. Sta, 01-06; *plant pathologist, Maine Exp. Sta*, 06- A.A; *Phytopath. Soc*; Soc. Bact; Bot. Soc; Soc. Prom. Agr. Sci; N. E. Bot. Club; Vt. Bot. Club. Physiology of maple sap flow; bacterial soft rots of vegetables.
- Morse, Prof. W (illiam) C (lifford)**, Agricultural College, Miss. *Geology*. Starr, Ohio, Oct. 28, 74. A.B, Ohio State, 06, fellow, 06-08, A.M, 08; Chicago, 11, 13-14. Asst. *geol*, Ohio State, 07-08, *instr*, 08-13; Washington (St. Louis), 14-16, asst. prof, 16-18; *prof*, *Miss. Agr. Col*, 18- Asst. geologist, Ky. Geol. Surv, 07, 19; geologist, Ohio State Highway Dept, 12-13; asst. geologist, Ill. Geol. Surv, 14-15; oil geologist, 16-; asst. state geologist, Miss, 18- A.A; Paleont. Soc; Ohio Acad. Stratigraphic geology; highway materials; oil and gas.
- Morton, Dr. Darwin A (bbot)**, 1017 Bellevue Ave, Syracuse, N. Y. *Chemistry*. Groton, N. Y, Feb. 26, 72. B.S, Cornell, 95, Ph.D, 99. Teacher, pub. sch, 89-91; asst. chem, Cornell, 95-96, *instr*, 98-99, asst, 99-00; *chemist, Solvay Process Co*, 00- A.A; Chem. Soc. The isomeric modifications of anethol; methods of commercial analysis; alkali manufacture.
- Morton, Dr. H (arold) A (rthur)**, Miller Rubber Co, Akron, Ohio. *Chemistry*. Worcester, Mass, Dec. 25, 90. A.B, Clark, 12, A.M, 13; Ph.D, Pittsburgh, 15. Fellow, Mellon Inst, 15-19; *director, research, Miller Rubber Co*, 20- Chem. Soc. Organic chemistry.
- Mory, A (ustin) V (an) H (oesem)**, Procter and Gamble Co, Ivorydale, Ohio. *Chemistry*. Near Masonville, Iowa, Nov. 15, 69. Wooster, 88-90; B.S, Rose, 94, Ch.E, 14. Analyst, Ill. Steel Co, 95; asst. chem, Armour and Co, 96-01; in charge chem. dept, Armour Packing Co, 01-07; chief, U. S. Lab. Food and Drug Inspection, Kansas City, Mo, 07-11; director, tech. lab, Sears Roebuck and Co, 11-20; *chem. supt, Procter and Gamble Co*, 20- Chem. Soc. (sec'y, Kansas City sect, 04-07, chairman, Chicago sect, 16, advisory

- board, 'Jour. Ind. and Eng. Chem,' 18-; coun-
cilor, 20-). Technology of oils, fats, soaps, and
glycerin.
- Moschcowitz, Dr. Alexis V(ictor)**, 925 Madison
Ave, New York, N. Y. *Surgery*. Giralt, Hun-
gary, April 25, 65. Ph.G, N. Y. Col. Pharmacy,
85; M.D, Columbia, 91. *Prof. clin. surg, Col-
umbia, 13-* Attending surgeon, Mt. Sinai
Hosp. Surg. Ass; N. Y. Acad. Med; Int. Surg.
Soc.
- Moschcowitz, Dr. E(li)**, 41 W. 83 St, New York,
N. Y. *Medicine*. Hungary, Aug. 2, 79. A.B,
Col. City of N. Y., 96; M.D, Columbia, 00;
Vienna and Berlin, 04. *Pathologist, Beth Israel
Hosp, N. Y. City, 07-*; *adj. visiting physician,
Mt. Sinai Hosp, 17-* A.A; Ass. Path. and Bact;
Am. Med. Ass; N. Y. Path. Soc. (pres, 17-19);
N. Y. Acad. Med. Pathological and internal
medicine; anaphylaxis; hypertension and nephri-
tis; adrenal diseases; appendicitis; calcification
and ossification; cysts of liver; cancerous infil-
tration of nerves; medical history.
- Moseley, E(dwin) L(incoln)**, Bowling Green,
Ohio. *Zoology, Botany, Physiography*. Union
City, Mich, March 29, 65. A.M, Michigan, 85.
Teacher, high sch, Grand Rapids, Mich, 85-87;
Sandusky, 89-14; *head, dept. sci, State Nor.
Col, Bowling Green, Ohio, 14-* Mem. Steere
zool. expd. to Philippines, 87-88. A.A; Ohio
Acad. (sec'y, 95-03, pres, 04). Changes in
level of Lake Erie; formation of Sandusky Bay
and Cedar Point; flora of Northern Ohio; cause
of trembles and milk-sickness.
- Moseley, Prof. Hal Walters**, Tulane University,
New Orleans, La. *Chemistry*. Russellville, Ky,
July 14, 88. B.S, Bethel, 08, M.S, 10; A.M,
Tulane, 14. *Prof. chem. and physics, Okla. Bap-
tist Col, 08-11; assoc. prof. chem, Tulane, 11-*
Prof. chem, Peabody Col. Teachers, summer, 14.
A.A; Chem. Soc. (v. pres, La. sect); New Or-
leans Acad. (treas). Inorganic and physical
chemistry; passivity of metals; quantitative
methods; physical constants; potassium chlorate.
- Mosenthal, Prof. Herman O(tto)**, 49 E. 53d St,
New York, N. Y. *Medicine*. New York, N. Y.,
July 8, 78. A.B, Columbia, 99, M.D, 03. Asst.
biol. chem, Columbia, 08-09, instr, 09-12, assoc,
12-14, asst. med, 09-10, instr, 10-14; assoc.
prof, Hopkins, 14-18; assoc, Columbia, 19-20;
assoc. prof, N. Y. Post-Grad. Med. Sch. and
Hosp, 20- A.A; Am. Physicians; Am. Med.
Ass; Soc. Biol. Chem; Soc. Exp. Biol; Soc. Clin.
Invest; N. Y. Acad. Med. Diseases of metab-
olism.
- Moser, Capt. Jeff(erso)n F(ranklin)**, U. S. N.,
2040 Santa Clara Ave, Alameda, Calif. *Ocean-
ography*. Allentown, Pa, May 3, 48. Grad,
U. S. Naval Acad, 68. Promotions from mid-
shipman to capt, U.S.N, 68- Mem. four exp-
ditions on Isthmus of Darien and in Nicaragua,
69-75; on coast surv. service, 75-95; hydrog.
inspector, U. S. Coast and Geod. Surv, 93-95;
mem. Fur-Seal Commission, 96, 97; in command
'Albatross' on fishery investigations and ocean-
ography; 96-02; on Agassiz South Sea expd,
99-00. A.A; Naval Inst. Asiatic-American
fisheries; Pacific fisheries; salmon fisheries of
Alaska.
- Mosher, Dr. Clelia Duel**, Stanford University,
Calif. *Physiology*. Albany, N. Y, Dec. 16, 63.
A.B, Stanford, 93, A.M, 94; M.D, Hopkins, 00.
Asst. *hygiene, Stanford, 93-94, instr, 94-96,*
asst. prof. *personal hygiene and med. adviser of
women, 10-* Asst. gynec, H. A. Kelly's sani-
tarium and extern, Hopkins Hosp, 00-01; med.
investigator, children's bur. and assoc. med. di-
rector, refugee bur, Red Cross, Paris, 17-19.
A.A; Am. Med. Ass. Physiology of women;
blood pressure; respiration; menstruation; dys-
menorrhea; schematograph for recording pos-
ture; gallstones; muscular strength; personal
hygiene.
- Mosher, Dr. Edna**, University of New Mexico,
Albuquerque, N. Mex. *Entomology*. Kempt
Shore, N. S. B.S.A, Cornell, 08; M.S, Illi-
nois, 13, Ph.D, 15. Teacher, rural science
schools, N. S, 02-05; supervisor nature study
and sch. gardens, Hampton, Va, 08-10; instr.
nature study and sch. gardens, Gary, Ind, 10-
12; entom, Illinois, 15-18; Ohio State, 18-19;
prof. *biol, New Mexico, 19-* Instr. agr. and
nature study, State Nor. Inst, Va, summers, 09,
11; entom, lake lab. (Ohio), summer, 19; re-
search specialist, Maine Exp. Sta, summer, 15.
Governor-general's medal, 00. A.A; Entom.
Soc; Soc. Zool; Ass. Econ. Entom; Ecol. Soc;
Ohio Acad; Int. Entom. Soc; N. S. Entom. Soc.
Morphology and taxonomy of immature stages
of insects, especially Lepidoptera; grasses of
Illinois; Gramineae.
- Mosier, Prof. J(eremiah) G(eorge)**, 908 W. Illinois
St, Urbana, Ill. *Agronomy*. Pike Co, Ohio, Jan.
8, 62. B.S, Illinois, 93. Instr. *soil physics,*
Illinois, 02-04, asst. prof, 04-11, *prof. and chief
of dept, 11-* Soil physics; clay subsoils; cul-
tivation of corn; peat as fertilizer; climate of
Illinois.
- Moss, Dr. Sanford A(lexander)**, General Electric
Co, Lynn, Mass. *Engineering*. San Francisco,
Calif, Aug. 23, 72. B.S, California, 96, M.S,
00; Ph.D, Cornell, 03. Instr. eng, California,
97-98; mech. eng, Cornell, 01-03; *engineer,*
mech. research dept, *Gen. Elec. Co, Lynn, Mass,*
04- With Air Service, U.S.A, 17-19. A.A;
Physical Soc; Mech. Eng; Elec. Eng; Eng.
Educ. Mathematical engineering; engineering
thermodynamics.
- Moss, Prof. William L(orenzo)**, Harvard Medical
School, Boston, Mass. *Medicine*. Athens, Ga,
Aug. 23, 76. B.S, Georgia, 01; M.D, Hopkins,
05; Berlin, 07. Res. house officer, Hopkins
Hosp, 05-06, asst. physician, 06-07; instr. med,
Hopkins, 08-10, assoc, 10-14; asst. res. physi-
cian, Hopkins Hosp, 10-14; intern, State Inst.
Study Malignant Diseases, Buffalo, 14-15; *asst.
prof, dept. health, Yale, 17; dept. prev. med.
and hygiene, Harvard Med. Sch, 19-* In charge,
Harvard expd. to Peru, 16. Capt, major and
lieut. col, M. C, 17-19. Ass. Path. and Bact;
Soc. Clin. Invest; Am. Med. Ass; Soc. Trop.
Med; Ass. Tuber; assoc. Am. Physicians. Im-
munity; anaphylaxis; tuberculosis; hemorrhagic
diseases; blood transfusion; diphtheria; influ-
enza; pneumonia.
- Mote, Don C(arlos)**, Office of State Entomologist,
Phoenix, Ariz. *Entomology*. Greenville, Ohio,
Jan. 13, 87. B.S, Ohio State, 11; M.S, 12.

- Parasitologist, Ohio Exp. Sta., 12-19; *state entomologist, Ariz.*, 19- A.A.; Ohio Acad. Parasitology; bionomics of the cheese skipper and *Drosophila ampelophila*; distribution of Hypoderma; parasites of fowls and sheep.
- Motherwell, Robert Millford**, Dominion Observatory, Ottawa, Can. *Astronomy*. Millford, Man., Aug. 14, 81. B.A., Toronto, 07, M.A., 08. Observer, *Dominion Observatory*, 07-13, asst. astronomer, 13-19, *astronomer*, 19- Gold medal, Royal Astron. Soc. Can., 07. Astron. Soc.; Royal Astron. Soc. Can. (sec'y, Ottawa Centre). Double stars; occultations of stars by the moon; direct celestial photography; light variations of stars.
- Mott, Director William E(iton)**, Carnegie Institute of Technology, Pittsburgh, Pa. *Engineering*. Burlington, N. J., Jan. 24, 68. Pennsylvania, 84-85; B.S., Mass. Inst. Tech., 89. Asst. Mass. Inst. Tech., 89-90; practising civil engineer, 90-92; instr. civil eng., Cornell, 92-01, asst. prof., 01-05; assoc. prof. hydraul. eng., Mass. Inst. Tech., 05-09; prof. and head, dept. civil eng., *Carnegie Inst. Tech.*, 09-17, dean, sch. applied science, 17-19, *director, div. science and eng.*, 19- A.A.; Assoc. mem. Civil Eng.; Eng. Educ.; Forestry Ass.; West. Pa. Eng. Soc. Science and engineering.
- Mott, W(illiam) Roy**, 1586 Cohasset Ave., Cleveland, Ohio. *Electrochemistry*. Decorah, Iowa, Feb. 11, 80. B.S.(Electrochem. Eng.), Wisconsin, 03, M.S.(Chem. Eng.), 07; Cornell, 04. Research chemist, Carborundum Co., 05-06; instr. chem., Wisconsin, 07-08; *research chem. engineer, Nat. Carbon Co.*, 09- Lecturer illuminating eng., Case, 19-20. Electrochem. Soc.; Chem. Soc. (sec'y, Cleveland sect., 19-20); Soc. Motion Picture Eng.; Illum. Eng. Soc. Single potentials of zinc, halogens and alkali metals; arc images in chemical analysis; volatility of refractories; white light in motion picture photography; flame arc carbons and lamps.
- Mottier, Prof. David M(yers)**, Bloomington, Ind. **Botany*. Patriot, Ind., Sept. 4, 64. A.B., Indiana, 91, A.M., 92; Ph.D., Bonn, 97. Instr. bot., Indiana, 91-93, assoc. prof., 93-98, *prof.*, 98- A.A.; Soc. Nat.; Bot. Soc.; Bot. Cent. States; Nat. Cent. States; Ind. Acad. (pres, 07); Wash. Acad. Cytology and fecundation in Spermatophyta; embryology of archegoniates; centrifugal force upon the cell; cytology of reproductive cells; fecundation; plastids as permanent organs of the cell.
- Moulton, Prof. C(harles) Robert**, University of Missouri, Columbia, Mo. *Chemistry*. Clifton, Pa., Sept. 16, 84. B.S., Illinois, 07, fellow, 07; M.S.A., Missouri, 09, Ph.D., 11. Asst. agr. chem., Missouri, and Exp. Sta., 07-10, instr., 10-12, asst. prof., 12-18, *prof.*, 18- Asst. animal nutrition, inst. animal nutrition, Pa. State, 17-18. A.A.; Chem. Soc.; Agr. Chem. Agricultural chemistry; animal nutrition; nitrogenous bodies in meat and meat extracts; timothy and wheat; composition, maintenance, growth and energy metabolism of beef animals.
- Moulton, Prof. C(harles) W(illiam)**, 21 Barclay St., Poughkeepsie, N. Y. *Chemistry*. Elmira, N. Y., May 6, 59. A.B., Minnesota, 85; Ph.D., Hopkins, 89. Instr. chem. and physics, Shat-
- tuck Sch., Faribault, Minn., 85-87, 89-92; assoc. prof. chem., Vassar, 92-94, *prof.*, 94- Chem. Soc.; Soc. Chem. Indust.
- Moulton, Dudley**, City Hall, San Francisco, Calif. *Entomology*. San Jose, Calif., Dec. 29, 79. A.B., Stanford, 03, A.M., 06. County entomologist, Santa Clara Co., Calif., 04-06; agent and expert, bur. entom., U. S. Dept. Agr., 06-09; deputy commissioner, Calif. State Commission of Hort., 09-11; *hort. commissioner, San Francisco City and Co.*, 15- A.A. Scale insects. Thysanoptera of California; insects affecting California deciduous fruits; horticultural quarantine.
- Moulton, Prof. E(iton) J(ames)**, 909 Colfax St., Evanston, Ill. *Mathematics*. Le Roy, Mich., Aug. 4, 87. B.S., Chicago, 07, Ph.D., 13; A.M., Wisconsin, 10; Harvard, 10-11. Prof. math., Pritchett, 08-09; instr., Wisconsin, 09-10; Harvard, 10-11; *Northwestern*, 12-13, asst. prof., 13-17, *assoc. prof.*, 17- A.A.; Math. Soc. (acting sec'y, Chicago sect., 18); Math. Ass.; Astron. Soc. Rotating fluid bodies; mathematical analysis.
- Moulton, Dr. F(orest) R(ay)**, University of Chicago, Chicago, Ill. **Mathematics, Celestial mechanics*. LeRoy, Mich., April 29, 72. A.B., Albion, 94; Ph.D., Chicago, 99. Instr. astron., Albion, 92-94; asst. *Chicago*, 96-98, assoc., 98-00, instr., 00-03, asst. prof., 03-08, assoc. prof., 08-12, *prof.*, 12- Nat. Acad.; A.A.; Math. Soc. (assoc. ed., 'Trans.', 08-); Astron. Soc.; Am. Acad.; hon. cor. mem. British Ass.; fel. Royal Astron. Soc.; Circolo Mat. di Palermo. Resistance to comets passing through sun's corona; criteria of temporary stability of satellite motion; problem of four bodies; problem of n bodies; determination of orbits from spectroscopic observations; nebular hypothesis; general methods of determining orbits; foundations of geometry; periodic solutions of problem of three bodies; nebular hypothesis; convergence of series used in celestial mechanics; ballistics; differential equations; theory of functions of infinitely many variables.
- Mount, Prof. Geo(rge) H(aines)**, 2303 Franklin St., Cedar Falls, Iowa. *Psychology*. Fairfield, Iowa, May 1, 79. A.B., Parsons, 03; A.M., Iowa, 08, Ph.D., 10. Instr. science, high sch., Algona, Iowa, 03-05; principal schools, Kanawha, 05-07; asst. educ., Iowa, 08-10; *prof. psychol. and educ.*, Northern State Nor. Sch., Mich., 10-11; *psychol., Iowa State Teachers Col.*, 11- Asst. psychol., Iowa, summer, 09. Psychol. Ass.; Nat. Educ. Ass.; Iowa Acad. Musical talent and training; pitch discrimination.
- Mountcastle, Dr. H(arry) W(illiam)**, Western Reserve University, Cleveland, Ohio. *Physics*. Pittsburgh, Pa., Feb. 5, 75. B.S., Case, 97, M.S., 00; Paris, 98; A.M., Western Reserve, 01; Ph.D., Hopkins, 04. Instr. physics, Case, 97-02; assoc. Bryn Mawr, 04-06; research asst., N. Y. Telephone Co., 06-07; asst. prof. physics, *Western Reserve*, 07-11, assoc. prof., 11-14, *prof.*, 14-18, *physics and astron. and director, physical lab.*, 18- A.A. (sec'y, council, 12, gen. sec'y, 13); Physical Soc.; Elec. Eng.; Illum. Eng. Soc. Thermal conductivity of glass; the magnetic rotatory dispersion of sodium vapor; waves

along wires; high frequency oscillations; optical behavior of metals.

Mourhess, Charles A (Ibert), U. S. Coast and Geodetic Survey, Washington, D. C. *Geodesy*. Andover, N. Y., Feb. 1, 89. Clarkson Mem. Sch. Tech. Aid, *U. S. Coast and Geod. Surv.*, 10-11, *geod. computer*, 11- Instr. geod. and astron. summer sch. eng, Columbia, 13, 15, 17; Lieut. corps engineers, 17-19. Math. Ass; Wash. Soc. Eng. Triangulation.

Moyer, Prof. James Ambrose, State House, Boston, Mass. *Engineering*. Cedars, Pa, Sept. 13, 75. B.E, State Nor. Sch, West Chester, Pa, 93; B.S, Harvard, 99, Austin fellow, 00-01, A.M, 04. Draftsman for Commander Roy C. Smith, 99; instr. descriptive geom. and eng, Harvard, 01-04; engineer, turbine dept, and chief computer, research lab, Gen. Elec. Co, 05-07; statist. engineer, Westinghouse, Church, Kerr and Co, New York, 07-08; prof. mech. eng. in charge mech. and hydrog. laboratories, Michigan, 08-12; prof. mech. eng, Pa. State, 12-15; *director*, Mass. Dept. Educ, 15- Chairman, congressional commission on war invention, 17-19; advisory commission on educ, U.S.N, 19- A.A; Mech. Eng; Elec. Eng; Automotive Eng; Eng. Educ; Nat. Educ. Ass; Univ. Ext. Ass; Franklin Inst; Boston Soc. Civil Eng; Boston Math. and Physical Club; Boston Econ. Club; Verein Ing; Int. Inst. du Froid. Explosive mixtures in gas engine cylinders; continuous engine indicators; superheated steam; steam turbines; turbine air compressors; aspirators; stresses in disks; heat transmission as affected by velocities; earth pressures.

Muckenfuss, Prof. A(nthony) M(oultrie), Perth Amboy, N. J. *Chemistry*. Charleston, S. C, Aug. 5, 69. A.B, Wofford, 89, A.M, 90; Ph.D, Hopkins, 95. Prof. chem, Millsaps, 93-02; Arkansas, 02-05; Mississippi, 05-15; Emory, 15-20; *research chemist*, Roessler and Hasslacher Chem. Co, 20- State chemist, Ark; pres, Faculty Research Club, Arkansas, 06. A.A; Chem. Soc. (chairman, Ga. sect, 20); Soc. Test. Mat. Oils, paints and pigments; parasulphamin benzoic acid; mineral and industrial resources of Mississippi; fertilizers in Arkansas; a new test for paint; foods.

Mudd, Dr. Harvey G(ilmer), Humboldt Building, St. Louis, Mo. *Surgery*. St. Louis, Aug. 29, 57. M.D, Washington (St. Louis), 81. *Prof. clin. surg. med. dept, Washington (St. Louis)*. A.A; Surg. Ass. (v. pres, 20); Ass. Genito-Urinary Surg. (pres, 08); Archeol. Inst; St. Louis Acad; Int. Ass. Urol; Int. Surg. Ass; Soc. Physico-Chirurg. di Palermo.

Mudd, S(eeley) W(intersmith), 1208 Hollingsworth Building, Los Angeles, Calif. *Mining engineering*. Kirkwood, Mo, Aug. 16, 61. E.M, Washington (St. Louis), 83. Assayer and supt, St. Louis Smelting and Ref. Co, 83-85; manager, Small Hopes Consol. Co. and Boreel Mining Co, 87-12; consulting engineer, N. J. Zinc Co, 02-04; Guggenheim Explor. Co. and Am. Smelt. and Ref. Co, 04-05; pres. and manager, Queen Esther Mining and Milling Co, 04-09; *consulting mining engineer*, 09- Trustee, Pomona. Col. staff, U.S.A, 18-19. Min. and Metal. Eng;

Inst. Min. and Metal; British Min. and Metal. Inst.

Mueller, Dr. Edward, Burton Halls, Dana St, Cambridge, Mass. *Chemistry*. South Bend, Ind, Oct. 16, 83. B.S, Purdue, 02; A.M, Harvard, 05, Ph.D, 07; Heidelberg, summer, 08. Anal. chemist, Norfolk and Western Railway Co, 02-04; asst. chem, Harvard, 05-07, instr. med. sch, Washington (St. Louis), 07-10; Tufts, 10-11; *Mass. Inst. Tech*, 11-13, asst. prof, 13-20; *assoc. prof*, 20- A.A; Chem. Soc; Am. Acad. Adsorption; atomic weights; aromatic character; hydrocarbon oils; ammoniates; biological chemistry.

Mueller, E(ugene) F, 3914 Huntington St, Washington, D. C. *Physics*. Denison, Iowa, Jan. 8, 83. A.B, Iowa, 02, 04-05; Harvard, 08-09. *Assoc. physicist*, Bur. of Standards, 05, 08, 09- A.A; Physical Soc; Wash. Acad; Wash. Philos. Soc. Thermometry; calorimetry.

Muenschner, Walter C(onrad Leopold), Cornell University, Ithaca, N. Y. *Botany*. Fischbach, Germany, May 30, 91. A.B, Wash. State, 14; A.M, Nebraska, 15; Cornell, 16-20. *Instr. biol.* and German, Wash. High Sch, Sioux Falls, S. Dak, 15-16; *bot*, N. Y. State Col. Agr, Cornell, 16- Asst. instr. marine bot, Puget Sound Marine Sta, summers, 15, 16; field asst. cereal investigations, bur. plant indust, U. S. Dept. Agr, 17. In U.S.A, 18-19. A.A; Bot. Soc; Ecol. Soc; S. Dak. Acad. Plant pathology and physiology; algology; taxonomy.

Muesebeck, C(arl) F(rederick) W(illiam), Cornell University, Ithaca, N. Y. *Entomology*. Medina, N. Y, Sept. 24, 94. B.S, Cornell, 16. With bur. entom, U. S. Dept. Agr, 16-18; *instr. parasitol*, Cornell, 18- A.A; Entom. Soc; Ass. Econ. Entom. Insect parasitism; parasitic Hymenoptera.

Muir, Roy C(ummings), International General Electric Co, Schenectady, N. Y. *Electrical engineering*. Arcadia, Wis, Dec. 30, 81. B.S. (E.E), Wisconsin, 05. *Engineer*, Int. Gen. Elec. Co, 19- A.A; Elec. Eng; Mech. Eng. Design and operation of electric power apparatus; turbine design.

Mulford, Prof. Walter, University of California, Berkeley, Calif. *Forestry*. Millville, N. J, Sept. 16, 77. B.S.A, Cornell, 99, F.E, 01. State forester, Conn, and forester, Conn. Exp. Sta, 01-04; forest agent, U. S. Bur. Forestry, 04-05; asst. prof. forestry, Michigan, 05-07, junior prof, 07-11; prof. and head of dept, Cornell, 11-14; *prof. and head of div, California*, 14-, *director, res. instruction, col. agr*, 19- Asst, Yale Forest Sch, summer, 02, autumn, 03; mem. board editors, 'Forestry Quarterly,' 02-04, 09; forest agent and forest expert, U. S. Forest Service, five summers. Soc. Foresters.

Mullan, Dr. Eugene H(agan), U. S. Public Service, Cape May, N. J. *Psychology*. Oakland, Calif, July 18, 79. B.S, St. John's (Md), 99; M.D, Maryland, 03. Asst. surgeon, U. S. Pub. Health Service, 05-09; passed asst. surgeon, 09-17, surgeon, 17-, *in charge, hosp. for mental diseases*, 19- Medico-Psychol. Ass. Psychiatry; mental hygiene; mental deficiency; mentality of rural school children and of immigrants; epilepsy; pupil conditions in immigrants.

- Mullenix, Prof. R(ollin) C(larke)**, 461 Washington St, Appleton, Wis. *Zoology*. La Valle, Wis. Nov. 26, 69. A.B. Wheaton, 95, A.M., 97; Chicago, summers, 95, 96, 01; Ph.D., Harvard, 08. Instr. chem. and biol. Wheaton, 95-97, *prof.*, 97-05; biol. Yankton, 08-11; *Lawrence*, 11-16, *zool.*, 16- Bowdoin prize and bronze medal, Harvard, 09; mem. ed. staff, 'Milwaukee Jour.', 19. A.A.; Soc. Zool. Nerve terminations in the ear of fishes; the neuro-fibrillae in the ear of birds and their connections.
- Muller, Dr. George P(aul)**, 1930 Spruce St, Philadelphia, Pa. *Surgery*. Philadelphia, June 29, 77. A.B. Cent. High Sch, Phila., 95; M.D. Pennsylvania, 99; M.S. Villanova, 16. *Assoc. surg.*, *med. sch.*, *Pennsylvania*, 10-, *prof.*, *grad. sch.*, 19- Surgeon, Misericordiae and St. Agnes Hospitals; consulting surgeon, Chester Co. Hosp. Surg. Ass; Clin. Surg. Soc; Col. Surg; Am. Med. Ass; Pediat. Soc; Phila. Col. Physicians. Clinical surgery.
- Muller, Prof. Hermann J(oseph)**, University of Texas, Austin, Texas. *Biology*. New York, Dec. 21, 90. A.B. Columbia, 10, A.M., 11, Ph.D., 16. Asst. physiol. Cornell, 11-12; *zool.*, Columbia, 12-15; instr. biol. Rice Inst., 15-18; *zool.*, Columbia, 18-20; *assoc. prof.*, *Texas*, 20- A.A.; Soc. Nat; Soc. Zool; Soc. Exp. Biol; fel. N. Y. Acad. Genetics.
- Müller, Prof. John Hughes**, University of Pennsylvania, Philadelphia, Pa. *Chemistry*. Philadelphia, Dec. 26, 82. A.M. Pennsylvania, 09, Ph.D., 10. Instr. chem. *Pennsylvania*, 10-19, *asst. prof. anal. chem.*, 19- Chem. Soc. Analytical and inorganic chemistry; atomic weights.
- Mulliken, Prof. S(amuel) P(arsons)**, 10 Harris St, Newburyport, Mass. **Chemistry*. Newburyport, Dec. 19, 64. B.S. Mass. Inst. Tech., 87; Ph.D., Leipzig, 90; fellow, Clark, 90-91. Asst. chem. Cincinnati, 88-89; assoc. Bryn Mawr, 91-92; instr. and acting head, dept. chem, Clark, 92-94; instr. and later asst. *prof. org. chem.*, *Mass. Inst. Tech.*, 95-13, *assoc. prof.*, 13- Major, C.W.S., 18-19. A.A.; Chem. Soc; Am. Acad. Organic chemistry; general method for identification of organic compounds by systematic procedure based on physical properties and chemical behavior.
- Mullikin, Dr. E(ichard) N(icholas)**, 9116 duPont Building, Wilmington, Del. *Chemistry*. Baltimore, Md, July 15, 88. A.B. Hopkins, 12, Ph.D., 15. Fellow, Mellon Inst., 15-16; chemist in charge pharmaceut. research and mfg, British Am. Chem. Co., 16-17; *special asst. to manager of dye div.*, *E. I. duPont de Nemours and Co.*, 17- Chem. Soc. Manufacture of dyestuffs, intermediates, heavy chemicals and pharmaceutical products.
- Mullin, R(obert) H(yndman)**, Vancouver General Hospital, Vancouver, B. C. Can. *Hygiene*. Hamilton, Ont, 77. B.A. Toronto, 99, M.B., 02. Asst. *prof. path. and bacter.*, Minnesota, 06-08, *assoc. prof.*, 08-10, *public health*, 10-15; *director*, *lab. div.*, *Minn. State Board of Health*, 10-15; *Nevada State Hygienic Lab.*, 15-17; *director*, *lab.*, *Vancouver Gen. Hosp.*, 17-; *prof. bacter.*, *British Columbia*, 17-, *pub. health*, 20- Demonstrator bacter, Toronto; bacteriologist, Provincial Board of Health laboratories, Ont. A.A.; Am. Med. Ass; Pub. Health Ass; Ass. Path. and Bact; Can. Pub. Health Ass; fel. Royal Sanit. Inst; fel. Royal Inst. Pub. Health. Public health.
- Mullins, Dr. G(eorge) W(alker)**, Columbia University, New York, N. Y. *Mathematics*. Fayetteville, Ark, Feb. 11, 81. A.B. Arkansas, 04; A.M. Columbia, 12, Ph.D., 17. *Prof. math.*, *Simmons (Tex)*, 05-12; instr. *Barnard, Columbia*, 12-19, *asst. prof.*, 19- Math. Soc.
- Mulsow, Prof. F(rederick) W(illiam)**, University of Chicago, Chicago, Ill. *Botany, Bacteriology*. Baldwin, Kans, 82. A.B. Baker, 11; fellow, Kansas, 13-14, A.M., 15; fellow, Chicago, 18-19, Ph.D., 19, M.D. Rush Med. Col., 20. Asst. state food bacteriologist, Kans, 14-15; *asst. prof. bacter.*, *Wash. State*, 15-16; *asst.*, *Chicago*, 17-18. A.A.
- Mumford, Dean F(rederick) B(lackmar)**, Columbia, Mo. *Agriculture*. Moscow, Mich, May 28, 68. B.S. Mich. Agr. Col., 91, M.S., 93; Leipzig, 00; Zürich, 01. Asst. Mich. Exp. Sta., 91-95, *asst. prof. agr.*, *Mich. Agr. Col.*, 93-95; *prof.*, *Missouri*, 95-04, acting dean, col. agr. and acting director, Exp. Sta., 03-05, *prof. animal husbandry*, 05-, *dean*, *col. agr. and director*, *Exp. Sta.*, 09. Chairman, Mo. Council Defense, Food Ad, Mo., 17-19. A.A. (councilor, 16); Soc. Prom. Agr. Sci; Soc. Animal Production. Animal husbandry.
- Mumford, Prof. Herbert W(indsor)**, Urbana, Ill. *Animal husbandry*. Moscow, Mich, Feb. 26, 71. Albion, 87-89; B.S. Mich. Agr. Col., 91. Instr. agr, Mich. Agr. Col., 95, *asst. prof.*, 96-97, *animal husbandry*, 97-98, *prof. agr. and experimenter with live stock*, 98-00; *prof. animal husbandry, Illinois, and chief in animal husbandry, Ill. Exp Sta.*, 01- A.A.; Soc. Prom. Agr. Sci; Soc. Animal Production; Econ. Ass; Ill. Acad. A comparison of fodders; the production and marketing of wool; comparison of silage and shock corn for beef production; market classes and grades of beef cattle; physical properties of meats; effects of feeds on the quality of pork; comparison of methods of feeding corn and clover for fattening steers; beef production; practical gardening and farming.
- Muncie, Dr. F(red) W(eaver)**, 2425 Belleview Ave, St. Louis, Mo. *Chemistry*. Centerville, Ind, July 31, 87. A.B. Wabash, 10, M.S., 13; Ph.D., Illinois, 15. Research agr. chemist, Ill. Exp. Sta., 11-17; *research chemist, Monsanto Chem. Works*, 17- Chem. Soc.
- Muncie, J(esse) H(oward)**, Girard, Pa. *Plant pathology*. Middlebury, Ind, July 3, 90. A.B. Wabash, 12; fellow, Cornell, 12-13, A.M., 16. Asst. botanist, Ohio Exp. Sta., 13; *asst. plant path.*, *Mich. Exp. Sta.*, 13-17, *research asst.*, 17; *path. inspector*, *plant disease surv.*, *bur. plant indust.*, *U. S. Dept. Agr.*, 17-18; *asst. prof. plant path.*, *Pa. State*, 18- A.A.; Bot. Soc; Phytopath. Soc. Diseases of vegetables.
- Munger, Thornton T(aft)**, U. S. Forest Service, Portland, Oregon. *Forestry*. North Adams, Mass, Oct. 3, 83. A.B. Yale, 05, M.F., 08. Forest asst. and later forest examiner, *U. S. Forest Service*, 08-, in charge, office of silviculture, 18- Lecturer nat. forest administration, forest sch,

Yale, 16; special lecturer, Washington (Seattle); Oregon Col. Soc. Foresters; Ecol. Soc. Silvics; silviculture; forest influences; forest mensuration.

Munn, M(alcolm) J(ohn), Cosden Building, Tulsa, Okla. *Geology*. Bodeaw, Ark, Aug. 2, 74. Arkansas. Topographical aid and asst. topographer, U. S. Geol. Surv. 02-04, asst. geologist, 04-13; oil geologist, 13-20; *pres*, *Munn Bros, Inc*, 21- Geol. Soc; Wash. Geol. Soc. General and economic geology, especially of oil and gas fields of the eastern part of the United States.

Munn, M(ancel) T(hornton), Experiment Station, Geneva, N. Y. *Botany*. Plainwell, Mich, Jan. 31, 87. B.S, Mich. Agr. Col, 12, fellow, 15-16, M.S, 17. *Assoc. botanist*, N. Y. *Exp. Sta*, Geneva, 12-15, 16- *Phytopath. Soc*; *Ass. Seed Anal.* Plant pathology; seeds.

Munn, W(illiam) F(aitoute), 518 Main St, East Orange, N. J. *Chemistry*. East Orange, Jan. 20, 91. Columbia. Chemist, W. Va. Pulp and Paper Co; Lederle Laboratories; Gen. Chem. Co; chief chem. and elec. engineer, Elec. Alloy Co; *chief chemist*, *Colura Pictures Corp.* A.A; Chem. Soc; Soc. Chem. Indust; Radio Club; N. Y. Chemists Club.

Munns, Edw(ard) N(orfolk), 114 Sansome St, San Francisco, Calif. *Forestry*. St. Louis, Mo, Jan. 13, 89. Michigan. Director, Converse Exp. Sta, U. S. *Forest Service*, 12-18, *forest examiner*, 18- A.A; Soc. Foresters; Ecol. Soc; West. Soc. Nat. Ecology.

Munroe, Prof. Charles E(dward), Forest Glen, Md. **Chemistry*. Cambridge, Mass, May 24, 49. B.S, Harvard, 71; Ph.D, George Washington, 94, LL.D, 14. Asst. chem, Harvard, 71-74; prof, U. S. Naval Acad, 74-86; chemist, U.S.N. Torpedo Sta. and War Col, 86-92; *prof. chem.* and dean, faculty of grad. studies, *George Washington*, 92-18, *emer. prof*, 18- Mem. U. S. Assay Commission, 85, 90, 93; visitor, U. S. Naval Acad, 98; special agent in charge chem. industries, census, 00, 05, 10; consulting chemist, U. S. Geol. Surv, 07-; collaborating chemist, U. S. Dept. Agr, 08-09; consulting expert explosives, U. S. Bur. Mines, 10-; chairman, committee explosives, Nat. Research Council, 18-; lecturer, Lowell Inst, 91-92. Commandant Order of Medjidje from Sultan of Turkey, 01. A.A. (see'y, subsect. chem, 80, v. pres, 88); Chem. Soc. (pres, 98); Soc. Chem. Indust; Philos. Soc; Naval Inst. (ed, 'Proc,' 80-86); Am. Acad; Wash. Acad; Wash. Chem. Soc. (pres, 95); London Chem. Soc; Chem. Gesell. Explosives; analytical methods; chemical technology.

Munroe, Prof. Henry S(mith), Litchfield, Conn. *Physics*. Brooklyn, N. Y, March 25, 50. B.S, Brooklyn Polytech, 67; E.M, Columbia, 69, Ph.D, 76, hon. Sc.D, 04. Asst. geologist, Ohio State Geol. Surv, 70-71; asst. chemist, U. S. Dept. Agr, 70-72; asst. geologist and mining engineer, Geol. Surv, Yesso, Japan, 72-75; *prof. geol.* and mining, Tokyo, 75-76; *adj. prof. surv.* and practical mining, Columbia, 77-91, *prof. mining*, 91-15, dean, faculty of applied science, 97-99. Min. Eng. (v. pres, 90-92); Min. and Metal. Soc. (pres, 08-09, see'y, 10-); Eng.

Educ. (pres, 09-10). Movement of mineral grains in water currents; subsidence of mineral grains in water and separation according to velocity; support of underground excavations in incoherent materials; economic physics.

Munson, Dr. J(ohn) P, 706 N. Anderson St, Ellensburg, Wash. *Zoology, Anatomy, Cytology*. Jolster, Norway, Feb. 21, 60. B.S, Wisconsin, 87, M.S, 92; Ph.B, Yale, 91; fellow, Chicago, 93-97, Ph.D, 97; hon. fellow, Clark, 97. Master in English, Luth. Nor. Sch, 89-91; in nat. sciences, Wis. Acad. 91-93; *head, dept. biol*, *Wash. State Nor. Sch*, 98- Director, dept. zool, Minnesota Seaside Sta; lecturer and mem. managing council, Puget Sound Marine Biol. Sta. Walker prize. A.A; Ass. Anat. The ovarian egg of *Limulus*; oogenesis of the tortoise; spermatogenesis of the butterfly; generation and degeneration of sex cells; anatomy of *Ophioglypha Sarsii*; minute structure of the chelonian brain; a walking cell; cytogenesis; cell division and differentiation; origin of sex; comparative cytology.

Munson, L(ewis) S(torms), E. I. duPont de Nemours and Co, Wilmington, Del. *Chemistry*. Corey, Mich, March 9, 73. B.S, Mich. Agr. Col, 97. Asst. chem, Mich. Exp. Sta, 97-99; chief of contracts lab, bur. chem, U. S. Dept. Agr, 99-06, chief, ink making div, bur. engraving and printing, 06-07; chemist, Ault and Wiborg Co, 07-18; *asst. gen. manager, dye works*, E. I. duPont de Nemours and Co, 18- Chem. Soc. Composition and adulteration of foods.

Munz, Dr. Philip A(lexander), Pomona College, Claremont, Calif. *Botany, Entomology*. Saratoga, Wyo, April 1, 92. A.B, Denver, 13, A.M, 14; Ph.D, Cornell, 17. Instr. biol, Denver, 13-14; asst, Cornell, 14-15, *bot*, 16-17; *asst. prof*, *Pomona*, 17- Cornell biol. exped. to the Southwest, summer, 17. A.A; Entom. Soc; Bot. Soc; Soc. Ichthyol. and Herp; Ecol. Soc. Herpetology; venation of Zygoptera; Anura; plant distribution and ecology in southern California.

Murbach, Dr. L(ouis), Castleton, Vt. *Biology*. Java, Ohio, July 5, 64. Ph.B, Michigan, 89, B.S, 90; Ph.D, Leipzig, 94; fellow, Chicago, 95. Teacher zool, high sch, Detroit, 90; instr, Michigan, 91; asst, Zool. Inst, Leipzig, 93; biol, Chicago, 95; head, dept. biol, high sch, Detroit, 96-19; Detroit Junior Co, 15-19; retired, 19. Assoc. ed, 'Sch. Science,' 01-; instr, Woods Hole, four seasons. A.A; Mich. Acad. Coelenterata; netting organs; life history of *Gonionemus*; *Hypolitus peregrinus*, n. s; Medusae from the coast of British Columbia and Alaska.

Murdoch, John, 16 High Rock Way, Allston, Mass. *Zoology, Ethnology*. New Orleans, La, July 9, 52. A.B, Harvard, 73, A.M, 76. Science teacher, high sch, Chelsea, Mass, 77-78; private tutor, Peekskill, N. Y, 78-80; acting prof. zool, Wisconsin, 80-81; naturalist, Point Barrow exped, 81-83; asst. librarian, U. S. Nat. Museum, 86-87; librarian, Smithsonian Inst, 87-92; *asst, catalog. dept*, *Boston Pub. Library*, 96- A.A; Anthropol. Ass; mem. Ornith. Union; Ethnol. Soc; Library Ass; Boston Soc. Nat. Hist; Nuttall Ornith. Club. Ethnology of the Eskimos.

Murdoch, Dr. Joseph, Belmont, Mass. *Geology*. Washington, D. C, Feb. 19, 90. A.B, Harvard,

- 11, M.S., 12, Ph.D., 15. Asst. secondary enrichment investigations, 13-15. Microscopical determination of opaque minerals.
- Murdoch, Dr. L(ester) H(ughes)**, Okeene, Okla. *Meteorology*. Peoria, Ill., Jan. 19, 69. Kans. State Nor. Sch., 87-90; M.D., George Washington, 06. Sect. director, U. S. Weather Bur., Salt Lake City, 99-02; Galveston, 03-04. Am. Med. Ass. Fluctuations in water level of Great Salt Lake; precipitation cycles.
- Murdock, Prof. Carleton C(hase)**, 505 E. Seneca St., Ithaca, N. Y. *Physics*. Cooperstown, N. Y., July 29, 84. B.S., Colgate, 07; A.M., Cornell, 10, Ph.D., 19. *Asst. prof. physics, Cornell, 19-* A.A. Photoelectric properties and polarization capacity of solutions of organic dyes.
- Murdock, H(arvey) E(llison)**, Bozeman, Mont. *Agricultural engineering*. Carroll, Ohio, Oct. 3, 79. B.S.(M.E.), Colorado, 06, M.E., 08, C.E., 11. Instr. theoret. and applied mech., Illinois, 06-12; irrig. engineer, U. S. Dept. Agr., 13-14; *agr. engineer, Montana, 14-* A.A.; Agr. Eng.; Eng. Educ. Strength of materials; irrigation; drainage; sewage disposal; timber treatment; tillage; farm power.
- Murlin, Prof. J(ohn) B(aymond)**, University of Rochester, Rochester, N. Y. **Physiology, Biology*. Auglaize Co., Ohio, April 30, 74. B.S., Ohio Wesleyan, 97, A.M., 99; fellow, Pennsylvania, 99-01, Ph.D., 01. Instr. physiol. and zool., Ohio Wesleyan, 96-98; prof. biol., Ursinus, 01-03; instr. physiol., Univ. and Bellevue Hosp. Med. Col., 03-06, asst. prof., 06-09; med. col., Cornell, 09-17; *prof. physiol. and director, dept. vital econ, Rochester, 17-* Lieut. Col., Sanit. C., and director, div. food and nutrition, med. dept., U.S.A., 17-19. A.A.; Physiol. Soc.; Soc. Zool.; Soc. Exp. Biol.; Soc. Biol. Chem.; Am. Med. Ass.; Pub. Health Ass. Absorption and secretion in Crustacea; nutritive value of gelatin; metabolism of pregnancy; energy metabolism of mother and child before and after birth; metabolism after pancreatectomy; carbohydrate metabolism; influence of fat on heat production; diet of soldiers in training camps.
- Murnaghan, Dr. Francis D(ominic)**, Johns Hopkins University, Baltimore, Md. *Mathematics*. Co. Tyrone, Ireland, Aug. 4, 93. B.A., National Univ., Ireland, 13, M.A., 14; Ph.D., Hopkins, 16. Instr. math., Rice Inst., 16-18; *assoc. applied math, Hopkins, 18-* Math. Soc.; Math. Ass. Applied mathematics; modern electrical theories; structure of the atom; aerodynamics.
- Murneck, Prof. A(ndrew) E(dward)**, Oregon Agricultural College, Corvallis, Oregon. *Horticulture*. Courland, Russia, May 24, 88. B.S., Oregon Col., 17; fellow, Iowa State, 17-18, M.S., 18. *Asst. hort. research, Oregon Col., 18-19, asst. prof., 19-* A.A.; Bot. Soc. Histology of pear fruit; relation of carbohydrates and nitrogen to fruitfulness.
- Murphey, Prof. H(oward) S(ylvester)**, 519 Welch Ave., Ames, Iowa. *Anatomy*. Coshocton Co., Ohio, Feb. 15, 83. D.V.M., Ohio State, 08. Asst. prof. vet. med., Iowa State, 09-11, assoc. prof., 11-13, *prof. vet. anat. and histol., 13-* A.A.; Ass. Anat.; Vet. Med. Ass. Veterinary histology.
- Murphy, Dr. E(dward) C(harles)**, Orchard Ave., Napa, Calif. *Civil engineering*. Croydon, Can., June 17, 59. B.C.E., Cornell, 84, M.S., 85, C.E., 92, Ph.D., 00. Asst. prof. civil eng., Kansas, 87-99; instr., Cornell, 01; *engineer, U. S. Geol. Surv., 03-* Civil Eng. Hydraulics; aerodynamics; accuracy of current meter work; laws of transportation of débris.
- Murphy, Dr. Fred T(owsley)**, Penobscot Building, Detroit, Mich. *Surgery*. Detroit, Oct. 23, 72. A.B., Yale, 97, hon. A.M., 14; M.D., Harvard, 01. Asst. anat., Harvard Med. Sch., 03-04, surg., 10-11; prof. surg., Washington (St. Louis), 11-19; surgeon-in-chief, Barnes and St. Louis Children's Hospitals, 11-19. Trustee, Phillips Acad., 08; mem. corp., Yale, 19- Surg. Ass.; Soc. Clin. Surg.; Am. Med. Ass. (see'y, surg. sect., 11).
- Murphy, Dr. James B(umgardner)**, Rockefeller Institute, New York, N. Y. **Pathology*. Morganton, N. C., Aug. 4, 84. B.S., North Carolina, 05; M.D., Hopkins, 09. Asst. Path. Inst., Ward's Island, N. Y., 09-10; *Rockefeller Inst., 10-12, assoc., 12-15, assoc. mem., 15-* A.A.; assoc. mem. Am. Physicians; Ass. Anat.; Soc. Exp. Path.; Soc. Bact.; Soc. Exp. Biol.; Harvey Soc.; Ass. Cancer Research (mem. council); Soc. Clin. Invest. Tissue grafting; cancer; tuberculosis; function of the lymphocytes and lymphoid tissue; biological action of X-ray.
- Murphy, Paul A.**, Charlottetown, P. E. I., Can. *Plant pathology*. Kilkenny, Ireland, 87. B.A., Trinity, Ireland, 13; Imp. Col. Sci., London, 13; Kaiserliche Biol. Anstalt, Berlin, 14; Cornell, 15. Tech. asst., seeds and plant disease div., Dept. Agr. and Tech. Instruction for Ireland, 12; traveling scholarship, England Board of Agr., 12-14; *asst. in charge, field lab. plant path, Exp. Sta., P. E. I. A.A.; Phytopath. Soc.* Diseases of potatoes; *Phytophthora erythroseptica*; *Phytophthora infestans*.
- Murphy, Robert Cushman**, Brooklyn Museum, Brooklyn, N. Y. *Zoology*. Brooklyn, April 29, 87. Ph.B., Brown, 11; A.M., Columbia, 18; Sc.D., Simmons, 20. Asst., Am. Museum Nat. Hist., 06-07; *curator, div. mammals and birds, museum, Brooklyn Inst., 11-17, dept. nat. science, 17-* Conductor, Am. Museum Nat. Hist. and Brooklyn Museum exped. to tropical and subantarctic Atlantic, 12-13; Peru, 19. A.A.; fel. Ornith. Union; Soc. Mammal; Soc. Ichthyol. and Herp.; N. Y. Acad.; N. Y. Linnean Soc. Zoögraphy; life history, morphology and distribution of marine vertebrates; fisheries.
- Murray, Prof. Cha(rlie)s**, Ames, Iowa. *Veterinary science*. Greenfield, Ohio, 76. B.S., Iowa State, 10, D.V.M., 12. Supt. pub. schools, 93-08; instr. bacter., Iowa State, 08-12, assoc. prof. vet. bacter., 12-16, *prof. vet. investigation, 16-* Soc. Bact.; Vet. Med. Ass.; U. S. Live Stock Sanit. Ass. Animal diseases; broncho-pneumonia and infectious abortion of swine.
- Murray, Prof. D(aniel) A(lexander)**, McGill University, Montreal, Can. *Mathematics*. Scotsburn, N. S., May 23, 62. B.A., Dalhousie, 84; Ph.D., Hopkins, 93. Tutor math., Dalhousie, 85-87; assoc. prof., N. Y. Univ., 90-94; instr., Cornell, 94-01; *prof., Dalhousie, 01-07; applied math, McGill, 07-* A.A.; Math. Soc. Differential equations.

- Murray, Prof. Elsie**, Sweet Briar, Va. *Psychology*. Athens, Pa, Sept. 17, 78. A.B., Cornell, 04, fellow, 06-07, Ph.D., 07; Columbia, 14-15. Asst. Vassar, 07-09; *prof. psychol. and philos.*, Wilson Col, 09-19; *Sweet Briar*, 19- Psychol. Ass. Memory imagery; organic and tactual sensation; imagery; experimental aesthetics; individual and vocational tests.
- Murray, Nat(haniel) C(arleton) (Davis)**, 1650 Irving St, Washington, D. C. *Statistics*. Cincinnati, Ohio, Nov. 29, 72. B.L., Cincinnati, 98. Market reporter, 92-94; asst. ed, 'Cincinnati Price Current,' 98-04; field agent, *bur. crop estimates, U. S. Dept. Agr.*, 04-07; *statistician and asst. chief*, 07- Statist. Ass; Econ. Ass. Agricultural statistics; rural economies.
- Murray, Prof. Thomas J(efferson)**, Washington State College, Pullman, Wash. *Bacteriology*. Nyack, N. Y., Oct. 13, 91. B.S., Col. City of N. Y., 13; M.S., Purdue, 15. Asst. bacter, Purdue, 13-15; assoc. prof. bacter, Va. Polytech, and assoc. bacteriologist, Exp. Sta., 15-18; *assoc. prof. bacter, Wash. State, and bacteriologist, Exp. Sta.*, 18- Soil bacteriology; effect of straw on biological activities of soil; inoculation of legumes.
- Murrill, Dr. Paul I(ngold)**, Plainfield, N. J. *Chemistry*. Hickory, N. C., July 11, 74. B.S., Kentucky, 95, M.S., 96; Ph.D., Michigan, 99, fellow, 99-00. Acting prof. chem, Ala. Polytech, 00-01; asst. chemist, nutrition investigations, U. S. Dept. Agr., 02-03; with E. I. duPont de Nemours Powder Co, 03-13; U. S. Rubber Co, 13-15; Tenn. Copper Co, 15-16; Fed. Dye and Chem. Co, 16-17; *chem. engineer and consulting chemist*, 17- Chem. Soc; Chem. Eng; Soc. Chem. Indust; N. Y. Chemists Club.
- Murrill, Dr. W(illiam) A(lphonso)**, New York Botanical Garden, Bronx Park, New York, N. Y. **Mycology*. Campbell Co, Va, Oct. 13, 69. B.S., Va. Polytech, 87; B.S., Randolph-Macon, 89, A.B., 90, A.M., 91; Ph.D., Cornell, 00. Prof. nat. science, Bowling Green (Va) Female Sem, 91-93; Wesleyan (Va) Female Inst, 93-97; asst. bot, Cornell, 98-99, asst. cryptogamic botanist, 99-00; instr. biol, De Witt Clinton High Sch, N. Y., 00-04; asst. curator, N. Y. Bot. Garden, 04-05, first asst, 06-07, asst. director, 09-19, *curator pub. instruction*, 19- Ed, 'Mycologia'; assoc. ed, 'North Am. Flora.' Phytopath. Soc; Bot. Soc; Torrey Bot. Club. Cytology; taxonomy of the Basidiomycetes; shade trees in cities; edible and poisonous mushrooms; nature and character books for children; explorations.
- Musgrave, Dr. W(illiam) E(verett)**, University of California Hospital, San Francisco, Calif. **Medicine*. Farmington, Tenn, Sept. 12, 69. M.D., George Washington. Pathologist, Bur. of Science, P. I; prof. clin. med. and applied therapeut. and chief of clinics, Philippine Med. Sch; *director of hospitals, California*. Am. Med. Ass; Pub. Health Ass; Soc. Trop. Med; Soc. Clin. Invest; Ass. Mil. Surg; Soc. de Path. Exot. Amebiasis; streptothricosis; trypanosomiasis; Malta fever; beriberi; etiology of arterio-sclerosis in the tropics; hospital organization and management.
- Musselman, Dr. Amos S(entman)**, Standard Oil Co, Whiting, Ind. *Chemistry*. Gettysburg, Pa, Oct. 15, 92. B.S., Pennsylvania Col, 12; Ph.D., Hopkins, 15. *Research chemist*, Richards and Co, 15-16; Texas Co, 16-17; *Standard Oil Co. of Indiana*, 17-
- Musselman, Dr. John Rogers**, Johns Hopkins University, Baltimore, Md. *Mathematics*. Gettysburg, Pa, Dec. 1, 90. A.B., Pennsylvania Col, 10, A.M., 13; Ph.D., Hopkins, 16. Instr. math, Illinois, 16-18; Washington (St. Louis), 19-20; *assoc. Hopkins*, 20- Statistician, Food Ad, 18; lieut. Gen. Staff, 18-19. Math. Soc; Math. Ass. Geometry; statistics.
- Musser, Dr. John H(err)**, Jr, 262 S. 21st St, Philadelphia, Pa. *Medicine*. Philadelphia, June 9, 83. B.S., Pennsylvania, 05, M.D., 08. *Physician, Phila. Gen. Hosp.*, 14-; *assoc. med. Pennsylv.*, 15-20, *asst. prof.*, 20- A.A.; Am. Physicians; Soc. Clin. Invest; Physiol. Soc.
- Mutchler, Andrew J(ohnson)**, American Museum of Natural History, New York, N. Y. *Zoology*. Phillipsburg, N. J. High sch. *Asst. dept. invert. zool. Am. Museum Nat. Hist.*, 13- Entom. Soc; N. Y. Entom. Soc. (librarian, 14, curator, 14-) Invertebrate zoology; Coleoptera.
- Muttkowski, Prof. Richard A(nton) von**, University of Idaho, Moscow, Idaho. *Entomology*. Milwaukee, March 4, 87. A.B., St. Lawrence Col, 04; St. Paul Sem, 04; A.B., Wisconsin, 13, Ph.D., 16. Asst. dept. invert. zool, Milwaukee Pub. Museum, 06-12; with Wis. Geol. and Nat. Hist. Surv, summers, 14-16; instr. zool, Wisconsin, summer, 16; investigator, U. S. Bur. Fisheries, summer, 17; instr. zool, Missouri, 16-17; Kansas State, 17-18; with intelligence div, Sig. C, A. E. F., 18-19; instr. zool, A. E. F. Univ, Beaune, 19; *asst. prof. zool. and entom. Idaho*, 19- A.A.; Entom. Soc; Ecol. Soc; Wis. Acad; Wis. Nat. Hist. Soc. (see'y, 09-12, ed, 10-18). Aquatics; physiology of insects; experimental zoology.
- Myers, Dr. Burton D(orr)**, Bloomington, Ind. **Histology*. Attica, Ohio, March 30, 70. Ph.B., Buchtel, 93; A.M., Cornell, 00; M.D., Leipzig, 02. Supt. schools, Greenwich, Ohio, 93-97; asst. physiol, Cornell, 98-00; *anat.*, Hopkins, 02-03, instr. 03; *assoc. prof. and head, dept. anat.*, Indiana, 03-05, junior prof, 05-06, *prof.*, 06-, *asst. dean*, 20- A.A.; Ass. Anat; Micros. Soc. (mem. exec. committee, 99); Am. Med. Ass; Am. Council Educ. Anatomy; embryology; optic chiasma; commissures on floor of third ventricle; the position of the normal stomach and observations on the movement of the diaphragm; histological changes in testes following vasectomy; development of certain features of the cerebellum.
- Myers, Prof. C(harles) E(mory)**, 304 W. Fairmount Ave, State College, Pa. *Horticulture*. Tivoli, Pa, Feb. 23, 82. B.S., Pa. State, 08; M.S., Cornell, 11. Asst. hort, Pa. State, 08-11, asst. prof, 11-18, *assoc. prof. plant breeding*, 18-20, *prof.*, 20- A.A.; Soc. Hort. Sci. Vegetable gardening; plant breeding.
- Myers, Dr. Chester Newton**, Valley Falls, N. Y. *Chemistry*. Lansingburg, N. Y., Nov. 7, 84. A.B., Williams, 06; fellow by courtesy, Hop-

- kins, 09-10, Ph.D, 10. Assoc. Carnegie Institution, 10-14; org. chem, Hopkins, 10-14; org. chemist, U. S. Pub. Health Service, 14-19, passed asst. surgeon (reserve), 19; *org. and biol. chemist, H. A. Metz Lab, 19-* Chem. Soc. Physical, biological and analytical chemistry; nutrition; chemotherapy; osmotic pressure; reaction velocities.
- Myers, Prof. C(lyde) H(adley)**, Wyckoff Road, Ithaca, N. Y. *Plant genetics*. Randolph, Ill, Feb. 6, 83. B.S, Ill. Wesleyan, 07, M.S, Illinois, 10; Ph.D, Cornell, 12. Asst. *plant breeding*, Illinois, 07-10; instr, *Cornell*, 11-12, asst. prof, 12-13, *prof, 13-* A.A; Soc. Agron. Bud variation and effect of environment.
- Myers, Dr. Garry C(leveland)**, Cleveland School of Education, Cleveland, Ohio. *Psychology*. Sylvan, Pa, July 15, 84. A.B, Ursinus, 09; Ph.D, Columbia, 13. Principal, pub. schools, Mercersburg, Pa, 10-11; Ursinus Acad, 11-12; prof. social sciences and psychol, Juniata, 12-14; Brooklyn Training Sch. for Teachers, 14-20; with *Cleveland Sch. of Educ, 21-* A.A; Psychol. Ass. Genetic psychology; incidental memory; recognition and recall; appetite.
- Myers, Prof. G(eorge) W(illiam)**, University of Chicago, Chicago, Ill. *Mathematics, Astronomy*. Champaign Co, Ill, April 30, 64. B.L, Illinois, 88, M.L, 91; Ph.D, Munich, 96. Instr. math. and astron, Illinois, 88-90, asst. prof, 90-95, assoc. prof, 95-97, prof, 97-00; head, dept. math. and astron, Chicago Inst, 00-01; *prof. teaching math. and astron, Chicago, 01-* Assoc. ed, 'Sch. Science,' 00-; course of study, sch. of educ, Chicago; math. ed, 'School Science and Math,' 05. A.A; Math. Soc; Astron. Soc; Circolo Mat. di Palermo; Astron. Gesell; Soc. astron. de France; Soc. math. de France; Soc. Belge d'Astron. Variable stars; mathematical pedagogy; teaching of astronomy and mathematics.
- Myers, Prof. Harold (Bunce)**, University of Oregon Medical School, Portland, Oregon. *Pharmacology*. Oberlin, Ohio, July 31, 86. A.B, Wisconsin, 08; M.D, Western Reserve, 11. Instr. *pharmacol*, Univ. and Bellevue Hosp. Med. Col, 12-15; *prof, Oregon, 15-*, asst. dean, *med. sch, 17-* Soc. Pharmacol. Tolerance of drugs; uranium glycosuria; diphtheria toxin.
- Myers, Dr. J(ay) A(rthur)**, University of Minnesota, Minneapolis, Minn. *Anatomy, Medicine*. Croton, Ohio, Nov. 25, 88. B.S, Ohio (Athens), 12, M.S, 13; Ph.D, Cornell, 14; M.D, Minnesota, 20. Instr. anat, Missouri, 13-14; *Minnesota, 14-18; int. med, 20-* Ass. Anat. Voice organ in birds; mammary gland; tuberculosis; vital lung capacity.
- Myers, Dr. Ralph E(merson)**, 257 Midland Ave, East Orange, N. J. *Chemistry*. Wooster, Ohio, June 13, 79. B.S, Buchtel, 01, M.S, 02; Ph.D, Pennsylvania, 04; Pa. State, 04-09. In charge electrochem. eng, Pa. State, 04-09; chem. engineer, in charge chemical research and tungsten filament manufacture, *Westinghouse Lamp Co, Bloomfield, N. J, 09-15, chief engineer in charge research and development, 15-* Chem. Eng; Chem. Soc; Electrochem. Soc; assoc. mem. Ceram. Soc. Electrochemistry; chemical engineering.
- Myers, Prof. Victor C(aryl)**, 303 East 20th St, New York, N. Y. *Physiological chemistry*. Buskirk Bridge, N. Y, April 13, 83. A.B, Wesleyan, 05, A.M, 07; fellow, Yale, 07-09, Ph.D, 09. Adj. prof. physiol. chem. and director, dept. physiol. chem. and exp. physiol, Albany Med. Col, 09-11; lecturer chem. path, *Post-Grad. Med. Sch. and Hosp, N. Y, 11-12, prof. path. chem, 12-* Acting director, laboratories, Post-Grad. Med. Sch. and Hosp, N. Y, 17-19. A.A; Physiol. Soc; Soc. Exp. Biol; Chem. Soc; Soc. Biol. Chem. (sec'y, 19-); Harvey Soc; Am. Med. Ass; Soc. de Chim. biol. Metabolism of creatin, creatinin and pyrimidins; pellagra; blood in health and disease.
- Myers, Prof. W(illiam) I(rving)**, New York State College of Agriculture, Ithaca, N. Y. *Agriculture*. Lowman, N. Y, Dec. 18, 91. B.S, Cornell, 14, Ph.D, 18. Instr. *farm management, Cornell, 14-18, asst. prof, 18-20, prof, 20-* Farm Econ. Ass; Econ. Ass. Agricultural economics; farm management.
- Myers, Prof. William S(hields)**, 25 Madison Ave, New York, N. Y. *Chemistry, Ceramics, Sanitation*. Albany, N. Y, Dec. 15, 66. B.S, Rutgers, 89, M.S, 94, Sc.D, 09. Asst. chemist, N. J. Exp. Sta, 88-89; chemist, Lister Agr. Chem. Works, 92-93; instr. and assoc. prof. chem, N. J. State Agr. Col, Rutgers, 93-01; *director, Nitrate of Soda Propaganda for U. S. and Colonies, 01-* Mem. N. J. Geol. Surv, 93-01; mayor, New Brunswick, 04-05. A.A; Chem. Soc; Soc. Chem. Indust; British Ass; fel. London Chem. Soc. Waters, soils and clays of New Jersey; effects upon crops of sodium nitrate.
- Myerson, Dr. Abraham**, 483 Beacon St, Boston, Mass. *Neurology*. Yanova, Russia, Nov. 23, 81. M.D, Tufts, 08. Instr. neuropath, St. Louis, 12-13; assoc. Harvard Med. Sch, 13-17; *asst. prof. neur, Tufts, 17-* Physician, various hospitals. Ass. Path. and Baet; Psychopath. Ass; Neur. Ass; Am. Med. Ass. Psychiatry; reflexes; syphilis; pathology of the sympathetic nervous system; inheritance of mental diseases; personality tests.
- Myrick, Dr. Raymond Thompson**, 1132 W. Park Ave, Whiting, Ind. *Chemistry*. Richmond, Ind, Nov. 16, 88. B.S, Earlham, 12; Ph.D, Hopkins, 16. Instr. chem, Earlham, 12-13; Hopkins, 15-16; with *Standard Oil Co. of Ind, 16-* Chem. Soc. Physical chemistry; colloidal phenomena; petroleum.

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- Nabours, Prof. Robert K(irkland)**, Kansas State Agricultural College, Manhattan, Kans. *Zoology*. Many, La, Nov. 5, 75. B.E, Chicago, 05, Ph.D, 11. Teacher nat. hist. and asst. curator, museum, Chicago, 05-09, asst. *zool, 09-10; instr, Kansas State, 10-11, asst. prof, 11-13, prof, 13-*, curator nat. hist. museum. Bokhara sheep investigation exped. to central Asia, 14. A.A; Soc. Nat; Soc. Zool; Kans. Acad. (pres, 19). Animal genetics; inheritance in Orthoptera; inheritance from crosses of Indian cattle on American cattle.
- Nachtrieb, Prof. Henry F(rancis)**, University of Minnesota, Minneapolis, Minn. *Zoology*. Near Galion, Ohio, May 11, 57. German Wallace, 74-77; B.S, Minnesota, 82; Hopkins, 83-85, fel-

- low, 84-85. Instr. zool. Minnesota, 86-87, *prof. animal biol., head of dept.*, 87-; curator, zool. museum, and zoologist, Minn. Geol. and Nat. Hist. Surv., 87-19. Ed., 'Zool. Reports,' Minn. Geol. and Nat. Hist. Surv. A.A.; Soc. Nat.; Soc. Zool. (v. pres, central sect, 10); Ass. Anat. Anatomy and embryology; echinoderms of Beaufort, N. C.; lateral line system of Polyodon; primitive pores of Polyodon spathula.
- Nagelvoort, Adriaan**, 52 E. 41st St, New York, N. Y. *Chemistry*. Sherman Co, Nebr, May 16, 83. A.B, Michigan, 05. *Chem. engineer*. Organizer, Nat. Expos. Chem. Industries, N. Y. City, 15. A.A.; Chem. Soc.; Electrochem. Soc.; N. Y. Chemists Club. Ore concentration.
- Nagle, Prof. James C.**, College Station, Tex. *Civil engineering*. Richmond, Va, Oct. 9, 65. B.S, Texas, 89, A.M., 92; C.E., Pittsburgh, 92; M.C.E., Cornell, 93. Rodman and asst. engineer on various railroads, 87-88; topographer, Tex. Geol. Surv., 89-90; *prof. civil eng.*, Tex. Col., 90-13, dean of eng., 11-13; chairman, Tex. State Board Water Engineers, 13-17; *prof. civil eng. and director*, *Tex. Eng. Exp. Sta.*, 17-; *mem. firm*, Nagle, Witt, Rollins Eng. Co., 19- Chief engineer, Brazos and Burleson R. R., 94; asst. chief engineer, H. E. and W. T. R. R., 99-00; agent and expert in irrig. investigations, U. S. Dept. Agr., 00-03; engineer, Burleson Co. Improv. Dist. No. 1, 09-10, 14-15, 20; consulting engineer. A.A.; Civil Eng.; Eng. Educ.; Ass. Eng. Societies; R. R. Eng.; Tex. Acad. (past pres). Railroad engineering; irrigation engineering; sediment carrying capacity of certain rivers as affecting irrigation storage reservoirs; river protection; sewerage.
- Nagler, Dr. Floyd A.** (ugust), 14 E. Court St. Iowa City, Iowa. *Engineering*. Howard City, Mich., Jan. 11, 92. B.S., Mich. Agr. Col., 14; M.S., Michigan, 15, Ph.D., 17. Asst. engineer, Fargo Eng. Co., 14-17; asst. hydraulic engineer with R. E. Horton, 17-20; *asst. prof. hydraulic eng.*, Iowa, 20- Second lieutenant, Sig. C., 17-18. A.A.; Civil Eng.; Meteor. Soc.; New Eng. Water Works Ass. Hydrology; obstruction of bridge piers to flow of water; Bazin weir formula.
- Nakahara, Dr. Waro**, Rockefeller Institute, New York, N. Y. *Medicine*. Tokyo, Japan, Sept. 14, 94. A.M., Cornell, 17, fellow, 17-18, Ph.D., 18. *Asst. Rockefeller Inst.*, 18- Biology; cancer.
- Narraway, J(ames) E(phraim)**, Department of Justice, Ottawa, Can. *Paleontology*. Guysborough, N. S., Can, June 11, 57. A.B., New Brunswick, 74. Paleont. Soc. Ontogeny of Ordovician fossils (trilobites and echinoderms).
- Nash, George V(alentine)**, N. Y. Botanical Garden, New York, N. Y. **Botany*. Brooklyn, N. Y., May 6, 64. *Botanist and horticulturist*, N. Y. Bot. Garden. A.A.; Bot. Soc.; Torrey Bot. Club; Hort. Soc. N. Y. Orchidaceae.
- Nason, Frank L(ewis)**, Box 6, West Haven, Conn. *Geology*. New London, Wis, May 12, 56. A.B., Amherst, 82, A.M. Instr. math, Rensselaer, 82-88; asst., N. J. Geol. Surv., 88-91; Mo. Geol. Surv., 91-92; consulting geologist and mining engineer, 92-; consulting mining geologist, N. J. Zinc Co., 06-; consulting geologist, Witherbee, Sherman and Co., 07-; Port Henry Iron Ore Co, Replogle Steel Co, and Chateaugay Ore and Iron Co., 19- A.A.; Geol. Soc.; Min. Eng. Structural economic geology; ore deposits; diamond drilling for magnetic iron ore.
- Nathanson, Prof. J(onas) B(ernard)**, Carnegie Institute of Technology, Pittsburgh, Pa. *Physics*. Vilna, Russia, Sept. 5, 89. A.B., Ohio State, 12; A.M., Illinois, 13, Ph.D., 16. Asst. physics, Illinois, 13-16; instr., Carnegie Inst. Tech., 16-19, asst. prof., 19- Physical Soc. Optical properties of alkali metals.
- Naylor, Prof. Joseph P.**, DePauw University, Greencastle, Ind. *Physics*. Pennsville, Ohio, April 4, 53. M.S., Indiana, 85. Instr. physics, high sch., Indianapolis, 83-15; assoc. prof., Indiana, 85-87, *prof.*, 87-91; DePauw, 91- Research prof. physics, affiliated colleges of Ind., 17- Physical Soc.; fel. Ind. Acad. (pres, 12); Ind. Sci. Teachers (pres, 13). Lecture and laboratory apparatus; heat in radioactive transformations.
- Neal, Prof. Herbert V(incent)**, Tufts College, Mass. **Biology*. Lewiston, Maine, April 3, 69. A.B., Bates, 90; A.B., Harvard, 93, A.M., Ph.D., 96; studied under Kupffer, 96-97. Master hist. and Latin, St. Paul's Sch., 90-92; asst. zool., Harvard and Radeliffe, 93-95; *prof. biol.*, Knox, 97-13; *zool.*, Tufts, 13- Asst. director, Harpswell Lab, So. Harpswell, Maine, 08; curator, Barnum Museum. A.A. (sec'y, F); Soc. Nat.; Soc. Zool. (sec'y, central sect, 10); Ass. Anat.; Am. Acad.; Ill. Acad.; Boston Soc. Nat. Hist. Morphology of vertebrate head; development of hypoglossus musculature; histogenesis of ventral nerves; development and histogenesis of nerves in Acanthias; history of eye muscles and eye muscle nerves; neuromeres and metamereres.
- Neal, Prof. R(oland)**, Drury College, Springfield, Mo. *Chemistry*. Clearfield, Iowa, Oct. 10, 83. A.B., Cornell, 04, A.M., 07; Ph.D., Stanford, 15. *Prof. science*, Dakota Wesleyan, 07-09; chem. and geol. Pacific (Calif), 10-20; chem., Drury, 20- Chem. Soc. Colloids; colloidal copper sulphid.
- Nebel, Prof. W(alter)**, 2503 Pierce St, Sioux City, Iowa. *Chemistry*. Milwaukee, Wis, Sept. 3, 85. B.S., Wisconsin, 09, M.S., 11, Ph.D., 17. Asst. chem., Wisconsin, 09-10, instr., 10-18, asst. prof., 18. Chem. director, Gen. Mfg. Co., 19-20. Chem. Soc. (sec'y, 18). Organic chemistry; alkaloids; cellulose acetate.
- Needham, Prof. James G(eorge)**, Ithaca, N. Y. **Biology*. Cass Co, Ill, March 13, 68. B.S., Knox, 91, M.S., 93; Hopkins, 93-94; Goldwin Smith fellow, Cornell, 96, Ph.D., 98. Instr. science, high sch., Jerseyville, Ill, 91-93; biol., Knox, 94-96; prof., Lake Forest, 98-07; *prof. entom. and limnol.*, Cornell, 07- Entomologist in charge, N. Y. State Field Sta. for Study of Aquatic Insects, 00-; assoc. ed., 'Psyche.' A.A.; Soc. Nat.; Entom. Soc. (pres, 19); Fisheries Soc.; Okefinokee Soc. (pres, 20); N. Y. Entom. Soc. Fresh water biology; life histories of aquatic insects; systematic study of Perlidae, Ephemeridae and Odonata.
- Neff, Prof. F(rank) H(oward)**, Case School of Applied Science, Cleveland, Ohio. *Civil engineering*. Cleveland, July 30, 65. B.S.(C.E.),

- Case, 87, C.E. 92. Instr. French and civil eng, *Case*, 87-92, asst. prof. *civil eng*, 92-97, *prof*, 97- A.A.; Civil Eng; Eng. Educ; R. R. Eng; Soc. Test. Mat; Int. Ass. Test. Mat.
- Neher, Prof. F(red)**, Princeton, N. J. *Chemistry*. Troy, N. Y. April 30, 67. A.B. Princeton, 89, A.M. 91; fellow, Chicago, 96-98. Asst. chem, *Princeton*, 91-92, instr, 92-98, asst. prof. org. and anal. chem, 98-03, *prof. and head*, dept. chem, 03-14, *prof. org. chem*, 14- Chemist, U. S. Fish Commission, 90; consulting chemist, U. S. Bur. Mines, 17-18. A.A.; Chem. Soc. Determination of arsenic; derivatives of halogenated ethers and esters; war gases.
- Nehrling, Henry**, Gotha, Fla. *Ornithology, Horticulture, Botany*. Howard's Grove, Wis, May 9, 53. Nor. Sch. Addison, Ill, 69-73. Teacher, parochial schools, 73-87; sec'y and custodian, Milwaukee Pub. Museum, 90-03; *collaborator*, *bur. plant indust*, U. S. Dept. Agr, 06- Deputy collector, U. S. Customs, Milwaukee, 87-90. Fel. Ornith. Union; Wis. Acad; life mem. Fla. Hort. Soc; cor. mem. Nuttall Ornith. Club; hon. mem. Agassiz Ass; Berlin Ornith. Gesell. North American birds; Amaryllidaceae; Araceae; Bromeliaceae; Scitamineae; Palmae; semi-tropical plants growing in Florida.
- Neidle, Prof. M(arks)**, Care L. Sonneborn Sons, Inc, Belleville, N. J. *Chemistry*. Russia, 90. B.S. Col. City of N. Y, 11, fellow, 11-13; A.M. Columbia, 12, Ph.D. 13. Instr. anal. and physical chem, Pittsburgh, 13-15, asst. prof, 15-18; *chief chemist*, Sterling Varnish Co, 18-19; *paint and varnish div*, L. Sonneborn Sons, Inc, 19- Chem. Soc. Surface tension of aqueous solutions; adsorption; preparation and theory of colloidal solutions; inorganic gels.
- Neikirk, Dr. L(ewis) I(rving)**, 4723 21st Ave, N. E, Seattle, Wash. *Mathematics*. Central City, Colo, Dec. 10, 73. B.S. Colorado, 98, M.S. 01; Harrison fellow, Pennsylvania, 01-03, Ph.D. 03, research fellow, 03-05. Instr. *math*, Illinois, 05-11, *Washington (Seattle)*, 11-14, *asst. prof*, 14- A.A.; Math. Soc; Math. Ass. Algebra; calculus; calculus of variations; abstract groups; functions of infinite number of variables; functional variable.
- Neill, Dr. M(ather) H(umphrey)**, 3715 Woodley Road, Washington, D. C. *Medicine*. Westfield, N. J, May 21, 82. A.B. Amherst, 05; M.D. Harvard, 09. *Commissioned officer, hygienic lab*, U. S. Pub. Health Service, 14- Soc. Bact; Am. Med. Ass. Infectious diseases; pellagra; stream pollution.
- Neilson, Prof. Cha(rl)es Hugh**, St. Louis University School of Medicine, St. Louis, Mo. *Medicine*. Sunbury, Ohio, 72. A.B. Wesleyan, 94, A.M. 97; fellow, Chicago, 00, Ph.D. 03; M.D. Rush Med. Col. 05. Asst. physiol, Chicago, 01-02, *assoc*, 02-04; asst. city pathologist, St. Louis, 06; *assoc. prof. physiol. chem*, St. Louis, 04-07, *prof*, 07-11, *prof. med. and director of dept*, 11- On staff, Alexian Brothers' Hosp, 09-18; visiting physician, St. Louis City Hosp, 14-; internist, Mo. Baptist Sanatorium, 18- Am. Med. Ass; Soc. Biol. Chem; St. Louis Biol. Club; St. Louis Soc. Int. Med. Red cell resistance.
- Neish, Dr. Arthur C**, Queen's University, Kingston, Can. *Chemistry*. Kingston, Can, Nov. 5, 76. B.A. Queen's (Can), 08; A.M. Columbia, 00, Ph.D. 04. Asst. qual. anal, Columbia, 00-02, *tutor chem*, 03-09, *instr*, 10-14, *asst. prof*, 14-19; *assoc. prof*, *Queen's (Can)*, 19, *prof. and head of dept*, 20- Lecturer, exten. teaching, Columbia, 08-19; Dept. of Educ, N. Y. City; *instr. chem*, N. Y. evening high schools, 04-08. Chem. Soc; Soc. Chem. Indust; Can. Inst. Chem. Rare earths; thorium; cerium; precipitation of rare earths; milkweed.
- Nelms, Dr. W(illiam) S(tockton)**, Emory University, Atlanta, Ga. *Physics*. Cleburne, Tex, Feb. 28, 83. A.B. Southwestern, 03, A.M. 04; fellow, Columbia, 12-13, Ph.D. 13. *Prof. physics*, John Tarleton, 05-06; asst, Columbia, 08-12; asst. prof, Ga. Sch. Tech, 13-16; Southwestern, 16-17; *assoc. prof*, Ga. Sch. Tech, 17-18; *assoc. prof. and in charge of dept*, *Emory*, 19-, *prof*, 20- Lieut. ordnance dept, 18- A.A.; Physical Soc. Resonators for short electric waves.
- Nelson, Dr. Alfred L(ewis)**, 1208 Olivia Ave, Ann Arbor, Mich. *Mathematics*. Moray, Kans, Feb. 8, 91. A.B. Midland, 11; A.M. Kansas, 13; Ph.D. Chicago, 15. *Instr. math*, Kansas, 12; *Michigan*, 15- Math. Soc; Math. Ass; Circolo Mat. di Palermo. Projective differential geometry.
- Nelson, Prof. Aven**, Laramie, Wyo. **Botany*. Keokuk, Iowa, March 24, 59. A.B. M.S.D. Mo. State Nor. Sch, 83; M.S. Drury, 90; A.M. Harvard, 92; Ph.D. Denver, 04. Instr. English and biol, Drury, 83-85; principal pub. schools, Ferguson, Mo, 85-87; *prof. biol*, *Wyoming*, 87-15, *bot*, 15-, *pres*, 17- In charge, lab, Columbian Expos, 93; La. Purchase Expos, 04. A.A.; *assoc. Bot. Soc*; Soc. Hort. Sci; Wash. Biol. Soc; St. Louis Acad; Int. Ass. Bot. Systematic, physiological and economic botany.
- Nelson, Prof. C(arl) Ferdinand**, University of Kansas, Lawrence, Kans. *Physiological chemistry*. Mörlunda, Sweden, May 25, 82. A.B. Wisconsin, 08, A.M. 10, fellow, 11-12, Ph.D. 12; M.D. Rush Med. Col. 17. Instr. chem, Iowa, 08-11; Illinois, 12-13; asst. prof. *physiol. chem*, *Kansas*, 13-14, *assoc. prof*, 14-19, *prof. and head of dept*, 19- Chem. Soc; Am. Med. Ass; Soc. Biol. Chem; Kans. Acad. Osmosis; metabolism in muscular tissue; calcium metabolism.
- Nelson, E(dward) W(illiam)**, U. S. Department of Agriculture, Washington, D. C. **Ornithology, Mammalogy, Ethnology*. Manchester, N. H, May 8, 55. Cook Co. Nor. Sch, 75; ScD, George Washington, 20; A.M. Yale, 20. Field naturalist, U. S. Dept. Agr, 90-07, *chief field naturalist*, *biol. surv*, 07-13, in charge biol. investigations, 13-14, asst. chief, 14-16, *chief of bur*, 16- Naturalist, 'Corwin' arctic search exped, 81; Death Valley exped, 91; scientific explorations in Mexico, 92-06. A.A.; fel. Ornith. Union (pres, 08); Soc. Mammal. (v. pres, 19-); hon. mem. Cooper Ornith. Club; hon. mem. Calif. Acad; Wash. Acad. (v. pres, 12); Wash. Biol. Soc. (pres, 12); cor. mem. Soc. Mex. Hist. Nat. Birds and mammals of North America and Central America; Eskimos of Alaska; conservation of wild life.

- Nelson, E(lnathan) K(emper)**, U. S. Department of Agriculture, Washington, D. C. *Chemistry*. Cincinnati, Ohio, Nov. 25, 70. B.S., Illinois, 94. Chemist, Swift and Co, 95-02; Morris and Co, 03-04; anal. and consulting chemist, 04-09; asst. chemist, *bur. chem., U. S. Dept. Agr.*, 09-12, *chief, essential oils lab.*, 12- Chem. Soc. Essential oils; pungent principles.
- Nelson, Dr. Ja(me)s A(llen)**, R. F. D. 3, Mt. Vernon, Ohio. *Zoology, Entomology*. Urbana, Ohio, April 29, 75. Ph.B., Kenyon, 98; Ph.D., Pennsylvania, 03; hon. fellow, Cornell, 04-08. Asst. zool., Pennsylvania, 03-04; expert in apiculture, *bur. entom., U. S. Dept. Agr.*, 08-18, *collaborator*, 18- A.A.; Soc. Zool.; Entom. Soc.; Ass. Eeon. Entom.; Ohio Acad.; Wash. Entom. Soc.; Phila. Acad. Embryology and anatomy of *Dinophilus*; structure of palpi of male spiders; development of the honey bee.
- Nelson, James C(arlton)**, 531 N. Cottage St., Salem, Oregon. *Botany*. Grant, Ky, Dec. 11, 67. B.S., Hanover, 90, A.M., 93. Instr., Carthage, 91-92; Hull Acad., Hull, Iowa, 92-94; high sch., Princeton, Ill., 94-99; Dubuque, Iowa, 99-07; *principal*, Marshalltown, Iowa, 07-12; Wenatchee, Wash., 12-14; *Senior High Sch., Salem*, 14- Collaborator 'Bot. Abstracts.' Bot. Soc.; Fern Soc. Systematic botany; vascular plants of Oregon; botanical biography.
- Nelson, Prof. John M(aurice)**, Columbia University, New York, N. Y. *Chemistry*. West Point, Nebr., Oct. 19, 76. B.S., Nebraska, 01; Ph.D., Columbia, 07. Chemist, Nebr. Food Commission, 01-03; instr. *chem.*, Rose, 03-04; Rensselaer, 07; tutor, *Columbia*, 08-15, asst. prof., 15-16, *assoc. prof.*, 16- Chem. Soc. Hydrolysis of cane sugar; Grignard reaction; starch; derivatives of inosite; invertase; valence.
- Nelson, Prof. Martin**, Fayetteville, Ark. *Agriculture*. Seneca, Wis., Sept. 12, 71. B.S.A., Wisconsin, 05, M.S., 06. Field asst., dept. soils, Wisconsin, 06; adj. prof. field crops and soils, Nebraska, 06-07, *assoc. prof. field crops*, 07-08; *prof. agron., col. agr. and Exp. Sta., Arkansas*, 08- Soc. Agron. Agronomy; acidity of soils and its influence upon farm crops, upon ammonification and nitrification; cross inoculation of legumes; the physical and chemical requirements of Southern soils; the control of rice blight; breeding grains and cotton adapted to Arkansas conditions.
- Nelson, N(els) C(hristian)**, American Museum of Natural History, New York, N. Y. **Anthropology*. Denmark, April 9, 75. B.L., California, 07, M.L., 08. Asst. curator, museum anthrop., California, 09-12, instr. *anthrop.*, 10-12; *asst. curator, Am. Museum Nat. Hist.*, 12- Field asst., U. S. Geol. Surv., 08; lecturer, Archeol. Inst., 11; archeol. expeditions to San Francisco Bay region and to southwest. U. S., 12-17; Ky, Fla, Spain and France. A.A.; Anthropol. Ass.; Ethnol. Soc. The archeology of the San Francisco Bay region, southwestern United States, Kentucky, Florida, Spain and France.
- Nelson, Dr. N(elson) L(awrence) T.**, Goodhue, Minn. *Botany*. B.S., Carleton, 91; Ph.D., Chicago, 99. Principal, high sch., Pine Island, Minn., 91-93; supt. pub. schools, Benson, Minn., 94-96; dean, Defiance, 00-01; instr. bot., Cent. High Sch., St. Louis, 01-09; prof. biol., Des Moines, 09-12; Presbyterian (S. C.), 12-14; instr., Florida, 14-16; prof. biol. and geol., Omaha, 17-18; *assoc. prof. biol. and bot., Tex. Col.*, 18- A.A.; Bot. Cent. States; Sullivant Moss Chapter (sec'y, 08). Taxonomy; ecology; bryology; mycology.
- Nelson, R(alph) A(ugustus)**, 429 Crescent Ave., Buffalo, N. Y. *Chemistry*. Galesburg, Ill., Aug. 31, 88. B.S., Illinois, 15; M.S., Northwestern, 16. *Research chemist*, Ill. Exp. Sta., 15; *Nat. Aniline and Chem. Co.*, 16- Chem. Soc.; Buffalo Eng. Soc. Physiological and organic chemistry.
- Nelson, Prof. R(alph) E(mory)**, 232 Littleton St., West Lafayette, Ind. *Chemistry*. Fowler, Ind., Oct. 15, 86. B.S., Purdue, 11, M.S., 13; Ph.D., Chicago, 18. Asst. and later instr. *chem., Purdue*, 11-16, *asst. prof.*, 19- Lieut., C. W. S., 18. Chem. Soc.; Ind. Acad. Physical-organic and organic chemistry; molecular rearrangement.
- Nelson, Prof. Thurlow C(hristian)**, 85 S. Adelaide Ave., New Brunswick, N. J. *Zoology*. New Brunswick, Sept. 22, 90. B.S., Rutgers, 13; Ph.D., Wisconsin, 17. Asst., oyster culture lab., *N. J. Exp. Sta.*, 09-14, *asst. biologist*, 16-; *asst. prof. zool., Rutgers*, 19- Asst., Bur. Fisheries, summers, 14, 19. A.A.; Soc. Zool. Oyster culture; physiology of lamellibranch mollusks.
- Nelson, Prof. Victor E(manuel)**, Iowa State College, Ames, Iowa. *Chemistry*. Eau Claire, Wis., Jan. 21, 88. B.S., Wisconsin, 12, M.S., 14. Asst. agr. chem., Wisconsin, 12-14, instr., 14-17; *assoc.*, Hopkins, 17-19; *asst. prof. physiol. chem., Iowa State*, 19- Chem. Soc. Fermentation; animal nutrition.
- Nelson, Dr. Walter C(hadwick)**, National Sanatorium, Johnson City, Tenn. *Bacteriology*. Fall River, Mass., Feb. 20, 90. Ph.B., Brown, 12, A.M., 13, Ph.D., 17. Chemist, milk dept., Providence, 14-17; provisional physiol. chemist, N. Y. State Board of Health, 17; *director, lab., Johnson City Nat. Sanatorium*. Lieut. Sanit. C., 17-19. The gas bacillus in milk.
- Nelson, Wilbur A(rmisteal)**, Tennessee Geological Survey, Nashville, Tenn. *Economic geology*. Nashville, Tenn., Feb. 14, 89. B.S., Vanderbilt, 10, A.M., Stanford, 15. Asst. chem., Vanderbilt, 08-10; chemist, Tenn. Packing Co, 10-11; asst. geologist, Tenn. Geol. Surv., 11-14; econ. geologist, Nashville, Chattanooga and St. Louis Ry, 14-16; mining geologist, Paga Mining Co, 16-18; *state geologist, Tenn.*, 18- Asst. ed., 'Resources of Tenn.', 12-14; asst. geologist, Va. Geol. Surv., summer, 12; Tenn. Highway Commission, 18; exec. committee, advisory council, U. S. Board Surveys and Maps, 20. A.A.; Geol. Soc.; Ass. Petrol. Geol.; Seismol. Soc.; Geol. Soc. of Am. Univ.; Min. Eng.; Tenn. Acad. (sec'y, 11-13); Nashville Eng. Ass. Clays of west Tennessee; southern Tennessee coal field; minerals of Tennessee; natural bridges; Monteagle Wonder Cave; smoke.
- Ness, Helge**, Texas Experiment Station, College Station, Tex. *Horticulture*. Norway, Nov. 4, 61. B.S., Tex. Col., 89; M.S., Cornell, 98. Instr. hort. and bot., *Tex. Col.*, 91-99, prof. bot., 00-03, *horticulturist, Exp. Sta.*, 08- Soc. Hort. Sci.

- Plant breeding; breeding species of *Rubus* and *Quercus*.
- Neubauer, Ferdinand John**, International Latitude Observatory, Ukiah, Calif. *Astronomy*. Marienbad, Bohemia, May 30, 86. A.B., Oregon, 10, A.M., 12; Ph.D., California, 17. Instr. astron., California, 17; *astronomer in charge, Int. Latitude Observatory, U. S. Coast and Geod. Surv.*, 18— With U. S. Shipping Board, 17–18. A.A.; Astron. Soc.; Pacific Astron. Soc. Variation of latitude.
- Neumann, Felix (Jonathan)**, Army Medical Museum, Washington, D. C. *Medicine*. Königsberg, Prussia, Sept. 10, 58. Königsberg, 78–79. Journalist, Königsberg, Dantzic, Berlin, 80–86; foreign book trade, New York, Boston, Chicago, 86–00; with library of Congress, 00–07; *Army Med. Museum and Library*, 08— A.A.; Anthropol. Ass.; Wash. Anthropol. Soc. (councilor, 12—). Anthropology; medical bibliography; history of medicine; history of science.
- Newberry, Spencer Baird**, Sandusky Portland Cement Co., Cleveland, Ohio. *Chemistry*. Cleveland, May 11, 57. E.M., Columbia, 78, Ph.D., 79; Berlin and Paris, 80–82. Asst. prof. and acting prof. chem., Cornell, 82–92; v. pres. and manager, *Sandusky Cement Co.*, 92–13, pres. and gen. manager, 13— U. S. commissioner, Paris Expos., 89. Soc. Chem. Indust.; assoc. mem. Civil Eng. (mem. committee on uniform tests of cement); Ass. Port. Cement Mfrs. Chemistry of cement and allied subjects.
- Newbold, Prof. W(illiam) Romanie**, University of Pennsylvania, Philadelphia, Pa. **Philosophy*. Wilmington, Del., Nov. 20, 65. A.B., Pennsylvania, 87, Ph.D., 91. Teacher Latin, Cheltenham Mil. Acad., 87–89; instr., *Pennsylvania*, 89–91, lecturer *philos.*, 90–94, asst. prof., 94–03, *prof.*, 03—, dean, dept. philos., 96–04. Ed., psychol. dept., 'Am. Naturalist,' 95–96. Psychol. Ass.; Philos. Ass.; Philos. Soc. Suggestibility, automatism and kindred phenomena; Aristotle's logic, metaphysics and psychology; Pythagoreanism; Greek theories of sound and consonance; gnosticism; Roger Bacon.
- Newburgh, Prof. L(ouis) H(arry)**, University Hospital, Ann Arbor, Mich. *Medicine*. Cincinnati, Ohio, June 17, 83. A.B., Harvard, 04, M.D., 08. Asst. internal med., Harvard Med. Sch., 12–16; asst. visiting physician, Mass. Gen. Hosp., 12–16; asst. prof. *internal med.*, *Michigan*, 16–18, *assoc. prof.*, 18—, *acting head of dept.*, 17— Am. Physicians; Soc. Clin. Invest.; Am. Med. Ass. Experimental medicine; use of strychnin in cardio-vascular disturbances; pneumonia; Bright's disease.
- Newcomb, Prof. J(ohn) L(loyd)**, University, Va. *Civil engineering*. Sassafras, Va., Dec. 18, 81. A.B., William and Mary, 00; C.E., Virginia, 03. Asst. engineer, Norfolk and South. R. R. Co., 03–04, div. engineer, 04–05; adj. prof. *civil eng.*, *Virginia*, 05–09, *assoc. prof.*, 09–10, *prof.*, 10— Consulting engineer, 05—; supervisor, S.A.T.C., 18. Eng. Educ.
- Newcombe, Prof. Frederick C(harles)**, 9 Geddes Heights, Ann Arbor, Mich. **Plant physiology*. Flint, Mich., May 11, 58. B.S., Michigan, 90; Ph.D., Leipzig, 93. Teacher, Mich. Sch. for Deaf, 80–87; instr. *bot.*, *Michigan*, 90–02, asst. prof., 93–97, junior prof., 97–05, *prof.*, 05— Int. Cong. Arts and Science, St. Louis, 04 (sec'y, sect. plant physiol.); ed-in-chief, 'Am. Jour. Bot.,' 14–17. A.A. (sec'y, G, 97); Soc. Nat.; Bot. Soc. (pres, 17); Bot. Cent. States (pres, 06). Perennial mycelium blackberry rust; influence of mechanical resistance on life period of cells; cause and condition of lysigenous cavity formation; regulatory formation of mechanical tissue; rheotropism of roots; klinostats and centrifuges for research; geotropic response; sensitive life of *Asparagus plumosus*; the behavior of twining plants in darkness; behavior of plants in unventilated chambers.
- Newcomer, H(arry) S(idney)**, 4401 Market St., Philadelphia, Pa. *Medicine*. Willets Point, N. Y., Oct. 16, 87. A.B., Wisconsin, 09, fellow, 10–11, A.M., 10, 11–12; Freiburg, 12–13; M.D., Hopkins, 15; Tübingen, 14. A.A.; Math. Soc.; Physical Soc. Biophysics.
- Newell, Dr. Franklin S(pilman)**, 443 Beacon St., Boston, Mass. *Medicine*. Roxbury, Mass., April 30, 71. A.B., Harvard, M.D., 96. Obstetrician, Mass. Gen. Hosp.; visiting surgeon, Boston City Hosp.; asst. visiting physician, Boston Lying-in Hosp.; asst. prof. obstet. and gynec., *Harvard Med. Sch. clin. prof. obstet.*, 18— Am. Med. Ass.; Gynec. Soc.; Gynec. Club; Col. Surg. Obstetrics.
- Newell, F(rederick) H(aynes)**, 1829 Phelps Place, N. W., Washington, D. C. **Hydrography*. Bradford, Pa., March 5, 62. B.S., Mass. Inst. Tech., 85; D.Eng., Case, 12. Hydraulic engineer, U. S. Geol. Surv., 88–90, hydrographer, 90–02, chief engineer, 02–07; director, U. S. Reclamation Service, 07–14, prof. civil eng., Illinois, 14–20; *consulting engineer*, 20— Mem. U. S. Land Commission; U. S. Inland Waterways Commission; Nat. Advisory Board for Fuels and Structural Materials; Eng. Council, 18; Nat. Research Council. Civil Eng.; Mech. Eng.; Eng. Ass. (pres, 20); Forestry Ass.; West. Soc. Eng.; Ill. Soc. Eng.; Wash. Soc. Eng. (pres, 07); Wash. Acad. (v. pres, 07). Agriculture by irrigation; hydrography of arid regions; principles of irrigation engineering; natural resources of Hawaii.
- Newell, Prof. Lyman C(hurchill)**, 688 Boylston St., Boston, Mass. *Chemistry*. Pawtucket, R. I., Sept. 18, 67. Ph.B., Brown, 90, A.M., 91; Ph.D., Hopkins, 95. Instr. *chem.*, Brown, 90–91; high sch., Pawtucket, R. I., 91–92; Somerville, Mass., 95–98; nor. sch., Lowell, Mass., 98–04; asst. prof., *Boston*, 04–06, *prof.*, 06— A.A.; Chem. Soc.; New Eng. Ass. Chem. Teachers (pres, 98). Organic and historical chemistry.
- Newell, Wilmon**, Gainesville, Fla. *Entomology*. Hull, Iowa, March 4, 78. B.S., Iowa State, 97, M.S., 99; Sc.D., 20. Asst. entomologist, Iowa Exp. Sta., 97–99; Ohio Exp. Sta., 99–02; asst. entomologist and apiarist, Tex. Exp. Sta., 02; state entomologist, Ga., 03–04; entomologist, La. Exp. Stations, and sec'y and entomologist, State Crop Pest Commission, La., 05–09; prof. entom., Tex. Agr. Exp. Sta. and state entomologist, Tex., 10–15; *plant commissioner, Fla. State Plant Board*, 15—; dean, col. agr., *Florida*, and director, *Exp. Sta.*, 21— A.A.; Ass. Eeon. Entom. (pres, 20). Agriculture; apiculture; horticultural

quarantine; eradication of insects and plant diseases.

Newkirk, Dr. Burt L(eroy), University of Minnesota, Minneapolis, Minn. *Astronomy*. Ellenville, N. Y., May 1, 76. A.B., Minnesota, 97, A.M., 99; Ph.D., Munich, 02. Asst. astron., Minnesota, 98-00; Watson asst., California, 03-04, instr. math, 04-06; asst., Lick Observatory, 06-07; asst. prof. *math. and mech. col. eng.*, Minnesota, 07-20, *assoc. prof.*, 20-; A.A.; Astron. Soc.; Math. Soc.; Eng. Educ.; Astron. Gesell. Parallax of ring nebula in Lyra; orbits of Watson asteroids; tables for reduction of photographic measures; the Repsold measuring apparatus of the Student's Observatory of the University of California; gyroscopic effects; dynamic balance.

Newkirk, William B(entley), Corn Products Refining Co., Edgewater, N. J. *Chemistry*. Fall City, Nebr., Nov. 9, 88. A.B., Southern California, 10. Supt. Fed. Chem. Co., 10-14; research chemist, Am. Beet Sugar Co., 14-18; sugar technologist, Bur. Standards, 18-19; *research chemist, Corn Products Ref. Co.*, 19- Viscous materials; rare sugars; sugar manufacture.

Newland, David H(ale), State Educational Building, Albany, N. Y. *Geology*. Vienna, N. Y., April 7, 72. A.B., Hamilton, 94; Munich, 94; Heidelberg, 95-96; Columbia, 96-97. Temporary field asst., N. Y. State Geol. Surv., 97-98; literary and scientific work, 98-03; *assoc. ed.*, 'Eng. and Mining Jour.', 04; *asst. state geologist*, N. Y., 05- A.A.; Geol. Soc.; Min. Eng. Geology of magnetic iron ores of the Adirondacks; iron ores of the Clinton formation; mining and quarry industries of New York; geology and petrology of the Precambrian.

Newlands, James A(ndrew), 11 Laurel St., Hartford, Conn. *Chemistry, Bacteriology*. Edinburgh, Scotland, April 23, 77. A.B., Beloit, 03; Chicago, 03-04; Mass. Inst. Tech., 04-05. Asst. chemist, sanit. lab., Beloit, 03-04; sanit. research sta., Mass. Inst. Tech., 04-05; chemist, Souther Eng. Co., Hartford, Conn., 05; chemist and bacteriologist, *Conn. State Board of Health*, 05-07, *chemist*, 07- A.A.; Chem. Soc.; Pub. Health Ass.; Health League; New Eng. Waterworks Ass.; Middletown Sci. Ass. (sec'y, 06-08). The determination of nitrates in water; purification of Connecticut River water; explosive mixtures in kerosene lamps; sewage pollution of oyster grounds along the Connecticut coast.

Newman, Prof. Clifford Lewis, Federal Vocational Education Board, Atlanta, Ga. *Agriculture*. Columbus, Ga., July 25, 64. B.S., Ala. Polytech., 86, M.S., 87. Asst. prof. agr., Tennessee, 87-89; principal, North Ala. Agr. Sch., 89-91; asst. agriculturist, Ark. Exp. Sta., 91-97; prof. agr., Arkansas, 97-04; agron., Clemson, 04-08; agr., N. C. Col., 08-19; adviser agr., Fed. Vocational Educ. Board, 19-20; N. C. state farm, 20-21; *asst. ed.*, 'Prog. Farmer,' 21- Institute lecturer. Cotton and cow-pea breeding.

Newman, Prof. H(oratio) H(ackett), University of Chicago, Chicago, Ill. *Zoology*. Near Seale, Ala., March 19, 75. A.B., McMaster, 96; fellow, Chicago, 98-00, 04-05, Ph.D., 05. Instr. biol. and chem., Culver Mil. Acad., Culver, Ind., 00-

04; *zool.*, Mich., 05-08, asst. prof. elect., 08; prof., Texas, 08-11; *assoc. prof.*, Chicago, 11-17, *prof.*, 17-, *dean, colleges of science*, 15- Instr. zool., Woods Hole, 06, *physiol. staff*, 09. A.A.; Soc. Nat.; Soc. Zool. General physiology; experimental evolution; animal behavior; phylogeny of the chelonian carapace; respiration of the heart; process of heredity in fish hybrids; habits of tortoises; spawning behavior of fish; hermaphroditism in fish; the process of heredity in fish hybrids; behavior of Texas lizards; variation and heredity in armadillo; oogenesis and parthenogenesis in armadillo; teleost hybridology and teratology; echinoderm hybridology; biology of twins.

Newman, Prof. P(orter) J(oseph), 914 Leavenworth St., Manhattan, Kans. *Chemistry*. Osgood, Ind., Feb. 28, 86. B.S., Franklin (Ind.), 08, M.S., 10. Asst. chemist, Indianapolis Board of Health, 06-07; *asst. chem.*, Franklin (Ind.), 07-08; *Kansas State*, 08-10, instr., 10-12, asst. prof., 12-17, *assoc. prof.*, 18- A.A.; Chem. Soc.; Electrochem. Soc. Rare earths; proteins.

Newsom, Prof. J(ohn) F(lesher), Palo Alto, Calif. *Geology, Mining*. Elizabethtown, Ind., Sept. 6, 69. A.B., Indiana, 91; A.M., Stanford, 92, Ph.D., 01. Instr. geol., Indiana, 95-96, asst. prof., 96-98; mining, Stanford, 99-01, *assoc. prof.*, 01-09, *prof.*, 09-10. Asst. geologist, Ark., 91-93. A.A.; Soc. Nat.; Geol. Soc.; Min. Eng.; Min. and Metal. Soc.; Calif. Acad.; fel. London Geol. Soc. Geology of the Santa Cruz mountains of California.

Newson, Mrs. H. B. (Dr. Mary W(inston)), Washburn College, Topeka, Kans. *Mathematics*. Forreston, Ill., Aug. 7, 69. A.B., Wisconsin, 89; fellow, Bryn Mawr, 91-92; fellow by courtesy, Chicago, 92-93; Ass. Col. Alumnae fellow, 95; Ph.D., Göttingen, 96. Instr. math., Fox Lake, Wis., 89-91; high sch., St. Joseph, Mo., 96-97; *prof. math.*, Kansas State, 97-00; *asst. prof.*, Washburn, 13- Math. Soc.; Math. Ass. Hermite's form of Lamé's differential equation; Riemann's theory of differential equations.

Newton, Alfred James, 1070 Harvard St., Rochester, N. Y. *Chemistry*. London, England, Nov. 14, 73. London. Principal, London Co. Council Sch. Photograving and Lithog., 02-12; *supt. engraving dept.*, Eastman Kodak Co., 12- Optical Soc.; Chem. Soc.; Royal Photog. Soc. Photomechanical reproduction.

Newton, Prof. H(oward) D(ouglas), Storrs, Conn. *Chemistry*. Stockbridge, Mass., Jan. 14, 81. B.S., Boston, 04; Ph.D., Yale, 08. Asst. chem., Yale, 05-08; *in charge, chem. dept.*, Conn. Col., 08- A.A.; Chem. Soc. Titanium in analysis.

Nice, Dr. L(eonard) B(laine), University of Oklahoma, Norman, Okla. *Physiology*. Marshfield, Ohio, May 1, 82. Ph.B., Ohio, 08; fellow, Clark, 09-11, Ph.D., 11. Asst. *physiol.*, Clark, 08-11; instr., Harvard, 11-12; *prof.*, Oklahoma, 13- Soc. Nat.; fel. Okla. Acad. (v. pres, 16, sec'y, 17-). Effect of alcohol, nicotine and caffeine on white mice; book disinfection; physiology of respiration; tonus rhythms in diaphragm muscle.

Nice, Mrs. L. B. (Margaret M(orse)), Norman, Okla. *Biology, Psychology*. Amherst, Mass., Dec. 6, 83. A.B., Mt. Holyoke, 06; fellow,

- Clark, 07-09. Mem. Ornith. Union; fel. Okla. Acad. Food and nesting of birds; child psychology; children's vocabularies and imaginations; ambidexterity; delayed speech development.
- Nicholls, Dr. A(lbert) G(eorge)**, 6 Studley St, Halifax, N. S. Can. *Pathology, Internal medicine*. Shotley Bridge, Durham, England, April 16, 70. B.A., McGill, 90, M.A., 93, M.D., C.M., 94, D.Sc., 09; Erlangen, Prague and Vienna, 96-97. Lecturer path., McGill, 99-04, asst. prof., 04-14, lecturer med., 07-14; *prof. path. and bacter.*, Dalhousie, 14- Can. Med. Ass.; fel. Royal Soc. Can.; Montreal Medico-Chirurg. Soc. Chronic Bright's disease; multiple progressive hyaloserositis; curative effect of various normal and antitoxic sera on tuberculosis; hemorrhagic typhoid fever; 'dust-bodies' of the blood; paths of infection.
- Nichols, Dr. Edson H.**, 322 W. Anderson St, Hackensack, N. J. *Chemistry*. Camden, N. J., July 12, 86. A.B., Cornell, 08, Ph.D., 11. Instr. chem., Cornell, 09-11; *chief chemist*, Maywood Chem. Works, 13- Chem. Soc. Industrial chemistry.
- Nichols, Dr. Edward H(all)**, 294 Marlboro St, Boston, Mass. *Surgery*. Reading, Mass., Jan. 6, 64. A.B., Harvard, 86, A.M., M.D., 92. Asst. path., *Harvard Med. Sch.*, 96-98, demonstrator surg. path., 97-00, instr., 01-03, asst. prof. surg. path. and surg., 04-13, assoc. prof. surg., 14-16, *prof. clin. surg.*, 16- Junior asst. surgeon, Children's Hosp., 97-00; asst. visiting surgeon, Boston City Hosp., 97-; cancer investigation (Croft fund), 99-04; consulting surgeon, Quincy Hosp., 05- Surg. Ass.; Ass. Path. and Bact.; Ass. Cancer Research; Am. Med. Ass.; Am. Acad.; Boston Soc. Med. Sci. Pathology of surgical diseases; congenital dislocation of the hip joint; club foot; tuberculosis of bones and joints; acute infectious osteomyelitis; relation of blastomycetes to cancer; transplantation of tissue and its relation to cancer; arthritis deformans; repair of tissues.
- Nichols, Prof. Edward L(eamington)**, Cornell University, Ithaca, N. Y. **Experimental physics*. Leamington, England, Sept. 14, 54. B.S., Cornell, 75; Leipzig, 75-76; Berlin, 76-78; Ph.D., Göttingen, 79; fellow, Hopkins, 79-80; LL.D., Pennsylvania, 06; Sc.D., Dartmouth, 10. Prof. physics and chem., Central Univ. of Ky., 81-83; physics and astron., Kansas, 83-87; *physics*, Cornell, 87-19, *emer. prof.*, 19- Founder, 'Physical Rev.' and ed., 83-; sec'y, chamber of delegates, Elec. Cong., Chicago, 93; ed. dept. physics, 'Johnson's Cyclopaedia' and 'Webster's Diet'; mem. visiting committee, Bur. Standards, 01- Nat. Acad.; A.A. (sec'y, B, 89, v. pres, 93, pres, 07); Physical Soc. (pres, 07, 08); Optical Soc.; Illum. Eng. Soc.; Elec. Eng.; Philos. Soc.; assoc. Am. Acad.; hon. mem. Nat. Elec. Light Ass.; Kans. Acad. (pres, 85). Radiation; color; physiological optics; electricity; photometry; optical properties of carbon and of matter at low temperatures; fluorescence and phosphorescence.
- Nichols, Gen. E(dward) W(est)**, Lexington, Va. *Mathematics*. Petersburg, Va., June 27, 58. Va. Mil. Inst., 74-78. Asst. prof. math., Va. Mil. Inst., 78-81, prof. applied math., 82-90, math. and mech., 90-07, *supt.*, 07- Commission, Va. Geol. Surv., 08-; major, corps engineers, 17-18; major-gen., engineers, Va. volunteers, 19. Ass. Mil. Schools and Colleges (pres, 20); S. Educ. Ass. Series; railway means of transport.
- Nichols, Pres. E(rnest) F(ox)**, Massachusetts Institute of Technology, Cambridge, Mass. **Physics*. Leavenworth, Kans., June 1, 69. B.S., Kansas State, 88; fellow, Cornell, 91-92, M.S., 93, Sc.D., 97; hon. Sc.D., Dartmouth, 03; LL.D., Wesleyan, 09; Colgate, 09; Clark, 09; Vermont, 11; Pittsburgh, 12; Dennison, 14; Dartmouth, 16. Asst. chem., Kansas State, 88-89; prof. physics, Colgate, 92-98; Dartmouth, 98-03; exp. physics, Columbia, 03-09; pres., Dartmouth, 09-16; prof. physics, Yale, 16-20; director pure science, Nela Research Lab., 20-21; *pres.*, Mass. Inst. Tech., 21- Collaborator, 'Astrophys. Jour.', 98-; ed., 'Physical Rev.', 13-16; Adams fellow, Columbia, 05-07, research assoc., Carnegie Institution, 07-09; mem. Nat. Research Council. Rumford medal, Am. Acad., 04. Nat. Acad. (chairman, physics sect., 17-20); A.A. (sec'y, B, 01, v. pres, 03); Physical Soc.; Astron. Soc.; Philos. Soc.; Am. Acad. Radiation; radiometric researches in the remote infra-red spectrum; heat radiation of stars and planets; pressure of light.
- Nichols, Dr. George E(lwood)**, Yale University, New Haven, Conn. **Botany*. Southington, Conn., April 12, 82. A.B., Yale, 04, Ph.D., 09. Asst. bot., *Sheffield Sci. Sch.*, Yale, 04-09, instr., 09-15, *asst. prof.*, 15- Board of control, 'Bot. Abstracts,' 19- Bot. Soc.; Ecol. Soc. (v. pres, 20); Ass. Geog.; Torrey Bot. Club (assoc. ed., 19-); New Eng. Bot. Club; Conn. Bot. Soc.; Conn. Acad. Ecology; ecological classification; vegetation of northeastern America; bryophytes.
- Nichols, Dr. H(arold) W(illiam)**, Western Electric Co., New York, N. Y. *Physics, Engineering*. Sheffield, Iowa, Feb. 23, 86. B.S., Armour, 08, E.E., 11; M.S., Chicago, 09, Ph.D., 18. Asst. prof. elec. eng., Armour, 09-14; *engineer-physicist*, Western Elec. Co., 14- Elec. Eng.; Physical Soc.; Math. Soc.; Radio Eng. Electromagnetism.
- Nichols, Major H(enry) J(ames)**, Army Medical School, Washington, D. C. *Pathology*. Milwaukee, Wis., May 21, 77. A.B., Yale, 99, A.M., 01; M.D., Pennsylvania, 04; Army Med. Sch., 06. *Med. officer, U.S.A.*, 06-; *asst. prof. path. and bacter.*, Army Med. Sch., 10-14, 19-Medal, Bombay Med. Cong., 09. A.A.; Ass. Path. and Bact.; Soc. Trop. Med. (pres, 19). Experimental syphilis and yaws; typhoid carriers and vaccine; pneumococcus and streptococcus infections and carriers.
- Nichols, Henry W(indsor)**, 5465 Madison Ave., Chicago, Ill. *Geology*. Cohasset, Mass., Dec. 7, 68. B.S., Mass. Inst. Tech., 93, Ph.D., 19. Asst. geol., Mass. Inst. Tech., 94; curator econ. geol., *Field Museum Nat. Hist.*, 95-97, *asst. curator geol.*, 97- Agent, Am. commission, Paris Expos., 00. Min. Eng.; Chem. Soc.; Chicago Acad. Ore deposits of Columbia; concretions.
- Nichols, Dr. Herbert**, 219 Commonwealth Ave., Chestnut Hill, Mass. **Engineering, Physics, Psychology*. Walpole, N. H., Feb. 7, 52. B.S., Worcester, 71; Ph.D., Clark, 91. Engineer, Pa. R. R., 72-85; instr. physics, Harvard, 91-93;

- lecturer, Hopkins, 96. Psychology of time and space; ethics; philosophy; genetic geometry and physics; abridged cosmology.
- Nichols, John Treadwell**, American Museum of Natural History, New York, N. Y. *Zoology*. Jamaica Plain, Mass, June 11, 83. A.B, Harvard, 05. Asst. dept. ichthyol, *Am. Museum Nat. Hist.*, 09-13, asst. curator, 13-19, *assoc. curator recent fishes*, 19- Ed, 'Copeia,' A.A; Soc. Ichthyol. and Herp; Soc. Mammal; mem. Ornith. Union; Cooper Ornith. Club; Nuttall Ornith. Club; Wash. Biol. Soc; N. Y. Linnean Soc. Systematic and faunal ichthyology and ornithology.
- Nichols, Dr. M(ary) Louise**, 3221 Race St, Philadelphia, Pa. *Zoology*. Brookville, Pa, Feb. 19, 73. Pennsylvania, 90-91, 92-93, 95-01, Ph.D, 01; Woods Hole, 95-97, 00. Teacher zool, Phila. Nor. Sch, 93-02, zool. and geog, 02; head, dept. science, *South Phila. High Sch. for Girls*. A.A. Spermatogenesis of *Oniscus asellus* Linn, with especial reference to the history of the chromatin; chromosome relations in the spermatocyte of *Oniscus*; development of the pollen of *Sarracenia*; comparative studies in crustacean spermatogenesis.
- Nichols, Dr. Susan P(ercival)**, Oberlin College, Oberlin, Ohio. *Botany*. Brownville, Maine, May 12, 73. B.S, Cornell, 98, fellow, 98-99; scholar, Am. Women's table, Naples Zool. Sta, 99-00; fellow, Wisconsin, 02-03, Ph.D, 04. Teacher science, Houghton Sem, N. Y, 00-02; private sch, Science Hill, Ky, 04-08; instr. bot, Oberlin, 08-11, *assoc. prof.*, 11- A.A; Soc. Nat; Bot. Soc. The nature and origin of binucleated cells in some Basidiomycetes.
- Nichols, Dr. T(homas) F(int)**, Phoenix, Ariz. *Mathematics*. Pownal, Maine, Nov. 10, 70. A.B, Bowdoin, 92; fellow, Clark, 93-95, Ph.D, 95. Asst. math, Wisconsin, 95-96; asst. prof, Hamilton, 96-04, prof. applied math, 04-08; chief engineer, Ray Consol. Copper Co, 08. Asst. engineer, N. Y. State Engineer's Office, 05-08. Math. Soc. Geometry of plane algebraic curves; the Jacobian curve of a bundle.
- Nichols, Walter S(mith)**, 313 Washington St, Newark, N. J. *Actuarial science*. Newark, Nov. 23, 41. A.B, A.M, Princeton, 63. Ed, 'Insurance Monitor' and 'Insurance Law Jour,' 70-20; v. pres, *Ins. Publication Co.* Actuary and consulting actuary for various corporations; director and trustee of several corporations; lecturer ins. law, Yale. A.A; Math. Soc; Actuarial Soc. (v. pres); Acad. Polit. and Social Sci. Mathematics and law of contracts, especially as applied to insurance; meteorology.
- Nichols, Dr. William Henry**, 61 Broadway, New York, N. Y. **Chemistry, Metallurgy*. Brooklyn, N. Y, Jan. 9, 52. Brooklyn Polytech, 65-68; B.S, N. Y. Univ, 70, M.S, 73, LL.D, 20; LL.D, Lafayette, 04; Sc.D, Columbia, 04; Pittsburgh, 20. *Mfg. chemist, copper refiner and smelter*, 70- Chairman, Allied Chem. and Dye Corp; director, numerous companies. Eighth Int. Cong. Applied Chem. (pres, 12). A.A; Chem. Soc. (pres, 18, 19); Soc. Chem. Indust. (pres, 04); Electrochem. Soc; Min. Eng; Can. Min. Inst. Metallurgy of copper; industrial chemistry.
- Nicholson, Prof. H(enry) Hudson**, First National Bank Building, Lincoln, Nebr. **Chemistry, Mineralogy*. Rushford, Wis, May 25, 50. Antioch, 67-70; A.M, Lawrence, 74; Harvard, 84; Heidelberg and Berlin, 85. Prof. physical science, Nebr. State Nor. Sch, 74-82; head prof. chem, Nebraska, 82-05; consulting mining and indust. engineer, 05- Mem. U. S. Assay Commission, 99; consulting engineer, Ingold Placer Mining Co; Hamilton Mining Co; Standard Consol. Mining Co; Cuban Development Co. Chem. Soc; Min. Eng; Chem. Gesell. Substituted acrylic acids with electrolytic separation of iron, nickel and zinc; gold ores of the Colorado sulphid belt; the calorimetric assay of copper; distillation products of Cuban hard woods.
- Nicholson, Prof. John F(rederick)**, Bentonville, Ark. *Agriculture*. Broadhead, Wis, July 9, 78. B.S, Wisconsin, 00, M.S, 02. Asst. bacteriologist, Wisconsin, 00-02; N. Y. Exp. Sta, Geneva, 02-03; Okla. Col. and Exp. Sta, 03-05, prof. bot. and entom, 05-09; prof. bacter, Idaho, 09-14; v. director, Exp. Sta, 13-14; supervisor farm marketing, Frisco R. R, 15-16; prof. agron, Arizona, and agronomist, Exp. Sta, 16-17; marketing specialist, Ark. and U. S. Dept. Agr, 17; farmer. State nursery inspector, Okla, 05-09. Soc. Bact. Dairy bacteriology; nitrification in soils; castor oil bean; farm marketing.
- Nicholson, Rev. P(atrick) J(oseph)**, St. Francis Xavier's College, Antigonish, N. S. Can. *Physics*. Beaver Cove, N. S, Sept. 8, 87. A.B, St. Francis Xavier, 09; A.M, Hopkins, 11, fellow, 11-12, Ph.D, 13; theol. studies, 13-16. *Prof. physics, St. Francis Xavier*, 12- A.A; Physical Soc. Selenium.
- Nicholson, Dr. Seth B(arnes)**, 1078 N. Michigan Ave, Pasadena, Calif. *Astronomy*. Springfield, Ill, Nov. 12, 91. B.S, Drake, 12; Ph.D, California, 15. Instr. astron, California, 13-15; astronomer, Mt. Wilson Solar Observatory, 15- Astron. Soc. Solar astronomy; orbits of comets and asteroids; discovery and orbit of Jupiter's ninth satellite.
- Nickerson, Mrs. Margaret (Lewis)**, Minneapolis, Minn. **Histology, Embryology*. Akron, N. Y, Dec. 8, 70. A.B, Smith, 93; Ass. Col. Alumnae, fellow, 96-97; A.M, Radcliffe, 97; M.D, Minnesota, 04. Inst. histol. and embryol, med. dept, Minnesota, 98-06; physician, pub. schools, Minneapolis, 12-
- Nickerson, Dr. W(infield) S(cott)**, Long Lake, Minn. **Zoology, Medicine*. Cotuit, Mass, Nov. 2, 64. B.S, Harvard, 90, Sc.D, 94; M.D, Minnesota, 05. Acting prof. biol, Colorado, 94-95; instr, Northwestern, 95-96; histol. and embryol, Minnesota, 97-99, asst. prof, 99-11; practicing physician, 11- Capt, M.R.C. Morphology of Vermes; morphology of several trematodes; human helminthology.
- Nicolet, Prof. Ben H(arry)**, University of Chicago, Chicago, Ill. *Chemistry*. Kansas City, Mo, July 30, 90. A.B, Kansas, 10; Ph.D, Yale, 13. Fellow, Mellon Inst, 13-17; asst. prof. chem, Chicago, 19- Chief, org. div. lab, C.W.S, A.E.F, 18. Chem. Soc. Hydantoins; hydrogenation of fats and oils.

- Nietz, A(dolph) H.**, 393 Raines Park, Rochester, N. Y. *Chemistry*. Rochester, Minn, July 10, 89. A.B. Minnesota, 13, M.S., 15. Asst. instr. chem, Minnesota, 14-15; *research chemist, Eastman Research Lab*, 15-17, 19- Lieut. bur. aircraft production, 18. Chem. Soc. Photography; organic reducers; hydrogen electrode.
- Nieuwland, Prof. Julius Arthur**, University of Notre Dame, Notre Dame, Ind. *Chemistry, Botany*. Ghent, Belgium, Feb. 14, 78. A.B., Notre Dame, 99, Sc.D., 11. Ph.D., Catholic Univ., 04. Assoc. prof. org. chem, *Notre Dame*, 04-09, *prof. bot.*, 09-, *head of dept.*, 19-, *dean, faculty of science*. Ed. 'Mid. Nat.' Chem. Soc.; Chem. Gesell. Synthesis of organic compounds from acetylene; taxonomy and nomenclature of higher plants.
- Niles, Prof. Walter L(indsay)**, 893 Park Ave, New York, N. Y. *Medicine*. Lebanon, N. Y., Jan. 2, 78. Cornell, M.D., 02. Asst. *prof. clin. med, med. col, Cornell*; acting dean, 18-19, *dean*, 19- Attending physician, Bellevue Hosp; consulting physician, Mem. and Southampton Hospitals. A.A.; Soc. Exp. Biol.; Am. Med. Ass; Harvey Soc; N. Y. Acad. Med. Bacteriology; circulation; metabolism in diabetes.
- Nipher, Prof. Francis E(ugene)**, Kirkwood, St. Louis Co, Mo. **Physics*. Port Byron, N. Y., Dec. 10, 47. Ph.B., Iowa, 70, A.M., 73; LL.D., Washington (St. Louis), 05. Instr. physical lab, Iowa, 70-74; *prof. physics, Washington (St. Louis)*, 74- Int. Cong. Arts and Science, St. Louis, 04 (speaker and chairman, sect. physical cosmos). A.A.; (see'y, A, 78, see'y, B, 83, v. pres, 91); Physical Soc; Philos. Soc; St. Louis Acad. (pres, 85-90); Royal Soc. Arts; Soc. de Physique. Electricity; optics; photography; gravitating nebulae; wind pressures; ether waves by explosions; nature of electric discharges; relation between gravitation and electrical action; local variations in the electrical potential of the earth and the effect on gravitating masses above its surface; venation in the magnetic field of the earth.
- Noble, Prof. Charles Albert**, 2224 Piedmont Ave, Berkeley, Calif. *Mathematics*. Soquel, Calif, Aug. 14, 67. B.S., California, 89, fellow, 96-97; Ph.D., Göttingen, 01. Teacher *math*, high sch, Oakland, Calif, 89; Boys' High Sch, San Francisco, 90-93; instr, *California*, 97-00, 01-03, asst. prof, 03-11, assoc. proc, 11-19, *prof*, 19- Math. Soc. Partial differential equations; calculus of variations.
- Noble, G(ladwyn) K(ingsley)**, American Museum of Natural History, New York, N. Y. *Zoology*. Yonkers, N. Y., Sept. 20, 94. A.B., Harvard, 17, A.M., 18. Asst. *curator herp*, *Am. Museum Nat. Hist*, 19- Zoologist, Harvard exped. to Peru, 16. Soc. Ichthyol. and Herp; assoc. Ornith. Union; Nuttall Ornith. Club; N. Y. Linnean Soc; Boston Soc. Nat. Hist; Wash. Biol. Soc. Ornithology; herpetology; anatomy.
- Noble, Dr. L(evi) F.**, Valyermo, Calif. *Geology*. Auburn, N. Y., Nov. 13, 82. A.B., Yale, 05, A.M., 07, Ph.D., 09. Junior geologist, *U. S. Geol. Surv*, 09-12, asst. geologist, 12-17, assoc. geologist, 17-19, *geologist*, 19- A.A.; Geol. Soc; Am. Geog. Soc; Calif. Acad. Geology of the Grand Canyon, Arizona; geology of desert region of southeastern California; water resources of Hawaii; nitrates and potash in deserts of California, Nevada and Arizona.
- Noble, Prof. W(illis) C(larke)**, 338 E. 26th St, New York, N. Y. *Bacteriology, Hygiene*. Peking, China, May 19, 85. Ph.B., Yale, 06, Ph.D., 13. Instr. bacter, *Univ. and Bellevue Hosp. Med. Col*, 14, lecturer, 14-17, *asst. prof. hygiene*, 17- Bacteriologist, Dept. Health, N. Y. City, 13-14; N. Y. State Dept. Health, 18-; N. Y. State Commission on Ventilation, 13-16. Soc. Exp. Biol; Soc. Bact; Harvey Soc. The tetanus bacillus; effect of high temperatures on formation of immune bodies; effect of cold on infection; immunization with single strain and double strain vaccines; virulence test in diagnosis of diphtheria.
- Noguchi, Dr. Hideyo**, Rockefeller Institute, New York, N. Y. **Pathology*. Fukushima, Japan, Nov. 24, 76. M.D., Tokyo Med. Sch, 97; M.S., Pennsylvania, 07; titular prof, Imp. Govt. Japan; Sc.D., Tokyo, 14. Asst. Govt. Inst. for Infectious Diseases, Tokyo, 98-00; path, Pennsylvania, 01-03; research asst, Carnegie Institution, 03-04; asst, *Rockefeller Inst*, 04-07, assoc, 07-09, assoc. mem, 09-14, *mem*, 14- A.A.; Am. Physicians; Ass. Path. and Bact; Soc. Bact; Soc. Exp. Biol; Soc. Exp. Path; cor. mem. Vienna Soc. Internal Med; Soc. biol. de Paris; Norwegian Med. Soc. Snake venoms and antitoxins; hemolysis; cytotoxins; sero-diagnosis of syphilis; cultivation of Spirachetae; filterable viruses; general paralysis; yellow fever.
- Nolan, Prof. A(retas) W(ilbur)**, 705 Michigan Ave, Urbana, Ill. *Agriculture*. Edgar Co, Ill. A.B., Indiana, 05; M.S., West Virginia, 12. Principal, township high sch, Lima, Ind, 04-08; prof. forestry, West Virginia, 08-12; asst. prof. agr. exten, *Illinois*, 12-21, *prof. agr. educ*, 21- State supervisor agr. educ, Ill, 17- Lecturer rural educ, Chicago, summer, 14.
- Nomland, Dr. J(orgen) O.** 200. Bush St, San Francisco, Calif. *Geology*. Buxton, N. Dak, Aug. 24, 85. E.M., North Dakota, 10; M.S., California, 15, Ph.D., 16. *Geologist, Standard Oil Co*, 16- Paleont. Soc. Paleontology.
- Norbury, Dr. Frank Parsons**, 407 S. Seventh St, Springfield, Ill. *Psychiatry*. Beardstown, Ill, Aug. 5, 63. M.D., L. I. Col. Hosp, 88; A.M., Ill. Col, 03. Res. physician, Pa. Inst. for Feeble-Minded, 88; asst. physician, Ill. Cent. Hosp. for Insane, 88-93; physician-in-charge, Oak Lawn Retreat, 96-00; Norbury Sanatorium, 01-09; *supt*, Kankakee State Hosp, 09-11; alienist, state board administration, 11-13; *Norbury Sanatorium*, 13- Prof. mental and nervous diseases, Keokuk Med. Col, 04-08; acting med. director, Nat. Committee for Mental Hygiene. A.A.; Am. Med. Ass; Psychopath. Ass; Medico-Psychol. Ass; Psychoanal. Ass. Neuropsychiatry; exhaustion; social psychiatry.
- Norcross, Prof. Wilbur Harrington**, Carlisle, Pa. *Psychology*. Ralston, Pa, June 28, 82. A.B., Dickinson, 07, A.M., 12; Hopkins, 14-16, fellow, 16-17, Ph.D., 20. Teacher Greek and Latin, Dickinson Sem, 08-14, dean, 12-14; *prof. psychol, philos. and educ*, *Dickinson*, 16- Lieut. S. C, 18-19. Psychol. Ass. Experimental psychology; learning process; acquisition of skill.

- Norris, Dr. Charles**, 344 W. 72d St, New York, N. Y. *Pathology, Bacteriology*. Hoboken, N. J., Dec. 4, 67. Ph.B, Yale, 88; M.D, Columbia, 92, Alumnus fellow, Col. Physicians and Surg, 96-97, 00-02; Göttingen, 94-95; Vienna, 95-96. Intern, Roosevelt Hosp, 93-94; tutor path, Columbia, 97-99; instr, med. sch, Cornell, 99-00; asst. bacter. and hygiene, Columbia, 02-03, instr, 03-04; *director, laboratories of Bellevue and Allied Hospitals*, 04-; *chief med. examiner, N. Y. City*, 18-; *asst. prof. path, med. sch, Cornell*; *prof. gross anat, Fordham*. Ass. Path. and Baet; Soc. Exp. Biol; N. Y. Path. Soc; N. Y. Acad. Med. The bactericidal action of lymph taken from the thoracic duct of the dog; influence of fasting on the bactericidal action of the blood; cases in which the bacillus aerogenes capsulatus was isolated; broncho-pneumonia with streptothrix; suppurative phylophlebitis associated with anaerobic micro-organisms; bacterial precipitins; pneumococci in human mouth and lungs after death; 'red-leg' in frogs; spirochete and spirochetal infection in man; spirochetal infection of white rats; multiple systemic sarcoma of myelogenous origin; acromegalia; detection of typhoid carrier; anterior poliomyelitis; vaccine treatment in acute suppurative infections; wood alcohol poisoning; practical pathology; function of the medical examiner.
- Norris, Prof. G(eorge) W(illiam)**, University of Pennsylvania, Philadelphia, Pa. *Medicine*. Philadelphia, Pa, Jan. 1, 75. A.B, Pennsylvania, 95, M.D, 99. *Asst. prof. med, Pennsylvania*, 12- Am. Med. Ass; Am. Physicians; Phila. Path. Soc; fel. Phila. Col. Physicians; Phila. Acad. Cardiac and pulmonary pathology.
- Norris, Prof. H(arry) W(aldo)**, Grinnell, Iowa. *Zoology*. Pittsfield, N. H, Sept. 11, 62. A.B, Grinnell, 86, hon. A.M, 89; fellow, Cornell, 88-90; Nebraska, 90-91; Freiburg, 01-02. Instr. biol, Grinnell, 88, *prof*, 91-03, *zool*, 03- A.A; Soc. Zool; Micros. Soc; Iowa Acad. Development of the amphibian ear; cranial nerves of Amphiuma, Siren, the cecilians, the dogfish and ganoid fishes.
- Norris, H(enry) H(utchinson)**, Upper Montclair, N. J. *Electrical engineering*. Philadelphia, Pa, April 26, 73. Hopkins, 90, 92-94; Cornell, 94-96. Electrician, Rhodes Mfg. Co, 90-91; Arnold Elec. Mfg. Co, 91-92; asst. instr. elec. eng, Hopkins, 92-94; instr, Cornell, 96-01, asst. prof, 01-05, prof, 05-14, in charge of dept, 09-14; assoc. ed, '*Elec. Ry. Jour.*', 14-20, *managing ed*, 20- Supt. elec. railway tests. and mem. jury awards, La. Purchase Expos, 04; consulting engineer. Elec. Eng. (manager, 09-12); Elec. Ry. Ass; Eng. Educ. (sec'y, 09-14). The pedagogical treatment of engineering branches; electric railway operation and engineering.
- Norris, Prof. James F(lack)**, 106 Chestnut St, Boston, Mass. **Chemistry*. Baltimore, Md, Jan. 20, 71. A.B, Hopkins, 92, fellow, 94, Ph.D, 95. Asst. org. chem, Mass. Inst. Tech, 95-96, instr, 96-00, asst. prof, 00-04; *prof. chem*, Simmons (Mass), 04-15; Vanderbilt, 15-16; gen. chem, Mass. Inst. Tech, 16-20, *org. chem*, 20- Lecturer org. chem, Harvard, 12-14; Clark, 13-14; assoc, Naval Consulting Board, 16; in charge war gas offense chem. research, U. S. Bur. Mines, 17-18; lieut. col, C.W.S, 18-19; in charge, C.W.S. for England and inspection German chem. war gas factories. Chem. Soc. (asst. ed, 'Jour,' pres, New Eng. sect, 04, 05); Am. Acad. Principles of organic chemistry; experimental organic chemistry.
- Norris, Dr. R(obert) S(tewart)**, Santa Cruz, Calif. *Chemistry*. Belleville, Wis, Jan. 19, 69. B.S, California, 92; Ph.D, Hopkins, 97. Food expert, U. S. Dept. Agr, 97-98; instr. chem, California, 98-99; chemist and supt, Union Sugar Co, 99-07; chemist, Exp. Sta, Hawaiian Sugar Planters' Ass, 07-13, sugar technologist, 13-20. A.A; Chem. Soc; Hawaiian Chem. Ass; Hawaiian Eng. Ass. Sugar technology.
- Norris, R(obert) V(an) A(rsdale)**, 524 Second National Bank Building, Wilkes Barre, Pa. *Min-ing engineering*. Newark, N. J, May 2, 64. E.M, Columbia, 85, hon. M.S, 14. Engineer, Susquehanna Coal Co, 86-14; D. L. and W. R. R, 06-18. Lecturer coal mining, Harvard, 07-17; Columbia, 09, 14-16. A.A; Min. Eng. (mem. council, 08-10, v. pres, 11-12, chairman, anthracite sect); Civil Eng; Mech. Eng; Can. Min. Inst; British Inst. Min. Eng. Coal mining; ventilation; surface subsidence; hoisting; haulage; valuation; taxation.
- North, Dr. H(enry) B(riggs)**, York Metal and Alloy Co, York, Pa. *Chemistry*. Janesville, Wis, Jan. 14, 79. Ph.G, Wisconsin, 02, B.S, 04, A.M, 06; Zürich; Sc.D, Paris, 09. Instr. chem, Wisconsin, 04-07; assoc. prof, Rutgers, 10-17; *research, chemist, York Metal and Alloy Co*, 17- A.A; Chem. Soc; Soc. chim. de France. Reactions of thionyl and sulphuryl chlorids.
- Northcott, Prof. John A(rthur)**, 1050 Ackerman Ave, Syracuse, N. Y. *Mathematics*. Belleville, Can, June 20, 83. A.B; Toronto, 04, A.M, 05. Asst. master, St. Andrew's, 04-07; instr. *math*, Cheshire Sch, Cheshire, Conn, 07-09; Syracuse, 09-12, asst. prof, 12-13; instr, Columbia, 13-14; assoc. prof, Syracuse, 14-20, *prof*, 20- Math. Soc. Differential geometry.
- Northrop, Dr. John H(oward)**, Rockefeller Institute, New York, N. Y. *Biology, Biological chemistry*. Yonkers, N. Y, July, 91. B.S, Columbia, 12, A.M, 13, Ph.D, 15, fellow, 15-16. Asst, Rockefeller Inst, 16, assoc, 17-20, *assoc. mem*, 20- A.A; Chem. Soc; Soc. Exp. Biol. Starch; effect of temperature on insects; fermentation.
- Northrup, Prof. Ann Hero**, 1200 Pine St, New Orleans, La. *Chemistry*. New Orleans, April 21, 75. A.B, Vassar, 96, A.M, 97. Instr. *chem*, Pratt Inst, 98-03; acting prof, Newcomb Col, Tulane, 04-05, *prof*, 05- A.A.
- Northrup, Dr. E(dwin) F(itch)**, Princeton, N. J, and 636 E. State St, Trenton, N. J. **Physics*. Syracuse, N. Y, Feb. 23, 66. A.B, Amherst, 91; fellow, Hopkins, 93-95, Ph.D, 95. Prof. physics, Texas, 96-97; engineer, Rowland Telegraph Co, 98-02; sec'y, Leeds and Northup Co, Phila, 03-10; asst. prof. physics, Princeton, 10-20; pres, Pyroelectric Instrument Co, Trenton, N. J, 16-20; v. pres, *Electrothermic Corp*, 20- Bronze medal, Paris, 00; Longstreth medal, 12; Elliott Cresson medal, 16. A.A; Physical Soc; Electrochem. Soc; Elec.

- Eng; Franklin Inst. Alternating current telegraphy; electrical measurements; forces in electrical conductors; electrical conductivity at very high temperatures; the motions of vortex rings in fluids; temperature measurement, recording and control; the measurement of large alternating currents; high frequency induction furnaces.
- Northrup, Dr. W(illiam) P(erry)**, 61 E. 73d St, New York, N. Y. *Medicine*. Peterborough, N. Y., Jan. 11, 51. A.B., Hamilton, 72, A.M., 75; M.D., Columbia, 78; LL.D., Knox, 20. Instr. Greek, Knox, 72-76; prof. *pediat.*, *Univ. and Bellevue Hosp. Med. Col.*, 94-20, *emer. prof.*, 20- Attending and consulting physician, Presb. Hosp. and consulting physician, hospitals, Health Dept., N. Y. City. Emer. mem. Am. Physicians; *Pediat. Soc.* (past pres); fel. N. Y. Acad. Med. (past pres, *pediat. sect.*). Diphtheria; scurvy; infant feeding; infectious diseases; open-air treatment of pneumonia and other acute infectious diseases; roof play grounds.
- Norton, Prof. Arthur E(dwin)**, Harvard University, Cambridge, Mass. *Mechanical engineering*. Portland, Maine, June 26, 77. Ph.B., Brown, 00, hon. A.M., 20. *Asst. prof. eng. drawing*, *Harvard*, 10-20, *assoc. prof. mech. eng.*, 20- Mech. Eng.
- Norton, Arthur H(erbert)**, 22 Elm St., Portland, Maine. *Zoology*. St. George, Maine, April 19, 70. Pub. schools. *Curator*, *Portland Soc. Nat. Hist.*, 05- A.A.; mem. Ornith. Union; Nat. Ass. Audubon Soc.; cor. mem. New Eng. Bot. Club; Maine Ornith. Soc. (pres. and sec'y); Portland (Maine) Soc. Nat. Hist.; Josselyn Bot. Soc. (sec'y). Ornithology; bibliography of the natural history of Maine.
- Norton, Prof. C(harles) L(add)**, Massachusetts Institute of Technology, Cambridge, Mass. *Physics*. Springfield, Mass., Dec. 11, 70. B.S., Mass. Inst. Tech., 93. *Asst. physics*, *Mass. Inst. Tech.*, 93-95, instr., 95-99, *asst. prof.*, 99-06, *assoc. prof.*, 06-10, *prof.*, 10- A.A.; Mech. Eng.; Chem. Soc.; Soc. Test. Mat.; Eng. Educ.; Am. Acad. Industrial physics; thermal conductivity of earthy materials and of cold storage insulation.
- Norton, Jesse B(aker)**, Pedigreed Seed Co., Hartsville, S. C. *Botany*. Leadvale, Tenn., Aug. 19, 77. B.S., Kansas State, 97, M.S., 01. Scientific aid, U. S. Dept. Agr., 00; *asst. entomologist*, Kansas Exp. Sta., 00-02; *asst. physiologist*, bur. plant indust., U. S. Dept. Agr., 02-07; *asst. prof. plant breeding*, Cornell, 07-08; *physiologist*, bur. plant indust., U. S. Dept. Agr., 08-18, *agr. explorer*, 19-20; *plant breeder*, *Pedigreed Seed Co.*, 20- A.A.; Bot. Soc.; Soc. Hort. Sci.; Am. Geog. Soc.; Wash. Acad.; Wash. Biol. Soc.; Wash. Bot. Soc. Plant breeding; breeding disease resistant vegetables; Liliaceae.
- Norton, Prof. J(ohn) B(itting) S(mith)**, College Park, Md. *Botany*, *Phytopathology*. Cooke Co., Tenn., April 7, 72. B.S., Kansas State, 96, M.S., 00. *Asst. bot.*, Kansas Exp. Sta., 94-96; *bot. asst.*, Mo. Bot. Garden, 96-01; *prof. bot.* and *plant path.*, *Maryland*, 01-19, *mycol.*, 20- A.A.; *Phytopath. Soc.*; Wash. Bot. Soc.; Dahlia Soc. Flora of southwestern United States; Ustilag-
- inae; North American Euphorbiaceae; plant diseases; effect of wind on plants.
- Norton, Prof. J(ohn) F(oot)**, University of Chicago, Chicago, Ill. *Bacteriology*. Natick, Mass., June 23, 85. B.S., Mass. Inst. Tech., 06; Ph.D., Chicago, 11. *Asst. org. chem.*, Mass. Inst. Tech., 06-07, *indust. chem.*, 07-08; *assoc. chem.*, *univ. high sch.*, Chicago, 08-10, *asst. bacter.*, Chicago, 10-11; *instr. sanit. chem.*, Mass. Inst. Tech., 11-14, *asst. prof.*, 14-17; *bacter.*, *Chicago*, 17- A.A.; Soc. Bact.; Pub. Health Ass.; Chicago Inst. Med. Hygiene; disinfection; water examination.
- Norton, Dr. Thomas H(erbert)**, Prescott Road, White Plains, N. Y. *Chemistry*. Rushford, N. Y., June 30, 51. A.B., Hamilton, 73, hon. Sc.D., 95; Ph.D., Heidelberg, 75; Berlin, 76-77; Paris, 77-78. Manager, chem. works, Paris, 78-83; *prof. chem.*, Cincinnati, 83-00; U. S. Consul, Harput, Turkey, 00-05; Smyrna, 05-06; Chemnitz, Germany, 06-14; special agent chem. investigations, Dept. Commerce, 15-17; chemist, E. I. duPont de Nemours and Co., 17-20; *ed.*, *Chem. Color and Oil Daily*, 20- Prof. chem., Col. Pharmacy, Cincinnati, Ohio, 88-90. Mem. jury awards, Cincinnati Expos., 87; trustee, Lane Theol. Sem.; Miami Med. Col.; Presbyterian Hosp.; mem. Pan-Am. Sci. Cong., 15; *ed.*, *Chem. Eng.*, 17-18. A.A. (sec'y, C, 91, sec'y, council, 92, gen. sec'y, 93, v. pres, 94, librarian, 97); Chem. Soc.; Soc. Chem. Indust.; Acad. Polit. and Soc. Sci.; Inst. Social Sci.; Wash. Acad.; fel. London Chem. Soc.; Chem. Gesell.; Soc. chim. de Paris; Russian Chem. Soc. Rarer metals, their special properties and preparation; organic chemistry; dyestuffs; chemical conditions in Europe and the near east.
- Norton, Prof. W(illiam) H(armon)**, Mount Vernon, Iowa. *Geology*. Willoughby, Ohio, April 3, 56. A.B., Cornell (Iowa), 75, A.M., 78; LL.D., Iowa, 11. Instr. Latin and Greek, *Cornell (Iowa)*, 75-77, *adj. prof.*, 77-81, *prof. Greek and geol.*, 81-90, *geol.*, 90- Special asst., Iowa Geol. Surv., 93-; *asst.*, U. S. Geol. Surv., 03-12. Geol. Soc.; Iowa Acad. (pres., 00). Artesian wells; glacial geology.
- Norwood, Prof. C(harles) J(oseph)**, University of Kentucky, Lexington, Ky. *Geology*, *Mining*. New Harmony, Ind., Sept. 17, 53. Missouri, 68-72. Lab. *asst. chem.* and *physics*, Missouri, 71-72; *asst. geologist*, Mo. Geol. Surv., 72-74; Ky. Geol. Surv., 74-80; *prof. nat. science*, Bethel (Ky.), 77-81; *chief inspector mines*, Ky., 84-97; *curator*, Ky. State Geol. Dept., 93-97, 02-18, *chief inspector mines*, 02-18, *chief, state dept. mines*, 18-20; *mining engineer*, 97-02; *dean, col. mining eng. and prof. mining and metal*, *Kentucky*, 02-18, *head of dept. and prof. mining*, 20-; *director*, Ky. Geol. Surv., 04-12. Editor and geol. and mining work, 80-83. A.A.; Geol. Soc.; Min. Eng.; Ky. Acad. Coals and clays.
- Nothnagel, Dr. Mildred (Mrs. Chas. E. Wilson)**, Agricultural Experiment Station, Virgin Islands. *Botany*. Chicago, Ill., March 25, 90. A.B., Indiana, 13, fellow, 16-17, Ph.D., 17; M.S., Chicago, 15; fellow, Northwestern, 15-16. *Asst. bot.*, Northwestern, 15-16; *asst. plant physiologist*, Fla. Exp. Sta., 17-18; *instr. bot.*, Texas,

- 18-19. A.A.; Bot. Soc.; Bryol. Club. Cytology; morphology.
- Notman, Arthur**, Bisbee, Ariz. *Geology*. Brooklyn, N. Y., April 28, 83. B.S., Harvard, 03, M.E., 08. Mining engineer, Detroit Copper Mining Co., 08-09; geologist, Copper Queen Consol. Mining Co., 09-10, chief geologist, 10-14; Old Dominion Copper Co., 14-15; chief geologist and efficiency engineer, Copper Queen Consol. Min. Co., 15-16; asst. supt., *mines dept., Copper Queen branch, Phelps Dodge Corp.*, 17-18, *supt.*, 19-A.A.; Min. Eng. (sec'y-treas, Ariz. sect, 15-, mem. committee on mining geol, 16-); Min. and Metal. Soc. Economic geology; Bisbee ore deposits.
- Novak, Dr. Emil**, 26 E. Preston St., Baltimore, Md. *Medicine*. Baltimore; March 8, 83. M.D., Maryland, 04; A.B., Loyola, 12. Res. surgeon, Md. Gen. Hosp., 04-05; assoc. gynec, Baltimore Med. Col., 05-08; assoc. prof., Col. Physicians and Surg., Baltimore, 09-14, obstet., 14-19; *instr. clin. gynec., Hopkins*, 15-A.A.; Am. Med. Ass.; Col. Surg.; Baltimore City Med. Soc. (sec'y, 11-19). Physiology and pathology of menstruation; menstrual histology of endometrium; corpus luteum.
- Novy, Dr. F(rederick) G(eorge)**, 721 Forest Ave., Ann Arbor, Mich. **Hygiene, Bacteriology, Physiological chemistry*. Chicago, Ill., Dec. 9, 64. B.S., Michigan, 86, M.S., 87, Sc.D., 90, M.D., 91; Hygienic Inst., Berlin, 88; Path. Inst., Prague, 94; Pasteur Inst., Paris, 97; LL.D., Cincinnati, 20. Asst. org. chem., *Michigan*, 86-87, *instr. hygiene and physiol. chem.*, 87-91, *asst. prof.*, 91-93, *junior prof.*, 93-02, *prof. bacter.*, 02-, *director, hygienic lab.*, 09- Past mem. Mich. Board Health; U. S. Commission to Investigate Bubonic Plague in Calif., 01. Int. Med. Cong., Moscow, 97 (hon. pres, sect. hygiene). A.A. (v. pres, K, 10); Soc. Bact. (pres, 04); Physiol. Soc.; Am. Physicians; Soc. Exp. Path.; Soc. Exp. Biol.; Ass. Path. and Bact.; Soc. Biol. Chem.; Soc. Pharmacol.; Ass. Immunol.; Sigma Xi (pres, Mich, 11); Mich. Acad. (pres, 10); Mich. Med. Soc.; cor. mem. Phila. Path. Soc.; assoc. mem. Soc. de Path. exot.; cor. mem. Soc. biol. de Paris; assoc. mem. Soc. Royale des Sci. Med. et Nat. Bruxelles; hon. mem. various med. societies and academies. Chemistry of bacteria; the cultivation of anaerobes; new anaerobic bacillus; immunizing action of non-bacterial products; etiology of diphtheria, yellow fever and plague; formaldehyde and sulphur disinfection; organic peroxides; cultivation of trypanosomes; trypanosomes of birds; hematozoa of birds; mosquito flagellates; relapsing fever spirochetes; Leishman-Donovan bodies; filterable virus; anaphylatoxin and anaphylaxis.
- Nowell, Prof. J(ohn) W(illiam)**, Wake Forest, N. C. *Chemistry*. Tyner, N. C., Aug. 15, 83. A.B., Wake Forest, 03, A.M., 07; Ph.D., Hopkins, 12. *Instr. chem.*, Wake Forest, 09-10; N. C. Col., 12-14; assoc. prof., *Wake Forest*, 14-15, *prof.*, 15- Chem. Soc. (pres, N. C. sect, 15, 18); N. C. Acad. Steric hindrance effect of ortho substituted groups in para-sulphamido benzoic acids.
- Nowlan, Prof. F(rederick) S(tanley)**, Bowdoin College, Brunswick, Maine. *Mathematics*. Haverhill, N. S., Aug. 2, 86. B.A., Acadia, 08; A.M., Harvard, 09. Adj. prof. *math.*, Ga. Sch. Tech., 09-10; instr., Horace Mann Sch., Columbia, 10-11, asst., Columbia, 11-12, *exten. instr.*, 12; *asst. prof., Bowdoin*. Math. Soc. Differential geometry.
- Nowlin, Prof. Nadine**, 1144 Louisiana St., Lawrence, Kans. *Zoology*. Missouri City, Mo., 83. A.B., A.M., Kansas, 03; M. Carey Thomas foreign fellow, 09. *Asst. prof. zool., Kansas*, 10-Table, Naples Zool. Sta., 09. Soc. Zool. Protozoology; pathogenic protozoa, especially those of the digestive tract.
- Noyes, Dr. Alice A(yr)**, 77 Winchester St., Bradford, Mass. *Entomology*. Haverhill, Mass., July 15, 84. A.B., Mt. Holyoke; A.M., Cornell, Ph.D. Lab. asst. zool., Mt. Holyoke, 07-10; assoc. prof. biol., Sweet Briar, 10-12; asst., Cornell, 13-15; instr. zool., Milwaukee-Downer, 15-16. A.A.; Entom. Soc. Net-spinning Trichoptera; proventriculus of a Hydro-psyche larva.
- Noyes, Dr. Arthur A(mos)**, California Institute of Technology, Pasadena, Calif. **Chemistry*. Newburyport, Mass., Sept. 13, 66. B.S., Mass. Inst. Tech., 86, M.S., 87; Ph.D., Leipzig, 90; LL.D., Maine, 08; Clark, 09; hon. Sc.D., Harvard, 09; Yale, 13; Pittsburgh, 15. Asst. anal. chem., Mass. Inst. Tech., 87-88, *instr. anal. or org. chem.*, 90-94, *asst. and assoc. prof. org. chem.*, 94-99, *prof. theoret. chem.*, 99-20, *director*, research lab. of physical chem., 03-20, *acting pres.*, 07-09; *director chem. research, Calif. Inst. Tech.*, 20- Ed., 'Rev. Am. Chem. Research,' 95-01; mem. Nat. Research Council. Converse medal, Chem. Soc. Nat. Acad. (ed., 'Proc,' 15); A.A. (sec'y, C, 00); Chem. Soc. (pres, 04); Philos. Soc.; Am. Acad.; Chem. Gesell.; Bunsen Gesell. Qualitative analysis of rare elements; physical chemistry; properties of salt solutions in relation to the ionic theory; systematic procedure for the qualitative analysis of the rare metals; instruction in qualitative chemical analysis and chemical principles; class reactions for identification of organic compounds.
- Noyes, H(arry) A(lfred)**, Mellon Institute, Pittsburgh, Pa. *Chemistry, Bacteriology*. Marlborough, Mass., July 7, 90. B.S., Mass. Col., 12, M.S., 14. Asst. chem., Mass. Col., 10-13; hort. chem. and bacter., Purdue Exp. Sta., 13-17, *research assoc.*, 17-18; *fellow fruit beverages, Mellon Inst.*, 19- A.A.; Chem. Soc.; Soc. Bact.; Soc. Agron.; Ind. Acad. Carbonic acid gas in relation to soil acidity, composition and biology; bacteriological technic; bacterial nutrition; fruit beverages.
- Noyes, Prof. William A(lbert)**, 1105 Nevada St., Urbana, Ill. **Chemistry*. Independence, Iowa, Nov. 6, 57. A.B., B.S., Grinnell, 79, A.M., 82; Ph.D., Hopkins, 82; Munich, 89; LL.D., Clark, 09; Chem.D., Pittsburgh, 20. Asst. chem., Grinnell, 79-80; instr., Minnesota, 82-83; prof., Tennessee, 83-86; Rose, 86-03; chemist, Bur. Standards, 03-07; *prof. chem. and director, chem. lab., Illinois*, 07- Nichols medal, 08; Willard Gibbs medal, 20. Nat. Acad.; A.A. (sec'y, C, 90, v. pres, 96); Chem. Soc. (ed., 'Jour,' 02-17, sec'y, 03-07, ed., 'Abstracts,' 07-09, pres, 20); Soc. Chem. Indust.; Philos. Soc.;

- Am. Acad; Ind. Acad. (pres, 94); Soc. Chim. indust; Ill. Acad; Chem. Gesell. Oxidation of benzene derivatives with potassium ferricyanid; atomic weight of oxygen; determination of phosphorus, sulphur and manganese in iron; hydrolysis of maltose and dextrin; camphoric acid; atomic weights of hydrogen and chlorine; molecular rearrangements; positive and negative valences; derivatives of camphor.
- Noyes, Dr. William A (Ibert), Jr**, University of California, Berkeley, Calif. *Chemistry*. Terre Haute, Ind, April 18, 98. A.B, Grinnell, 19; Sc.D, Paris, 20. Second lieu, Sig. C, 18-19. Electrolysis of iron; polarization of solutions of iron, nickel and sulphuric acid.
- Nugent, David Bertram**, Dominion Observatory, Ottawa, Can. *Astronomy*. Millbrook, Ont, Dec. 28, 81. B.A, Toronto, 06, M.A, 07. Asst. physics, Toronto, 07; asst. astronomer, *Dominion Observatory*, 12-19, astronomer, 19-. Royal Astron. Soc. Can. (treas, Ottawa Center, 12-). Physics; fundamental stars.
- Nugent, Prof. Paul C (ook)**, 417 University Place, Syracuse, N. Y. *Civil engineering*. New Orleans, La, Jan. 4, 71. A.B, Roanoke, 89, A.M, 94; C.E, Rensselaer, 92. Instr. *civil eng*, Lafayette, 96-97; *Syracuse*, 97-00, assoc. prof, 00-02, prof, 02-. Civil Eng; Eng. Educ; Ass. Prof.
- Nusbaum, Dr. C (hristian)**, 42 Walker St, Cambridge, Mass. *Physics*. Columbus Grove, Ohio, Oct. 1, 82. A.B, Ohio State, 08, A.M, 10; fellow, Harvard, 11-13, Ph.D, 15. Asst. physics, Ohio State, 08-11; Harvard, 13-15, instr, 15-18; assoc. physicist, Bur. Standards, 18-20; *research assoc*, Mass. *Inst. Tech*, 20-. A.A; Physical Soc; Soc. Test. Mat. Hysteresis and eddy-current losses in iron at high frequencies; magnetic analysis.
- Nusim, M (elach) J (oseph)**, 541 Lafayette St, Easton, Pa. *Mechanical engineering*. Vaslui, Roumania, Sept. 21, 81. A.B, Lycée real, Braila, Roumania, 00; Columbia, 04-05, M.E, 05. Asst. engineer, Gen. Elec. Co, Lynn, Mass, 05-10, in charge eng. calculations and exp. steam tests, 11-14; with Westinghouse Machine Co, 14; turbine engineer, Southwark Foundry and Machine Co, 15-18; *consulting engineer*, *Ingersoll-Rand Co*, 18-. Assoc. mech. eng, Columbia, 19-20. A.A; Mech. Eng. The theoretical end of turbine engineering.
- Nuttall, Mrs. Zelia**, Casa Alvarado, Coyoacan, D. F, Mex. *Archeology*. San Francisco, Calif, Sept. 6, 58. Private schools, Paris, Dresden and Bedford Col, London, 64-76. *Hon. special asst*, Peabody Museum, Cambridge, Mass, 87-; *field director of Crocker archeol. researches in Mex, California*, 04-. *Hon. prof. archeol*, Nat. Museum, Mex; mem. advisory council, dept. anthrop, California; scientific mission to Russia, Pennsylvania, 94; int. jury awards, Columbian Expos, 93; La. Purchase Expos, 04. Medal, Hist. Expos, Madrid, 92; Columbian Expos, 93; Pan-Am. Expos, 01, 15. Int. Geog. Cong, Geneva, 08 (hon. v. pres); Int. Am. Cong. (hon. v. pres). A.A; hon. mem. Archeol. Ass; Anthrop. Ass; Ethnol. Soc; Am. Geog. Soc; Philos. Soc; Asiatic Ass; Calif. Acad; Hawaiian Hist. Soc; Soc. Cient. Ant. Alz; Soc. Mex. de Geog. y Estadística; Soc. Ital. d'Anthrop; Soc. de Géog. de Genève; Paris Soc. des Américanistes. Ancient and colonial history, calendar systems, religions and languages of the inhabitants of Mexico and Central America; ancient manuscripts and picture writings; documents relating to expeditions of Sir Francis Drake and John Hawkins; botany of Mexico.
- Nutting, Prof. C (harles) C (leveland)**, State University, Iowa City, Iowa. **Zoology*. Jacksonville, Ill, May 25, 58. A.B, Blackburn, 80, A.M, 82; Harvard table, Naples Zool. Sta, 95. Curator, museum nat. hist, Iowa, 86-90, *prof. zool*, 90-. Zool. explorations in Central America for U. S. Nat. Museum, 82-84; naturalist, Hawaiian cruise of 'Albatross', 02; various zool. expeditions; exped. to Barbados-Antigua, 18. A.A. (sec'y, F, 97; v. pres, 02); Soc. Nat; Soc. Zool. (pres, cent. branch, 06); Nat. Cent. States; Wash. Acad; fel. Iowa Acad. (pres, 91); Iowa Anthropol. Ass. (pres, 06). Hydroids and Aleyonaria; American Hydroids; Aleyonaria of the Hawaiian cruise of the 'Albatross'; Gorgonaceae of the Siboga expedition; Aleyonaria and Hydroids of Japan.
- Nutting, Dr. P (erley) G (ilman)**, Westinghouse Research Laboratory, East Pittsburgh, Pa. **Optics, Spectroscopy*. Randolph, Wis, Aug. 22, 73. A.B, Stanford, 97; M.S, California, 99, Whiting fellow (Göttingen), 01-02; Pres. White fellow, Cornell, 02-03, Ph.D, 03. Asst. physics, Stanford, 97-98; California, 98-01; asst. physicist, Bur. Standards, 03-09, assoc. physicist, 09-12; asst. prof. physics, George Washington, 07-09; physicist research laboratory and optical engineer, Eastman Kodak Co, 12-16; *in charge scientific research*, *Westinghouse Elec. and Mfg. Co*, 16-. A.A; Physical Soc; Astron. Soc; Elec. Eng; Optical Soc. (pres, 17); Soc. Glass Technol; British Optical Soc. Spectroscopy; refractometry; lens testing; visual sensitometry; colorimetry; photographic sensitometry; industrial research.
- Nuzum, Dr. Frank R**, Cottage Hospital, Santa Barbara, Calif. *Medicine*. Wisconsin, 88. B.S, Wisconsin, 11; M.D, Rush Med. Col, 13. Asst. to Dr. J. B. Herrick, 14-16; to Dr. A. J. Ochsner, 16-17; *practising physician*, 18-. Ass. Path. and Bact; Am. Med. Ass. Internal medicine; pathology; changes in the His bundle.
- Nuzum, Dr. J (ohn) W (eston)**, 2106 Sedgwick St, Chicago, Ill. *Surgery*. Broadhead, Wis, June 16, 89. B.S, Wisconsin, 12; M.D, Rush Med. Col, 14. Intern, Cook Co. Hosp, 15-16, pathologist, 16-19; instr. hygiene and prev. med. and later *assoc. path. and anat. col. med*, Illinois. Director, surg. lab, Augustana Hosp, Chicago. Am. Med. Ass. Surgical pathology; bacteriology.
- Nydegger, Dr. James A (rchibald)**, U. S. Public Health Service, Baltimore, Md. *Medicine*. Ft. Pendleton, Md, June 26, 64. A.B, St. John's (Md), 90, A.M, Sc.D, 12; M.D, Maryland, 92; London Sch. Trop. Med, 15. *Med. inspector of immigrants, alien seamen and outpatients*, U. S. Pub. Health Service, 92-. Pub. Health Ass; Am. Med. Ass; Md. Acad. Preventive medicine; hygiene; sanitation; tropical medicine; school hygiene.

Nyswander, Prof. R(euben) E(dson), 2151 S. Josephine St, Denver, Colo. *Physics*. Antwerp, Ohio, Jan. 4, 78. A.B, Indiana, 01, A.M, 04; fellow, Cornell, 06-07, Ph.D, 08. Asst. *physics*, Indiana, 99-02; magnetic observer, U. S. Coast and Geod. Surv, 03-06; instr, Indiana, 08-09; *prof*, Denver, 09-, *director, sch. elec. eng*, 19-A.A; Physical Soc; Eng. Educ. The absorption and reflection of calcite and aragonite for infra-red rays as dependent upon the plane of polarization; energy in the spectrum of the tungsten filament.

O

Oakes, Dr. E(arle) T(homas), 715 W. 172d St, New York, N. Y. *Chemistry*. Marlette, Mich, Aug. 3, 90. A.B, 15, A.M, 16; Ph.D, Columbia, 19. Chemist, Royal Italian Aeronautical Commission, 16-17; asst. chief chemist, Bur. Aircraft Production, 17-19; *research director, Nat. Biscuit Co*, 19- Physical chemistry.

Obear, Dr. G(eorge) B(arrows), University of the Philippines, Manila, P. I. *Physics*. Lynn, Mass, July 27, 79. B.S, Mass. Inst. Tech, 03; M.S, Brown, 05, Ph.D, 11. Instr. math. and elec. eng, Lowell Textile Sch. 03-04; asst. instr. math, Brown, 05-07; physics, Colby, 11-16; Case, 16-18; capt. and head, dept. physics and eng, Med. Research Lab, Air Service, 18-20; *chief, dept. physics, Univ. Philippines*, 20-A.A; Physical Soc. Standard cells; nucleation and ionization; hygrometry of gelatinous media; electric conditions in animal tissue; oxygen and aviation; dermatography.

Oberholser, Harry C(hurch), 2805 18th St, N. W, Washington, D. C. *Ornithology*. Brooklyn, N. Y, June 25, 70. Private schools. Asst. *Ornithologist, biol. surv, U. S. Dept. Agr*, 95- A.A; fel. Ornith. Union; Ecol. Soc; Wash. Biol. Soc; cor. mem. N. Y. Linnean Soc; Cooper Ornith. Club; Wilson Ornith. Club; Foreign Bird Club; British Ornith. Union; Australasian Ornith. Union; S. African Ornith. Union; Bombay Soc. Nat. Hist. General systematic ornithology; geographical distribution; troglodytes; *Otocoris*; Bleda and its allies; birds of South America, Africa and Asia; great horned owls; the birds of Texas.

Ocaranza, Dr. F(ernan)do, 2a San Juan de Letran, Number 19, Mexico City, Mexico. *Physiology*. Mexico City, May 30, 76. A.B, Inst. Cie. y Lit. de Mex, 95; M.D, Mexico, 00. *Prof. physiol*, Mexico, 15-17; *Mil. Med. Sch*, 17-18; *biol, Mexico*, 18- Conferencist, exten. univ, 17; chief comp. physiol, Inst. de Biol. Ass. Study Int. Secretions; Soc. Sanit. y Moral Profilaxia; Acad. N. de Med; Soc. de Med. Interna; Soc. Astron. de Mex. Physiological constants of guinea pigs; hematology of man, rabbits and guinea pigs; hormones of the guinea pig; thyroids, parathyroids and thymus.

Ochsner, Dr. Albert John, 2106 Sedgwick St, Chicago, Ill. *Surgery*. Baraboo, Wis, April 3, 58. B.S, Wisconsin, 84, LL.D, 09; M.D, Rush Med. Col, 86; F.R.M.S, King's Col, London, 87. Instr. nor. path. histol, Rush Med. Col, 84-91, chief asst, dept. clin. surg, 88-95; *surgeon in chief Augustana Hosp*, 91-; *St. Mary's Hosp*, 97-; *prof. clin. surg, med. dept, Illinois*, 00-Ed, 'Year Book Surg,' 18- Gold medal, La.

Purchase Expos, 04. Surg. Ass; Am. Med. Ass; Chicago Surg. Soc. (pres, 07). Appendicitis; organization, construction and management of hospitals; surgery of the thyroid gland; clinical surgery; surgical diagnosis and treatment.

Ockerson, Dr. J(ohn) A(ugustus), 1307 International Life Building, St. Louis, Mo. *Engineering*. Sweden, March 4, 48. A.B, Illinois, 73, C.E, 76, hon. Eng.D, 03. Asst. engineer, A. T. and S. F. Ry, 72; asst, Surv. of Great Lakes, 73-79; U. S. asst. engineer, jetties at mouth of Miss. River, 76; physical investigations, Miss. River, 80-98; *U. S. commissioner, Improvements of Miss. River*, 98- Mem. int. jury of awards, Paris Expos, 00; chief, dept. liberal arts, La. Purchase Expos, 04. Officier de l'Instruction Pub, 00; Knight of Crown of Italy, 04; Knight of Order of Vasa, Sweden, 04, Commander, 05; Knight of the Crown of Germany, 05; Officer of the Order of the Dragon, China, 05; Mérite agricole, France, 07. Delegate, Int. Cong. Navigation, Paris, 00; Milan, 05; St. Petersburg, 08; Philadelphia, 12. Civil Eng. (pres, 12); St. Louis Eng. Club (pres); Int. Maritime Ass. Value of stadia in topographic surveys; refined geodetic surveys; hydrographic surveys, including velocity and volume determinations; erosion of river banks; changes in beds of sedimentary streams; flood control; revetment of river banks; efficiency of hydraulic dredges; volume of river traffic.

O'Connell, Dr. Marjorie, American Museum of Natural History, New York, N. Y. *Paleontology*. Newark, N. J, Aug. 15, 90. A.B, Columbia, 11, A.M, 12, Ph.D, 16. Lecturer geol, Adelphi, 13-14; curator paleont, Columbia, 14-16; Sarah Berliner fellow, 17-18; expert asst. *paleont, Am. Museum Nat. Hist*, 18-19, *research asst*, 20- Asst. geol, Columbia, summers, 12, 13, instr, 14. Walker first prize, Boston Nat. Hist. Soc, 14. A.A; fel. Paleont. Soc; fel. Am. Geog. Soc; Geol. Soc; N. Y. Acad. Invertebrate paleontology and stratigraphy; ancient habitats; Jurassic of Cuba.

O'Connor, John (Joseph), Jr, 800 Cathedral Place, Richmond, Va. *Chemistry*. Pittsburgh, Pa, March 3, 87. A.B, Pittsburgh, 10, A.M, 13. Director boys' activities, Kaufmann Settlement, Pittsburgh, Pa, 10-11; asst. econ surv, Pittsburgh, 11-12; economist smoke investigation, Mellon Inst, 12-13, chief fellow smoke investigation, 13-14, asst. director, 14-19; *civilian asst, quartermaster general's office*, 19- Chem. Soc.

Odell, Dr. Allan F(ulson), Jackson Laboratory, E. I. duPont de Nemours and Co, Wilmington, Del. *Chemistry*. Columbia, Tenn, May 2, 86. B.S, Vanderbilt, 06, M.S, 07, Ph.D, 09. Demonstrator chem, Tennessee, 06-07; Toronto, 07-08; Tennessee, 08-09; asst. prof, Louisiana, 09-13; *research chemist, Chas. Pfizer and Co*, 13-17; *E. I. duPont de Nemours and Co*, 17- A.A; Chem. Soc. Organic chemistry; cypress wood; terpenes in cypress oil; tartaric, racemic, meso-tartaric and saccharic acids; aromatics; dye intermediates; sulphur colors.

O'Donoghue, Prof. Cha(rle)s H(enry), University of Manitoba, Winnipeg, Can. *Zoology*. Bedfordshire, England, Sept. 23, 85. B.Sc, London, 08, D.Sc, 12, British mem. fellow, 12, fellow,

- 14; Freiburg, 13. Asst. Univ. Col. London, 08, 13, sub-dean, faculty science, 15; *prof. zool. Manitoba*, 18— Lecturer biol. St. Thomas's Hosp, 14. Fel. Soc. Zool.; Physiol. Soc.; Ass. Anat.; Soc. Mammal.; British Ass. (gen. committee, 10). Circulatory system of vertebrates; reproductive cycle in mammals; ovaries; mammary glands; nudibranchiate Mollusca.
- O'Donovan, Dr. Charles**, 5 E. Read St, Baltimore, Md. *Therapeutics, Clinical medicine*. Baltimore, Feb. 7, 60. Loyola; A.B. Georgetown, 78, A.M. 88; M.D. Maryland, 81. *Prof. diseases of children*, Women's Med. Col. of Baltimore, 94-98; *Baltimore Med. Col.*, 99-07, *therapeut. and diseases of children*, 08— A.A.; Am. Med. Ass.; Md. Med. and Chirurg. Faculty (past pres). The action of certain heart stimulants in the early stages of pneumonia.
- Oertel, Dr. Horst**, McGill University, Montreal, Can. *Pathology*. Oberlossnitz, Saxony, Jan. 25, 73. M.D. Yale, 94; Leipzig, Würzburg and Berlin, 94-98; Guy's Hosp, London, 13-14. Instr. clin. path, Univ. and Bellevue Hosp. Med. Col. 99-03; pathologist, N. Y. City Hosp. and director, Strecker Mem. Lab, 03-07; director, Russell Sage Inst. Path, City Hosp, N. Y., 07-13; assoc. prof. path, McGill, 14-19, *Strathcona prof. path. and director, path. museum and laboratories*, 19—; pathologist, Royal Victoria Hosp. 14-19, *pathologist-in-chief*, 19— Ass. Path. and Bact.; Soc. Exp. Biol.; N. Y. Path. Soc. Excretion of organic phosphorus in urine; comparative study of reflex action; multilocular echinococcus disease in the United States; leukemia of the skin; non-inflammatory necrosis of the liver with jaundice in chronic cyanosis; primary carcinoma of the liver; histogenesis of cancer; epithelial proliferation and formation of giant cells in nephritis; anatomic-histological processes in Bright's disease; cause of death and sudden death; functional mutation and morphological persistence; nephritis; pathology of pancreas; degeneration and senescence; immunity; metastasis in tumors; general pathology; relation of age period to disease.
- Oesper, Prof. R(alph) E(dward)**, University of Cincinnati, Cincinnati, Ohio. *Chemistry*. Cincinnati, June 14, 86. A.B. Cincinnati, 08, A.M. 09, Ph.D. 14. Asst. chem, Cincinnati, 07-10; instr. high sch, Everett, Wash, 10-12; asst. prof, Ohio Mech. Inst, 12-13; asst, Cincinnati, 13-14; instr, N. Y. Univ, 14-17; asst. prof, Smith, 17-18; *assoc. prof, Cincinnati*, 18— Chem. Soc. Organic and analytical chemistry; colloids; emulsions.
- Oestlund, Dr. Oscar W(illiam)**, University of Minnesota, Minneapolis, Minn. *Entomology*. Attica, Ind, Sept. 27, 57. A.B. Augustana, 79, A.M. 87, Ph.D. 00; Minnesota, 80-82. Asst. and entomologist, Minn. Geol. and Nat. Hist. Surv, 85-90; entomologist and instr. dept. biol, Minnesota, 91-06, *asst. prof. animal biol*, 06— Entomologist, Minn. Hort. Soc, 87-90. A.A.; Minn. Acad. Aphididae; principles of taxonomy as applied to Insecta.
- Office, Leon R(ichard)**, Mellon Institute, Pittsburgh, Pa. *Ceramics*. Columbus, Ohio, Aug. 4, 93. B.S.(Cer.E), Ohio State, 15. Ceramic engineer, 15; asst. ceram, Ohio State, 16; *fellow, Mellon Inst*, 16— Ceramic Soc; Chem. Soc; Soc. Test. Mat. (mem. committee C-8). Refractories; silica bricks; pyrometry and coke.
- O'Gara, Dr. P(atrick) J(oseph)**, American Smelting and Refining Co, Salt Lake City, Utah. *Botany*. Coleridge, Nebr, July 1, 72. South Dakota, 96, 97; B.S. Nebraska, 02, Sc.D. Nebraska, 17; foreign study, 04-05. Plant pathologist, U. S. Dept. Agr, 02-10, plant pathologist and entomologist, Rogue River Valley, Oregon, 10-14; *director, agr. and smelter by-product investigations, Am. Smelting and Refining Co*, 14— Special meteorol. observer in charge frost prevention investigations, U. S. Weather Bur, 10-14. A.A.; Phytopath. Soc; Bot. Soc; Forestry Ass; Min. and Metal. Eng; Soc. Exp. Eng; fel. Royal Meteor. Soc; Royal Soc. Arts. Plant diseases; bacteriology; mycology; plant physiology; meteorology; effect of sulphur dioxide on plants.
- Ogburn, Prof. John H(utcheson)**, 715 Ave E, Bethlehem, Pa. *Astronomy*. Springfield, Tenn, Dec. 22, 68. C.E. Vanderbilt, 92, fellow, 92-93. Asst. astronomer, Dudley Observatory, Albany, N. Y., 93-95; *instr. math. and astron, Lehigh*, 95-06, asst. prof, 06-10, assoc. prof, 10-12, *prof*, 12— Position and orbits of minor planets; definitive orbit of minor planet 387; determination of aberration constant and the variation of latitude by zenith telescope method.
- Ogden, Prof. H(enry) N(eely)**, 614 University Ave, Ithaca, N. Y. *Civil engineering*. Dexter, Maine, April 30, 68. C.E. Cornell, 89. Instr. civil eng, Cornell, 89-92, 94-96, asst. prof, 96-08, *prof. sanit. eng*, 08— Mem. N. Y. State Pub. Health Council, 13— Civil Eng. Sewer flushing; septic tanks.
- Ogden, Dr. J(ay) Bergen**, 1 Madison Ave, New York, N. Y. *Physiological chemistry*. West Sparta, N. Y., Aug. 5, 68. M.D. Harvard, 93. Instr. chem, Harvard Med. Sch, 93-01; director, chem. lab, N. Y. City, 01-04; instr. med. chem, med. sch, Tufts, and med. chemist, Carney Hosp, 04-05; *asst. med. director, Metropolitan Life Ins. Co, N. Y. City*, 05— Asst. clin. path, Boston City Hosp, 93-01; visiting med. chemist, Long Island Hosp, 96-01; assoc. ed, 'Med. Critic,' 02-03; asst. surgeon, Boston Dispensary. Chem. Soc. Oxaluria; hematoporphyrin in the urine; functional albuminuria; toxicological action of heroin; urinary preservatives.
- Ogden, Prof. R(obert) M(orris)**, Cornell University, Ithaca, N. Y. **Psychology, Education*. Binghamton, N. Y., July 6, 77. B.S. Cornell, 01; Ph.D. Würzburg, 03. Asst. psychol, Missouri, 03-05; asst. prof. philos. and psychol, Tennessee, 05-07, assoc. prof, 07-09, *prof*, 09-14; psychol, Kansas, 14-16; *educ, Cornell*, 16— A.A.; Psychol. Ass. (sec'y-treas, 14-16, council, 18-20); S. Soc. Philos. and Psychol. (sec'y-treas, 10, pres, 12). Memory and the rapidity of learning; esthetics; experimental investigation of the thought processes; audition.
- Ogilvie, Prof. I(da) H(elen)**, Barnard College, New York, N. Y. *Geology*. New York, Feb. 12, 74. A.B. Bryn Mawr, 00; Chicago, 01; Ph.D. Columbia, 03. Lecturer geol, Barnard, Columbia, 03-05, tutor, 05-10, instr, 10-12, asst. prof,

- 12-16, *assoc. prof.*, 16- Director, Women's Agr. Camp, 17-20. A.A.; Geol. Soc.; Ecol. Soc.; N. Y. Acad. Glaciology of California, the Adirondacks, British Columbia and Maine; geology of the Ortiz Mountains, New Mexico.
- Oglevee, Prof. C(hristopher) S(toner)**, Lincoln, Ill. *Biology*. Dickinson Run, Pa, March 24, 68. B.S., Lincoln, 94, Sc.D, 05. Asst. biol., Lincoln, 94-00, prof. nat. science, 00-19; retired, 19. A.A.; Ill. Acad. The influence of insoluble substances on the toxic action of poisons.
- O'Hare, Dr. James P(atrik)**, 536 Commonwealth Ave, Boston, Mass. *Medicine*. Charlestown, Mass, March 17, 86. A.B., Harvard, 08, M.D, 11. Fellow med, *Harvard Med. Sch.*, 14-15, asst., 16-18, *instr.*, 18- Asst. physician, Carney Hosp, 13-15; Boston City Hosp, 15-16; *assoc. med.*, Peter Bent Brigham Hosp, 16-18, 18- Soc. Clin. Invest; Am. Med. Ass. Nephritis.
- O'Harra, Prof. Cleophas C(isney)**, State School of Mines, Rapid City, S. Dak. *Geology*. Bentley, Ill, Nov. 4, 66. A.B., Carthage, 91, LL.D, 20; Ph.D, Hopkins, 98. Prof. nat. and physical sciences, Carthage, 92-95; miner. and geol, *S. Dak. Sch. of Mines*, 98-11, *pres. and prof. geol.*, 11-A.A.; Geol. Soc.; Seismol. Soc.; Min. and Metal. Eng; Wash. Geol. Soc. Geology of Alleghany County, Maryland; geology and mineralogy of the Black Hills; White River badlands.
- Ohern, Prof. D(aniel) W(ebster)**, 515 W. 14th St, Oklahoma City, Okla. *Geology*. Maquon, Ill, June 2, 70. A.B., Drake, 98; A.M., West Virginia, 99; Ph.D, Hopkins, 07. Asst. Greek, West Virginia, 98-03; *assoc. prof.*, geol, Bryn Mawr, 07-08; *prof. miner. and director, sch. mines*, Oklahoma, 08-11; *director*, Okla. Geol. Surv, 11-13; *consulting geologist*, 13- Field asst., U. S. Geol. Surv; Md. Geol. Surv; Okla. Geol. Surv. A.A.; fel. Geol. Soc; Okla. Acad; Wash. Acad. Structure, stratigraphy and paleontology of the upper Carboniferous of Oklahoma.
- Ohle, Prof. Ernest L(inwood)**, Washington University, St. Louis, Mo. *Mechanical engineering*. Berea, Ohio, July 10, 75. B.S.(M.E), Case, 02, M.E, 05. Instr. mech. eng, Case, 02-05; *prof. steam eng. and head, dept. mech. eng.*, Iowa, 05-08; *prof. mech. eng.*, *Washington (St. Louis)*, 08- A.A.; Mech. Eng; Eng. Educ; St. Louis Eng. Club. The explosive pressure of gaseous mixtures.
- Ohlmacher, Dr. Joseph C**, Vermilion, S. Dak. *Pathology*. Sycamore, Ill, Oct. 27, 74. M.D, Rush Med. Col, 01. Instr. path, Northwestern, 01-02; clin. director and pathologist, Independence State Hosp, Iowa, 02-10; pathologist and asst. supt., Clarendon State Hosp, 12-18; *head, dept. path. and bacter.*, *South Dakota*, and *director, state health laboratories*, 18- Pub. Health Ass. Bacteriology; serology.
- O'Kane, Prof. Walter C(ollins)**, Durham, N. H. *Entomology*. Columbus, Ohio, Nov. 10, 77. A.B., Ohio State, 97, A.M, 09. *Prof. econ. entom.*, *N. H. Col. and entomologist*, *Exp. Sta.*, 10- State nursery inspector, N. H., 12-; deputy commissioner of agr, 14-; chief, div. miscellaneous activities, N. H. Food Ad, chairman entom. committee, Nat. Research Council. A.A; Entom. Soc; Ass. Econ. Entom. (pres, 19); N. H. Acad. (sec'y, 19); Appalachian Mountain Club.
- Okey, Prof. Ruth E(liza)**, University of California, Berkeley, Calif. *Physiological chemistry*. Woodsfield, Ohio, Sept. 13, 93. B.S., Monmouth, 14; M.S., Illinois, 15, fellow, 17-18, Ph.D, 18. Instr. physiol. chem, Illinois, 18-19; *asst. prof. household science, California*, 19- Chem. Soc. Nutrition; emodin-containing drugs; inulin in the animal body; effect of menstrual cycle on blood composition and metabolism.
- Okkelberg, Prof. Peter**, University of Michigan, Ann Arbor, Mich. *Biology*. Goodhue, Minn., Nov. 12, 80. A.B., Minnesota, 06, A.M, 09; Ph.D, Michigan, 18. Asst. zool., Minnesota, 08-09; *instr.*, *Michigan*, 10-18, *asst. prof.*, 18- A.A; Soc. Mammal. Embryology; cytology; fertilization and development of germ cells.
- Olcott, Eben E(rskine)**, Desbrosses Street Pier, New York, N. Y. *Mining and metallurgical engineering*. New York, March 11, 54. Col. City of New York; E.M., Columbia, 74. Chemist, Ore Knob Copper Co, 74-75; *asst. supt.*, Ore Lead Co, 75-76; *asst. supt. and supt.*, Orinoco Exploring and Mining Co, Venezuela, 76-79; in consulting practise in western Colo., Utah, Nev., South Am. and Mex, 79-84; *consulting mining engineer*, 84- Gen. manager, Hudson River Day Line, 95-01, *pres*, 01- Min. Eng. (pres, 00-02); Civil Eng. Mines; ore deposits.
- Oldroyd, Mrs. T. S. (Ida Shepard)**, Stanford University, Calif. *Paleontology*. Goshen, Ind, Nov. 25, 57. *Curator geol. museum, Stanford*, 14-A.A; Paleont. Soc; West. Soc. Nat; Calif. Acad. Conchology; shells of Puget Sound.
- Olds, Prof. George D(aniel)**, 3 Orchard St, Amherst, Mass. *Mathematics*. Middleport, N. Y., Oct. 14, 53. A.B., Rochester, 73, A.M, 76, LL.D, 97. Teacher, Albany Acad, 73-79; *prof. math.*, Rochester, 84-91; *Amherst*, 91-, *dean*, 08-20, *acting pres*, 20-21. A.A; Math. Soc.
- Oldys, Henry**, U. S. Department of Agriculture, Washington, D. C. *Ornithology*. Washington, D. C, March 26, 59. B.L, George Washington, 88. Various positions in government service, 77-99; with biol. surv, U. S. Dept. Agr, 99-12; *independent lecturer and writer*, 12- Mem. Ornith. Union; cor. mem. Royal Hungarian Bur. Ornith. Evolution of bird song.
- Olin, Prof. H(ubert) L(eonard)**, Black Springs, Iowa City, Iowa. *Chemistry*. Marcus, Iowa, May 10, 80. A.B., Iowa, 08; M.S., Illinois, 11, Ph.D, 14. Instr. chem, Vassar, 13-14; Illinois, 14-16; *asst. prof.*, Ohio State, 16-18; *assoc. prof.*, *Iowa*, 19- Capt. C.W.S., 18-19; U.S.R., 19- Chem. Soc; Electrochem. Soc. Carbonization and by-products of coal.
- Olitsky, Dr. Peter K(osciusko)**, Rockefeller Institute, New York, N. Y. *Pathology*. New York, Aug. 20, 86. M.D, Cornell, 09. Bacteriologist, research laboratories, N. Y. City, 13-14; *asst. path. and bacter.*, *Rockefeller Inst.*, 17-18, *assoc.*, 18- Fellow, Mt. Sinai Hosp, 14-17; typhus exped. to Mex, 16; meningitis exped. to China, 18. Ass. Path. and Baet; Soc. Exp. Biol; Ass. Immunol; Harvey Soc; Am. Med. Ass.

- Bacteriology; serology; immunology; typhus fever; epidemic meningitis; bacillary dysentery; epidemic influenza.
- Olive, Dr. Edgar W(illiam)**, 904 Hume-Mansur Building, Indianapolis, Ind. **Botany*. Lebanon, Ind, April 1, 70. B.S. Wabash, 93, M.S., 95; A.M. Harvard, 97, Ph.D. 02. Instr. bot. Wabash, 93-95; sciences, high sch. Frankfort, Ind, 95-96; bot. Harvard and Radcliffe, 97-03; research asst. Carnegie Institution, Bonn, 03-04; Wisconsin, and res. lecturer, bot, 04-06; prof. S. Dak. Col. and state botanist, S. Dak. 07-12; curator, Brooklyn Bot. Garden, 12-20. A.A.; Bot. Soc. (v. pres, 17); Phytopath. Soc. *Acrasieae*; mitotic division of the nuclei of the *Cyanophyceae*; morphology of *Monascus purpureus*; *Entomophthoraceae*; *Empusa*; slime molds; sexual fusions in rusts.
- Oliver, Prof. Jean (Redman)**, 1246 Lombard St, San Francisco, Calif. *Pathology*. Watsonville, Calif, Aug. 19, 90. A.B. Stanford, 11, M.D. 14. Instr. path. Stanford, 14-16; asst. path. and bacter. Rockefeller Inst, 16-18, assoc. 19; *assoc. prof. path.* Stanford, 19- Major, M.C. A.E.F. 17-18. Soc. Exp. Biol. Mammalian spermatogenesis; experimental nephritis and hemochromatosis; nephrolysis; precipitins; antibody production; oxidizing ferments.
- Oliver, Dr. Wade W(right)**, Long Island Medical College, Brooklyn, N. Y. *Bacteriology*. Cincinnati, Ohio, Aug. 30, 90. A.B. Michigan, 12; M.D. Cincinnati, 15. Asst. bacter. Cincinnati, 11-15; with Rockefeller Int. Health Foundation, 16; *prof. bacter.* L. I. Col. Hosp, 17- A.A.; Ass. Path. and Bact; Soc. Bact; Am. Med. Ass. Bacterial adaptation to diminished oxygen tension; actinomycosis; sprue.
- Olivier, Prof. Charles P(ollard)**, Leander McCormick Observatory, University of Virginia, Charlottesville, Va. *Astronomy*. Charlottesville, April 10, 84. A.B. Virginia, 05, A.M. 08, Ph.D. 11; California, 09-10. Vanderbilt fellow and instr. Virginia, 05-09; fellow and asst. Lick Observatory, 09-10; *prof. astron.* and physics, Agnes Scott Col, 11-14; *adj. prof. astron.* Virginia, 14- Volunteer observer, U. S. Naval eclipse exped. to Spain, 05; Yerkes Observatory, summer, 13; master computer, ordnance dept, 18-19. A.A.; Astron. Soc; Meteorol. Soc; fel. Royal Astron. Soc; Soc. astron. de France; Bur. Cent. Météor; Soc. astron. d'Anvers. Double stars; meteors; radial velocities; stellar parallax; variable stars.
- Olmstead, L(ewis) B(ertie)**, U. S. Department of Agriculture, Washington, D. C. *Physics*. Cambridge, Nebr, Feb. 26, 84. B.S. Nebraska, 09, A.M. 11. Asst. physics, Nebraska, 09-11; *assoc. prof. math.* State Nor. Sch, Peru, Nebr, 11-12; asst. Bur. Standards, 12-13; *soil physicist*, bur. soils, U. S. Dept. Agr, 13- A.A.; Physical Soc; Chem. Soc. Optics; soil physics.
- Olmsted, Dr. James Montrose Duncan**, University of Toronto, Toronto, Can. *Physiology*. Lake City, Iowa, May 21, 86. A.B. Middlebury, 07; Rhodes scholar, Oxford, 08-11, B.A. 11, M.A. 14; A.M. Harvard, 18, Ph.D. 20. V. principal, high sch. Spring Valley, N. Y. 07-08; *prof. biol.* Shorter, 11-12; *assoc. prof.* Richmond, 12-15; asst. zool. Harvard, 15-18, 19-20; *assoc. physiol.* col. med, Illinois, 20; *asst. prof.* Toronto, 20- Physiology of the sense organs; regeneration.
- Olney, Prof. L(ouis) A(twell)**, Lowell Textile School, Lowell, Mass. *Chemistry*. Providence, R. I, April 21, 74. B.S. Lehigh, 96, M.S. 08. Instr. chem. Brown, 96-97; *prof. chem. and head, dept. textile chem. and dyeing*, Lowell Textile Sch, 97-; *pres.* Stirling Mills, 12- Chemist, Board Health, Machine Shop, and Gas Light Co, Lowell; contributor, 'Century Diet'; ed. contributor, 'Textile World Record'; ed. tech. supplement, 'Am. Dyestuff Reporter,' 20- A.A.; Chem. Soc. (past pres, New Eng. sect, assoc. ed, 'Abstracts'); Soc. Chem. Indust; Chem. Eng.; Cotton Mfg. Ass; Soc. Dyers and Colorists. Petroleum; distillation of coal and coal tar; textile coloring; textile fibers; physics of color; theory of textile coloring; fastness of dyes.
- Olsen, Prof. J(ohn) C(harles)**, 316 Argyle Road, Brooklyn, N. Y. **Chemistry*. Galesburg, Ill, July 22, 69. A.B. Knox, 90, A.M. 93; Hopkins, 94, fellow, 99-00, Ph.D. 00; Chicago, 97. Teacher physics and chem, high sch. Jerseyville, Ill, 90-91; Ipava, Ill, 91-94; Chicago, Ill, 95-98; *prof. anal. chem.* Brooklyn Polytech, 00-14; *prof. chem. and head of dept.* Cooper Union, 14-18; *prof. chem. eng.* Brooklyn Polytech, 18- Lecturer anal. chem. Brooklyn Inst. Arts and Sciences, 00-; Pratt Inst, 00-06. Chem. Soc; Chem. Eng. (sec'y, 08); N. Y. Chemists Club; Chem. Gesell. Compounds of manganese; analytical methods; vapor tension of crystals; preparation of pure standard salts; case hardening of steel with gases.
- Olshausen, Prof. Geo(rge) R(oberth)**, 2732 Hille-gass Ave, Berkeley, Calif. *Physics*. St. Louis, Mo, Nov. 1, 68. D.E. Washington (St. Louis), 90; Ph.D. Berlin, 01. Asst. engineer, Union Depot R. R. Co, St. Louis, 90-91, chief engineer, 91-95; mech. engineer, Wm. Wharton, Jr. and Co, Phila, 95-96; asst. prof. mech. eng. Armour Inst, 01, *prof. physics*, 01-02; mech. and elec. engineer, Lichter and Jens, St. Louis, 02-03; instr. physics, Cornell, 03-07; asst. prof. theoret. and elec. eng. Worcester Polytech, 07-11; asst. physicist, *assoc. engineer physicist and later engineer physicist*, Bur. Standards, 12- Physical Soc. Unipolar rotation; theory of radiant heat; cathode rays; coaxial solenoids.
- Olson, Geo(rge) A(lfred)**, 607 California St, Pullman, Wash. *Chemistry*. Chicago, Ill, Dec. 11, 74. B.S.A. Wisconsin, 02, M.S. 08. Asst. chemist, Wis. Exp. Sta, 02-08; instr. agr. chem, Wisconsin, 03-08; asst. chemist, Wash. Exp. Sta, 08-10, chemist, 10-12, *head, div. agr. chem.*, 12- State chemist, Wash, 16-; federal collaborating chemist, 16- A.A.; Chem. Soc. (chairman, sec'y and counselor, Intermountain sect); Agr. Chem; Soc. Agron; Ass. Food Chemists; Soc. Milling and Baking Tech; Inst. Inventors. Enzymes; foods; fertilizers; insecticides; fungicides; preservatives; antiseptics; soils; dust explosions.
- O'Neill, Prof. Edmond**, University of California, Berkeley, Calif. *Chemistry*. Nashville, Tenn, Dec. 13, 58. Ph.B. California, 79; Strasbourg, 80-87. Instr. chem. California, 79-86, asst. prof, 88-90, *assoc. prof.* 90-07, *prof. inorg. chem. and dean, col. chem.* 07-; *director of lab-*

- cratories, 12- A.A.; Chem. Soc; Chem. Eng; Franklin Inst; San Francisco Acad; Chem. Gesell. Constituents of California plants; California petroleum.
- O'Neill, Dr. J(ohn) J(ohnston)**, 510 Cooper St, Ottawa, Ont, Can. *Geology*. Port Colborne, Ont, Nov. 12, 86. B.Sc, McGill, 09, M.Sc, 10; fellow, Yale, 10-12, Ph.D, 12; Wisconsin, 12-13. Asst. geol, McGill, 09-10; Yale, 11-12; field asst, Can. Geol. Surv, 09-13, asst. geologist, 13, geologist, 14-20; *Whitehall Petrol. Corp.*, 20- Geologist in charge, Can. arctic exped, 13-16. Geol. Soc; Min. and Metal. Eng; Can. Min. Inst. Petrography; economic geology; arctic geology.
- Ophtils, Dr. W(illiam)**, 114 Walnut St, San Francisco, Calif. **Pathology, Bacteriology*. Brooklyn, N. Y., Oct. 23, 71. Würzburg, 90-93; Berlin, 94; M.D, Göttingen, 95. Asst. Path. Inst, Göttingen, 96-97; *prof. path. and bacter.*, Missouri, 97-98; *Cooper Med. Col., San Francisco*, 98-; *path., Stanford*, 09- Fellow, Rockefeller Inst, 05-08. Ass. Path. and Bact; Soc. Exp. Biol; several med. societies. Tuberculosis; amyloid substances; coccidoidal granuloma; acid proof bacilli; tuberculosis and pseudo-tuberculosis; inflammatory edema of lungs; chronic inflammation of kidneys and liver; arteriosclerosis.
- Opie, Dr. Eugene L(indsay)**, Washington University, St. Louis, Mo. **Pathology*. Staunton, Va, July 5, 73. A.B, Hopkins, 93, M.D, 97, fellow, 98-99. Asst. bacter, Hopkins, 99-00, instr, 00-01, assoc, 01-04; mem. Rockefeller Inst, 04-10; *prof. path, med. dept., Washington (St. Louis)*, 10-, dean, sch. med, 12-15. House officer, Hopkins Hosp, 97-98; pathologist, Bay View Asylum, 98-04; pathologist, Presb. Hosp, N. Y. City, 07-10; ed, 'Jour. Exp. Med'; capt, major, lieut. col. and col, M.C, 17-19. A.A; Ass. Path. and Bact. (pres, 18); Am. Physicians; Soc. Exp. Biol. (sec'y, 09); Soc. Exp. Path; Physiol. Soc; Am. Med. Ass; Md. Med. and Chirurg. Faculty. Histology and pathology of the pancreas and its relation to diabetes mellitus; protozoan micro-organism related to the malarial parasites; relation of eosinophile leucocytes to infection with animal parasites and with bacteria; necrosis and cirrhosis of the liver; enzymes and anti-enzymes of inflammatory exudates; diet in relation to certain toxic substances; pneumonia and influenza; tuberculosis.
- Oppenheimer, Prof. B(ernard) S(utro)**, 1 W. 70th St, New York, N. Y. *Medicine*. New York, June 20, 76. A.B, Harvard, 97; M.D, Columbia, 01. Fellow path, Columbia, 11; *attending physician, Montefiore Home and Hosp*, 11-; *asst. prof. clin. med, Columbia*, 15-; *assoc. attending physician, Mt. Sinai Hosp*, 19- Gold-medal, Am. Med. Ass, 17. Soc. Exp Biol; Soc. Clin. Invest; N. Y. Acad. Med. Anatomy and pathology of the heart.
- Oppitz, Prof. Louis K(ossuth)**, Richmond, Ind. *Optics*. Kaschau, Hungary, May 29, 78. A.B, Yale, 06, A.M, 09; Ph.D, Pennsylvania, 15. Instr. physics, Pennsylvania, 12-15; assoc. prof. West. Col. for Women, 15-16; *prof. physics, Westminster (Pa)*, 16-18; St. Thomas, 18-20; *Earlham*, 20- Optical constants of the binary alloys of silver with copper and platinum.
- Orcutt, Charles Russell**, Museum of Natural History, Balboa Park, San Diego, Calif. *Botany*. Hartland, Vt, April 27, 64. Pub. schools. Ed, 'W. Am. Scientist' and 'Am. Plants.' Davenport Acad; San Diego Soc. Nat. Hist. West American Mollusca; Cactaceae; botany of western America.
- Orcutt, Mrs. Ruby Rivers (Murray)**, Guilford, Conn. *Chemistry*. Burlington, Vt, Nov. 19, 89. A.B, Mt. Holyoke, 12, A.M, 14; Ph.D, Cornell, 16. Asst. chem, Mt. Holyoke, 12-14; reader, Cornell, 14-16; chemist, Standard Aniline Products Co. and Standard Essence Co, 16-18. Abstractor, 'Chem. Abstracts,' 16-17. Unsaturated compounds containing phenyl groups; phthaleins; adsorption.
- Ordeman, Dr. G(eorge) Fred(erick)**, 243 La Porte Ave, Whiting, Ind. *Chemistry*. Frederick, Md, Nov. 9, 92. B.S, Washington and Lee, 12, 12-13; Ph.D, Hopkins, 16. Assoc. prof. chem, Washington and Lee, 16-18; *research chemist, Standard Oil Co. of Ind*, 19- Lieut, S.C, 18-19.
- Ordenez, Ezequiel**, 2a General Prime 43, Mexico, D. F, Mex. *Geology*. Lerma, Mex, 70. Surveyor, Nat. Sch. of Engineers, Mex, 92. Prof. miner. and geol, Nat. Sch. of Engineers, 91-92; geologist, Geol. Inst. of Mex, 92-98, sub-director, 98-06; *mining geologist*, 06- Int. Geol. Cong, Washington, 91; Russia, 97; Mexico City, 06 (sec'y gen); Stockholm, 10. Geol. Soc; hon. mem. Min. Eng; Am. Geog. Soc; Soc. Cient. Ant. Alz; Mex. Inst. Min. and Metal; Soc. géol. de France; Geol. Gesell. Mining geology; petrography; volcanoes; oil fields; geography of Mexico; geology of the oil fields of Mexico.
- Ordway, Dr. Thomas**, Albany Medical College, Albany, N. Y. *Medicine*. Dorchester, Mass, May 7, 77. A.B, Harvard, 00, A.M, 01, M.D, 05. Asst. path, Harvard Med. Sch, 07-08; Boston City Hosp, 08-09; prof. path. and bacter, Albany Med. Col, 09-11; physician in charge, Huntington Hosp, Harvard Med. Sch, 11-15; *assoc. prof. med. and dean, Albany Med. Col*, 15- A.A; Am. Med. Ass; Am. Physicians; Ass. Path. and Bact; Soc. Clin. Invest; Soc. Cancer Research. Pancreatitis in cat; metabolism of rat; blood in cancer; radium injuries; radiotherapy; tumors of fowl; nature of the Wassermann reaction.
- Orndorff, Prof. W(illiam) R(idgely)**, 802 E. Seneca St, Ithaca, N. Y. **Chemistry*. Baltimore, Md, Sept. 9, 62. A.B, Hopkins, 84, fellow, Ph.D, 87; Berlin and Heidelberg, 97-98; Munich, 06. Asst. chem, Hopkins, 84-86; instr, Cornell, 87-90, asst. prof, 90-03, *prof. org. and physiol. chem*, 03- Mem. jury of awards, Paris Expos, 89; La. Purchase Expos, 04; Panama-Pacific Expos, 15; special agent, eleventh census, 90. Chem. Soc; Chem. Gesell. Reaction of diazo-compounds with alcohol; polymeric modifications of acetic and propionic aldehydes; molecular weight of hydrogen peroxid and of sulphur; paranthracene or dianthracene; constitution of gallein and coerulein; bilirubin; phenol tetrachlorophthalein; tetrachlorogallein; trisazo compounds of resorcin; constitution of the phthaleins and of the oxyazo compounds; constitution and color of organic compounds.

Orr, William, 397 Main St, Winchester, Mass. *Geology*. Philadelphia, Pa, Nov. 16, 60. A.B., Amherst, 83, A.M., 90. Principal, Hopkins Acad., Hadley, Mass, 83-85; Smith Acad., Hatfield, Mass, 85-88; teacher science, high sch, Springfield, 88-90, principal, 90-10; deputy commissioner of educ, Mass, 10-16; *educ. sec'y, Int. Y. M. C. A. Committee*, 16- Curator, Museum Nat. Hist, Springfield, 94-10. A.A. *Geology of western Massachusetts; extinct volcanoes of Mt. Tom and Mt. Holyoke; physiography of Holyoke Range; terraces of Connecticut River and of Westfield River; glacial formation of western Massachusetts.*

Orrok, Geo(rge) A(lexander), Willimantic, Conn. *Mechanical engineering*. Dorchester, Mass, July 3, 67. Sch. Mechanic Arts, 93-85; Mass. Inst. Tech, 85-88. Teacher, pub. schools, Bridgewater, West Springfield, Easthampton, Mass, 88-90; manual training, Ogden Mil. Acad, 90-91; Utah Col, 91-92; draftsman and engineer, F. S. Pearson, 92-98; N. Y. Edison Co, 98-16; *consulting engineer*, 16- A.A.; Mech. Eng. (sec'y, gas power sect, 07-14, manager, 12-15); Civil Eng; Min. Eng; Naval Archt. and Marine Eng; Franklin Inst; Conn. Soc. Civil Eng; Brooklyn Eng. Club (pres, 10). Heat transmission; power development; air and helium at low temperatures.

Ortmann, Dr. A(rnold) E(dward), Carnegie Museum, Pittsburgh, Pa. **Zoology, Paleontology*. Madgeburg, Germany, April 8, 63. Jena and Kiel, 82-86; Ph.D, Jena, 86; Sc.D, Pittsburgh, 11. Asst. bot, Jena, 85-86; paleont, Strasbourg, 86-87, first asst, zool. museum, 87-94; curator invert. paleont, Princeton, 94-03, asst. physical geog, 01-03; *curator invert. zool, Carnegie Museum, 03-*; *prof. physical geog, Pittsburgh, 10-* Mem. sci. exped. to E. Africa, 90-91; Princeton exped. to N. Greenland, 99. A.A.; Soc. Nat; Ass. Mus; Ecol. Soc; Philos. Soc; Zool. Gesell. Invertebrates; corals; cephalopods; bryozoans; crustaceans; geographical and geological distribution; general zoogeography; distribution of invertebrates with reference to geological history of the earth; theory of evolution.

Orton, Prof. C(layton) B(oberts), State College, Pa. *Plant pathology*. E. Hardwick, Vt, April 1, 85. B.S., Vermont, 09; M.S., Purdue, 15; Columbia, 16-17. Agent, U. S. Dept. Agr, 09-10; asst. plant path, Wisconsin, 10; asst. botanist, Ind. Exp. Sta, 10-12; asst. prof. bot, Pa. State, 13-16, assoc. prof, 16-18, *plant path*, 18-19, *prof*, 19-; asst. botanist, *Exp. Sta*, 13-18, *plant pathologist*, 18- Collaborator, plant disease surv, U. S. Dept. Agr, 13-; sec'y, committee plant path, Nat. Research Council, 19-; trustee, Crop Production Inst, 20- A.A.; Phytopath. Soc. (mem. advisory board, sec'y, 19-); Bot. Soc; Forestry Ass; Potato Ass; Ind. Acad. Diseases of cultivated plants; plant disease control; Uredinales; Dothideales.

Orton, Prof. Edward, Jr, 788 E. Broad St, Columbus, Ohio. *Ceramic engineering*. Chester, N. Y., Oct. 8, 63. E.M., Ohio State, 84. Director, dept. ceramic eng, Ohio State, 94-16, and dean, col. eng, 02-15; *manufacturer*. State geologist, Ohio, 99-06; lieut. col, motor transport corps, 17-19; D. S. medal, 19. A.A.; Eng. Educ;

Ceramic Soc. (sec'y, 99-17). Industrial problems in the various silicate industries; the standardization of paving brick tests; pyrometric cones.

Orton, Dr. Samuel T(orry), University of Iowa, Iowa City, Iowa. *Psychiatry*. Columbus, Ohio, Oct. 15, 79. B.S., Ohio State, 01; M.D., Pennsylvania, 05; A.M., Harvard, 06. Pathologist and clin. director, Worcester State Hosp, Mass, 10-14; instr. neuropath, Harvard, 13; scientific director, Pa. Hosp, Phila, 14-19; *prof. psychiat, Iowa, and director, State Psychopathic Hosp*, 19- Lecturer neur, Clark, 13, 15. Ass. Path. and Bact; Neur. Ass; Medico-Psychol. Ass; Psychopath. Ass. Neuropathology.

Orton, Dr. W(illiam) A(rlen), U. S. Department of Agriculture, Washington, D. C. **Vegetable pathology*. North Fairfax, Vt, Feb. 28, 77. B.S., Vermont, 97, M.S., 98, Sc.D, 15. Asst. botanist, Vt. Exp. Sta, and instr. bot, Vermont, 97-99; *pathologist in charge cotton, truck and forage crop disease investigations, U. S. Dept. Agr*, 99-, *v. chairman, fed. hort. board*. Ed, 'Phytopathology', 18-20. A.A.; Phytopath. Soc. (pres, 18-20); Bot. Soc; Wash. Bot. Soc. Parasitic fungi of Vermont; fungicides; diseases of plants; wilt diseases of plants; diseases of cotton and truck crops; breeding of disease resistant plants.

Osborn, Prof. Frederick A(rthur), University Station, Seattle, Wash. *Physics*. Tecumseh, Mich, March 3, 71. Ph.B., Michigan, 96, 00-02. Asst. physics, high sch, Saginaw, Mich, 90-91; instr, high sch, Ann Arbor, 93-96; prof, Olivet, 96-02; *prof. and director, physics laboratories, Washington (Seattle)*, 02- A.A.; Physical Soc; fel. Illum. Eng. Soc. Thickness of liquid films; Abbé-Pulfrich interferometer; diffraction grating; index of refraction of liquids.

Osborn, Prof. H(enry) F(airfield), American Museum of Natural History, New York, N. Y. **Vertebrate paleontology, Comparative anatomy, Biology*. Fairfield, Conn, Aug. 8, 57. A.B., Princeton, 77, Sc.D, 80, LL.D, 02; Royal Col. Sciences (under Huxley), 79; Cambridge (under Balfour), 79, hon. Sc.D, 04; LL.D, Trinity (Conn), 01; Columbia, 07; hon. Ph.D, Christiania, Norway, 11. Asst. prof. nat. science, Princeton, 81-83, prof. comp. anat, 83-90; Da Costa prof. biol, Columbia, 90-95, *zool*, 95-10, *research prof*, 10-, dean, faculty of pure science, 92-95; curator *vert. paleont, Am. Museum Nat. Hist*, 91-10, hon. curator, 10-, asst. to pres, 99-01, v. pres. and trustee, 01-08, *pres*, 08-; *vertebrate paleontologist, U. S. Geol. Surv*, 00- Paleontologist, Can. Geol. Surv, 00-04; director, Brearley Sch. for Girls, 94-19, pres, 01-18; elector, Hall of Fame, 10-; trustee, Kahn Foundation for Foreign travel of Am. Teachers, 11-; N. Y. Pub. Library, 12-18. Gold medal, Nat. Inst. Social Science, 13; Hayden medal, Phila. Acad, 14; Gaudry medal, Soc. géol. de France, 18; Darwin medal, Royal Geol. Soc, 18; Cullum medal, Am. Geog. Soc, 19; Commander Order of the Crown, Belgium, 19. Nat. Acad. (councilor, 06, trustee, 13); A.A. (v. pres, 92); Soc. Nat. (pres, 91); Soc. Zool. (pres, 91); Geol. Soc; Paleont. Soc. (pres, 04); life fel. Am. Geog. Soc; Philos. Soc. (coun-

- cilor, 07-); Am. Acad; N. Y. Zool. Soc. (pres, 09); fel. N. Y. Acad. (v. pres, 97, 98, pres, 98-00); Wash. Acad. (v. pres, 11); La Plata Mus; Soc. Cient. Ant. Alz; hon. mem. British Ass; London Linnean Soc; London Zool. Soc; London Geol. Soc; Manchester (England) Lit. and Philos. Soc; hon. fel. Edinburgh Royal Soc; Paris Inst. de Paleont. humaine; Moscow Imp. Soc. Nat; Bavarian Acad; Senckenbergische Natur. Gesell; assoc. Belgian Acad; hon. fel. Swedish Acad; Upsala Acad. Evolution and biology.
- Osborn, Prof. Henry T(leslie)**, 1599 Hewitt Ave, St. Paul, Minn. *Zoology*. Newark, N. J, July 5, 57. A.B. Wesleyan, 78; fellow, Hopkins, 81-84, Ph.D, 84. Asst. biol. Wesleyan, 78-81; *prof. zool*, Purdue, 84-87; *biol. and geol*, *Hamline*, 87-, *dean of faculty*, 18- Asst. U. S. Fish Commission, 80-81; mem. staff, Cold Spring Harbor, summers, 91, 92; *prof. biol*, *Chautauqua*, N. Y, summers, 95-03; Minnesota, summers, 13, 14. A.A; Soc. Nat; Soc. Zool; Ass. Prof; Minn. Acad. (pres). Embryology and anatomy of gasteropods; structure of trematodes; trematodes of Minnesota frogs.
- Osborn, Prof. Herbert**, Ohio State University, Columbus, Ohio. **Zoology, Entomology*. Lafayette, Wis, March 19, 56. B.S. Iowa State, 79, M.S. 80, Sc.D. 16; museum comp. zool, Harvard, 81-82; Naples Zool. Sta, 94-95. Asst. *zool. and entom*, Iowa State, 79-83, asst. prof, 83-85, *prof*, 85-98; *Ohio State*, 98- Special agent, div. entom, U. S. Dept. Agr, 85-94; entomologist, Iowa Exp. Sta, 90-98; in charge entom. exhibit, Exp. Stations, Columbian Expos, 93; state entomologist, Iowa, 98; director, lake lab. at Sandusky, Ohio State, 00-19; director, Ohio Biol. Surv, 12- A.A. (v. pres, 17); Soc. Nat; Soc. Zool; Ass. Econ. Entom. (pres, 98); Entom. Soc. (managing ed, 'Annals,' 08-, pres, 11); Ecol. Soc; Soc. Prom. Agr. Sci. (pres, 17); Micros. Soc. (pres, 07-09); Wash. Entom. Soc; Wash. Biol. Soc; Iowa Acad. (pres, 87, sec'y, treas. and ed, 90-98); Ohio Acad. (treas, 98-04, pres, 04). Economic entomology; life histories and ecology of insects; grass insects; Hemiptera; Mallophaga; systematic and faunal studies of Hemiptera.
- Osborne, Dr. Caroline A(melia)**, Hospital Cottage, Baldwinsville, Mass. *Psychiatry*. East Templeton, Mass, April 18, 66. M.D. Woman's Med. Col, Pa, 99; A.M. Clark, 07, Ph.D, 08. Supt. of nurses, *Mem. Hosp*, 99-04, *instr*, 04- Asst. voice clinic, Psychopath. Hosp, Boston, 15- A.A; Am. Med. Ass; Med. Woman's Nat. Ass. Neuro-pathology; mental defectiveness; speech defects; biology; hygiene.
- Osborne, Prof. George A(bbott)**, 249 Berkeley St, Boston, Mass. *Mathematics*. Danvers, Mass, Dec. 21, 39. B.S. Harvard, 60. *Instr. math*, Lawrence Sci. Sch, Harvard, 60; asst. prof, U. S. Naval Acad, 61-65; *prof*, *Mass. Inst. Tech*, 66- A.A; Math. Soc.
- Osborne, Dr. Harold S(mith)**, 195 Broadway, New York, N. Y. *Electrical engineering*. Fayetteville, N. Y, Aug. 1, 87. B.S. Mass. Inst. Tech, 08, fellow, 08-10, Eng.D, 10. *With eng. dept*, *Am. Telegraph and Telephone Co*, 10- With Edison Elec. Illum. Co, summers, 05-08. A.A;
- Elec. Eng; Physical Soc; assoc. Radio Eng. Dielectrics; capacities of parallel wires; inductive interference in telephone circuits.
- Osborne, Prof. Oliver T(homas)**, 1155 Forest St, New Haven, Conn. *Medicine*. New Haven, Nov. 14, 62. M.D. Yale, 84, hon. A.M. 00; Leipzig, 85. *Prof. therapist*, *Yale*, 94- Chairman, med. board, Gaylord Sanatorium. Am. Med. Ass. (ed, therapist. dept, 'Jour,' 07-); Therapeut. Soc. (past pres). Pharmacology; materia medica; therapeutics; drugs and organic extracts; principles of therapy; diseases of the kidney and heart.
- Osborne, Dr. Thomas B(urr)**, Box 1922, New Haven, Conn. **Chemistry*. New Haven, Aug. 5, 59. A.B. Yale, 81, Ph.D, 85, hon. Sc.D, 10. *Research chemist*, *Conn. Exp. Sta*, 86- Research assoc, Carnegie Institution. Nat. Acad; A.A; Chem. Soc; Physiol. Soc; Soc. Biol. Chem. (pres, 10); Soc. Exp. Biol; Am. Acad; hon. mem. London Chem. Soc; assoc. mem. Soc. Royale des Sci. Med. et Nat. Bruxelles. Chemistry of the vegetable proteins and related subjects.
- Osburn, Prof. Raymond C(arroll)**, Ohio State University, Columbus, Ohio. **Zoology*. Newark, Ohio, Jan. 4, 72. B.S. Ohio State, 98, M.S. 00; fellow, Columbia, 02-03, Ph.D, 06. *Instr. biol. and embryol*, Starling Med. Col, 98-99; *prof. biol*, Fargo, 99-02; teacher, N. Y. High Sch. of Commerce, 03-07; *instr. zool*, Barnard, Columbia, 07-10, asst. prof, 10-15; assoc. director, N. Y. Aquarium, 10-15; *prof. biol*, Conn. Col. for Women, 15-17; *prof. zool. and entom. and head of dept*, *Ohio State*, 17- Research assoc, Am. Mus. Nat. Hist. A.A; Soc. Nat; Soc. Zool; Fisheries Soc; Ass. Econ. Entom; Entom. Soc; Ass. Prof; Ohio Acad; N. Y. Entom. Soc; N. Y. Acad. Fishes and fisheries; Syrphidae; aquatic adaptations in vertebrates; origin of the limbs of vertebrates; Bryozoa; Woods Hole faunal survey.
- Osburn, Prof. William Morris**, Ill. *Zoology*. Wilmington, Ill, Oct. 3, 54. A.B. Kansas, 77, A.M. 91. Prof. nat. science, Walden, 91-01; *instr. biol*, Cincinnati, 01-02; dept. biol, Hughes High Sch, Cincinnati, 02-04; *proprietor*, *Goose Lake Seed and Stock Farm*, Morris, Ill, 04- Curator entom, Cincinnati Soc. Nat. Hist; assoc. ed, 'Prairie Farmer'; supervisor, Goose Lake Township, Ill. Assoc. Ornith. Union; Ill. Poultry Ass. (pres). Ornithology; parasitism in Lepidoptera.
- Osgood, Wilfred H(udson)**, Field Museum of Natural History, Chicago, Ill. *Zoology*. Rochester, N. H, Dec. 8, 75. A.B. Stanford, 99; Ph.D, Chicago, 18. Asst. biologist, U. S. Biol. Surv, 97-09; asst. curator mammal and ornith, *Field Museum Nat. Hist*, 09-19, *assoc. curator zool*, 20- Specialist, Fur Seal Inquiry, 14; mem. exped. to Venezuela, 20; mem. Nat. Research Council, 19- A.A; fel. Ornith. Union; Soc. Mammal. (v. pres, 19); Wash. Biol. Soc. (sec'y, 00-09); Cooper (Calif) Ornith. Club (first pres); Chicago Campfire Club (pres, 20); cor. mem. London Zool. Soc. Mammalogy; ornithology; biological surveys of Alaska; American mammals.

- Osgood, Prof. William F(ogg)**, Harvard University, Cambridge, Mass. **Mathematics*. Boston, Mass, March 10, 64. A.B, Harvard, 86, A.M, 87; Göttingen, 87-89; Ph.D, Erlangen, 90; LL.D, Clark, 09. Instr. *math*, Harvard, 90-93, asst. prof, 93-03, prof, 03-14, *Perkins prof*, 14- Ed, 'Annals of Math,' 01-02. Nat. Acad; Math. Soc. (v. pres, 03, pres, 05, 06; ed, 'Trans,' 09); Philos. Soc; Math. Verein; Circolo Mat. di Palermo; Charkow Math. Soc; Calcutta Math. Soc. Theory of functions of real and of complex variables.
- O'Shaughnessy, Prof. Louis**, Blacksburg, Va. *Mathematics, Engineering*. South Solon, Ohio, Aug. 8, 77. B.S, Va. Polytech, 03, C.E, 04; A.M, Ohio State, 07; Ph.D, Pennsylvania, 11. Instr. civil eng, Va. Polytech, 04-06; math, Pennsylvania, 07-18; *prof. civil eng*, Va. Polytech, 18-19, *applied math*, 19- A.A; Math. Soc; Math. Ass; Eng. Educ. Differential equations and series.
- O'Shaughnessy, M(ichael) M(aurice)**, City Hall, San Francisco, Calif. *Civil engineering*. Limerick, Ireland, May 28, 64. B.S, Royal Univ, Ireland, 84. *City engineer*, San Francisco, 12- Laurie prize, Soc. Civil Eng, 12. Civil Eng. (pres, San Francisco branch, 20); Water Works Ass; New Eng. Water Works Ass. Hydraulic engineering; railway construction; tunnels.
- O'Shea, Prof. M(ichael) V(incent)**, University of Wisconsin, Madison, Wis. *Education, Psychology*. Le Roy, N. Y, Sept. 17, 66. B.L, Cornell, 92; Europe, 95. *Prof. educ*, Minn. State Nor. Sch, 92-95; Teachers' Col, Buffalo, 95-97; *Wisconsin*, 97- Lecturer educ, summer sessions, California, Pennsylvania and other universities, 06-15; Committee of One Hundred on Pub. Health. Chairman Am. committee, Int. Educ. Cong. Liège, 06, Brussels, 10. A.A; several educ, psychol. and philos. societies. Mental development in childhood and youth; tobacco in relation to mental efficiency; measurement of vocational aptitudes.
- Oskamp, Joseph**, Misosuri Fruit Experiment Station, Mountain Grove, Mo. *Horticulture*. Cincinnati, Ohio, Jan. 22, 88. B.S, Missouri, 12. Asst. hort, Purdue Exp. Sta, 12-13, research asst. pomol, 14-16, assoc, 17-20; *horticulturist*, Mo. Fruit Exp. Sta, 20- Soc. Hort. Sci. Orchard nutrition; soil management; fertilization; pruning; stock and seion.
- Osmun, Prof. A(lbert) Vincent**, Massachusetts Agricultural College, Amherst, Mass. *Botany*. Danbury, Conn, Jan. 20, 80. B.Agr, Conn. Col, 00; B.S, Boston, 03; B.S, Mass. Col, 03, M.S, 05. Asst, Exp. Sta, Storrs, Conn, 00-02; *instr. bot*, Mass. Col, 03-07, asst. prof, 07-14, assoc. prof, 14-16, *prof, head of dept, and head*, Exp. Sta, 16- A.A; Bot. Soc; Phytopath. Soc; New Eng. Bot. Club; Fern Soc. (see'y, 04). Bacteria of soils; ferns and flora of New England; soil bacteria; plant pathology; mycology.
- Ostenberg, Zeno**, San Jose, Calif. *Chemistry*. Des Moines, Iowa, Nov. 18, 88. A.B, Stanford, 13, A.M, 14; fellow, California, 15-16. Asst. pharmacol, Stanford, 13-15; chief chemist, Int. Cellulose Co, 16-17. Lieut, N.R.F.C, 18-19. Chem. Soc. Physical, organic, bacteriological and pharmacological chemistry; cellulose and gliadin solutions.
- Osterhout, George E**, Windsor, Colo. *Botany*. Wyoming Co, Pa, March 31, 58. A.B, Lafayette, 81. A.A; Torrey Bot. Club; Cooper Ornith. Club; Colo. Biol. Soc. Flowering plants and birds of Colorado; the Ammiaceae and the genus *Cirsium*.
- Osterhout, Prof. W(inthrop) J(ohn) V(anleuven)**, Harvard University, Cambridge, Mass. **Botany*. Brooklyn, N. Y, Aug. 2, 71. A.B, Brown, 93, A.M, 94; Bonn, 95-96; Ph.D, California, 99. Instr. *bot*, Brown, 93-95; California, 96-99, asst. prof, 99-08, assoc. prof, 08-09; asst. prof, Harvard, 09-13, *prof*, 13- Hitchcock lecturer, California, 19; mem. board directors, Rockefeller Inst, 20-; ed, 'Jour. Gen. Physiol.' Nat. Acad; A.A; Soc. Nat; Philos. Soc; Bot. Soc; Physiol. Soc; Soc. Exp. Biol; Chem. Soc; Am. Acad; New Eng. Bot. Club; Boston Soc. Nat. Hist; Wash. Acad. Spindle formation and fertilization in plants; antagonism; permeability; electrical conductivity; respiration; photosynthesis.
- Ostrander, Prof. J(ohn) E(dwin)**, Amherst, Mass. *Civil engineering, Mathematics*. Slingerlands, N. Y, March 20, 65. A.B, C.E, Union, 86, A.M, 89. Practising civil engineer, 86-91; instr. civil eng, Lehigh, 91-92; *prof. civil eng. and mech. arts*, Idaho, 92-97; *math. and civil eng*, Mass. Col, and *meteorologist*, Mass. Exp. Sta, 97- Acting prof. astron, Amherst, 00-07. Civil Eng; Min. Eng; Eng. Educ. Variation of the magnetic needle; meteorology.
- Otis, Prof. Cha(rle)s H(erbert)**, Western Reserve University, Cleveland, Ohio. *Botany*. Raymond, Nebr, Jan. 25, 86. A.B, Michigan, 10, Ph.D, 13. Asst. bot, Michigan, 09-10, curator, bot. garden and arboretum, 10-12, acting director and asst. bot, 12-13; instr. bot, Cornell, 13-15; instr. bot, N. H. Col, and asst. botanist, Exp. Sta, 15-16; instr. *biol*, Western Reserve, 16-19, *asst. prof*, 19- Exten. service, Vt. Exp. Sta, 15; plant disease surv, bur. plant indust, U. S. Dept. Agr, 18. A.A; Bot. Soc; Ohio Acad. Trees of Vermont and Michigan; transpiration of emersed water plants.
- Otis, Prof. D(aniel) H(enry)**, 1822 Chadbourne Ave, Madison, Wis. *Agriculture*. Topeka, Kans, March 30, 72. B.S, Kansas State, 92, M.S, 97. Asst. agr, Kansas State, 92-98, dairying, 98-00, prof. dairy and animal husbandry, 00-03; manager, Deming ranch, Oswego, Kans, 03-05; assoc. prof. animal nutrition, Wisconsin, 05-09, prof. farm management, 09-19, asst. dean, col. agr, 12-19; *director*, Banker-Farmer Exchange of Wis. Bankers Ass, 19- Mem. educ. corps, A.E.F. Kans. Acad; Wis. Acad. Animal nutrition; farm management; inoculation of soy beans for root tubercles; feeding of farm animals; feeding of calves; selection of feeds for farm animals; simplification of farm and household accounts.
- Outerbridge, Alex(ander) E(wing), Jr**, Wm. Sellers and Co, Philadelphia, Pa. *Metallurgy*. Philadelphia, July 31, 50. Pennsylvania. Asst, assay lab, U. S. Mint, Phila, 68-79, organizer, assay dept, New Orleans branch, 79-

- 80; *metallurgist*, A. Whitney and Sons Car Wheel Works, 80-88; *William Sellers Co*, 88-Lecturer indust. econ, Pennsylvania; prof. metal, Franklin Inst; John Scott Legacy medal and premium; Elliott Cresson gold medal. Franklin Inst. Molecular physics of iron.
- Overbeck, Dr. R(obert) M(ilton)**, U. S. Geological Survey, Washington, D. C. *Geology*. Baltimore, Md, Jan. 23, 87. A.B. Hopkins, 09, fellow, 14-15, Ph.D. 15. With U. S. Geol. Surv., 13-20; *private work*, 20- Min. and Metal. Eng; Wash. Geol. Soc. Copper ores; geology and mineral resources of Alaska.
- Overholser, Prof. E(arle) L(ong)**, University of California, Berkeley, Calif. *Pomology*. Kansas City, Mo, Dec. 19, 88. B.S.(Agr), Missouri, 13, fellow, 13-14, A.M., 14; Cornell, 14-16. Asst bot, Missouri, 11-13; instr. *pomol*, Cornell, 14-17, asst. prof, 17-18; exchange prof. from Cornell, *California*, 18-19, asst. prof, 19- A.A; Soc. Hort. Sci. Susceptibility of host plant to powdery mildews; color production in fruits; pollination of apples; cold storage of fruits.
- Overholts, Prof. L(ee) O(ras)**, Pennsylvania State College, State College, Pa. *Botany*. Camden, Ohio, June 23, 90. A.B. Miami, 12; Lackland fellow, Washington (St. Louis), 12-15, Ph.D. 15. Instr. *bot*, Pa. State, 15-17, asst. prof, 17-20, *assoc. prof*, 20- Field asst. forest path, bur. plant indust, U. S. Dept. Agr, summer, 18. Bot. Soc. Taxonomy of the higher fungi; forest pathology.
- Overman, Dr. O(liver) R(alph)**, University of Illinois, Champaign, Ill. *Chemistry*. Windfall, Ind, April 15, 86. A.B. Indiana, 10, A.M., 11; Ph.D. Cornell, 17. Teaching fellow, Indiana, 10-11; asst. chem, Cornell, 11-15; prof. chem. and geol, Huron, 15-17; *assoc. dairy chem*, Illinois, 17-19, asst. prof, 19- A.A; Chem. Soc. (councilor, S. Dak. sect, 16); S. Dak. Acad. (second v. pres, 15). Electrodeposition of lead; oxidation of hydrazin and ammonia; food values and dairy products.
- Overton, Prof. Ja(me)s B(ertram)**, University of Wisconsin, Madison, Wis. **Botany*. Richmond, Mich, Dec. 23, 69. Ph.B. Michigan, 94; fellow, Chicago, 00-01, Ph.D. 01; Bonn, 03-04. Senior master math, St. John's Mil. Acad, Delafield, Wis, 95-98; asst. bot, Chicago, summer, 00-01; prof. biol, Illinois Col, 01-04; instr. bot, Wisconsin, 04-07, asst. prof, 07-12, *assoc. prof*, *plant physiol*, 12-15, *prof*, 15- A.A; Soc. Nat; Bot. Soc; Ecol. Soc; Ass. Prof; Bot. Cent. States; Wis. Acad; Int. Ass. Bot; Bot. Gesell. Parthenogenesis and special problems in fertilization; reduction divisions in flowering plants; cytology of Ascomycetes; physiology of vascular plants.
- Ovitz, Frank K(ehn)**, 313 Oliver St, Whiting, Ind. *Chemical engineering*. Mineral Point, Wis, May 17, 82. B.S. Michigan, 05. Instr. chem. eng, Illinois, 06-07, chemist, Eng. Exp. Sta, 07-08; asst. chemist, fuel engineer and later supt, U. S. Bur. Mines, 08-20; *fuel engineer*, *Standard Oil Co. of Ind*, 20- Chem. Soc; Min. Eng. Chemistry and utilization of fuels; petroleum combustion.
- Owen, Prof. D(avid) A(llen)**, 200 S. State St, Franklin, Ind. *Biology*. Worthington, Ind, Dec. 11, 52. A.B. Franklin, 78, A.M. 81. Instr. nat. science, Franklin, 79-81, prof. biol, 85-09. Bot. Cent. States; Ind. Acad.
- Owen, Prof. Fayette Timothy**, 1022 West St, Emporia, Kans. *Chemistry*. Lyndon, Ill, April 11, 68. A.B. Doane, 96, A.M. 04; Columbia, 05, Ph.D. 12. Teacher science, Franklin Acad, Franklin, Nebr, 96-04; head, dept. science, State Nor. and Training Sch, Potsdam, N. Y., 05-11; *prof. chem*, Emporia, 13- Chem. Soc. Physical chemistry.
- Owen, Miss Juliette A**, 306 N. Ninth St, St. Joseph, Mo. *Ornithology*. St. Joseph, Mo. Vassar. A.A; Ornith. Union; Mus. Ass; N. Y. Acad; Wash. Acad; Wash. Biol. Soc. Ornithology and botany of Missouri.
- Owen, Miss Luella Agnes**, 306 N. Ninth St, St. Joseph, Mo. *Geography, Geology*. St. Joseph, Mo. Pub. and private instruction. Mem. Int. Congresses Geog. and Geol. A.A; Am. Geog. Soc; Forestry Ass; Soc. de Spéléologie. Origin and deposition of loess; evidence of early man in the Missouri River valley; value of the Missouri and its tributaries for transportation; caves and other evidence supporting the theory of geyser action; land snails in loess of China, America and Europe; the causes, consequences and control of floods of the Missouri River.
- Owens, Dr. A(lbert) W(affie)**, 75 Magazine St, Cambridge, Mass. *Metallurgy*. B.S. Bucknell, 09; Ph.D. Illinois, 18. Instr. science, Indiana, 09-11; chem, Illinois, 11-13; science, high sch, Bisbee, Ariz, 13-15; chem, Illinois, 15-17; *physical chemist*, Bur. Standards, 18-20; *tech. research lab*, U. S. Smelting, Ref. and Min. Co, Boston, Mass, 20- Chem. Soc. Atomic weight of samarium; preparation of pure aluminum and of iron-carbon-manganese alloys.
- Owens, Prof. C(harles) E(lmer)**, Oregon Agricultural College, Corvallis, Oregon. *Botany*. Clay Co, Ind, Nov. 26, 77. A.B. Indiana, 10, A.M., 11. Teacher, pub. schools, Ind, 06-10; teaching fellow, Indiana, 10-12; instr. *bot. and plant path*, Oregon Col, 12-16, asst. prof, 16-20, *assoc. prof*, 20- A.A; Bot. Soc; Phytopath. Soc. Plant pathology.
- Owens, Prof. F(rederick) W(illiam)**, 110 Westburne Lane, Ithaca, N. Y. *Mathematics*. Rockwell City, Iowa, Nov. 18, 80. B.S. M.S. Kansas, 02, fellow, 02-03; Ph.D. Chicago, 07. Instr. *math*, Northwestern, 05-07; Cornell, 07-15, asst. prof, 15- A.A; Math. Soc; Math. Ass; Physical Soc; Circolo Mat. di Palermo. Foundations of geometry; applied mathematics.
- Owens, Dr. Robert Bowie**, Franklin Institute, Philadelphia, Pa. *Electrical engineering*. Grad, Charlotte Hall Mil. Acad, Md; Hopkins; E.E. Columbia, 91, A.M. 99, John Tyndall fellow; B.Sc. M.Sc. D.Sc. McGill. Prof. elec. and steam eng, Nebraska, 91-98; elec. eng, McGill, 98-09; elec. engineer, Southern Power Co, 09-10; *sec'y*, *Franklin Institute*, 10- Director, elec. and machine building, Trans-Miss. Exhibit, 98; mem. jury of awards, Columbian Expos, 93; La. Purchase Expos, 04; delegate, Int. Elec. Cong, Chicago, 93; St. Louis, 04; major, Sig. C; chief, intelligence div; chief sig. officer, Am. troops in England, Sig. C. A.E.F; hon. companion, D. S. Order. A.A; Elec. Eng. (past v. pres); Phys-

ical Soc; Eng. Educ; Chem. Soc; fel. Royal Soc. Can; Can. Inst. Eng; British Inst. Elec. Eng.

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- Paarmann, J(uergen) H(erman)**, 1532 Clay St, Davenport, Iowa. *Ornithology*. Davenport, Sept. 2, 70. B.S. Iowa, 01, M.S. 02. Teacher, pub. schools, 94-97; principal, Wolcott, Iowa, 99-00; *curator*, *Davenport Acad. Sciences*, 02-03; *Supervisor* nature study, pub. schools, Davenport, 03-10; *prof. biol*, Augustana, 18-19. Bird Club (sec'y); Mus. Ass; Iowa Anthropol. Ass. (v. pres, 03-06, sec'y, 06-); Davenport Acad. Classification of the hydroids; apiculture; English sparrow; flora of eastern Iowa.
- Pace, Prof. Edward A(loysius)**, Catholic University, Washington, D. C. **Psychology*. Starke, Fla, July 3, 61. A.B. St. Charles, 80; D.D. Urban Col. of Propaganda, Rome, 86; Ph.D. Leipzig, 91. *Prof. philos*, *Catholic Univ*, 91-Ed, 'Catholic Enycl.' Psychol. Ass; Philos. Ass. Fluctuations of attention; adaptation; retinal fatigue.
- Pace, Dr. L(ula)**, Baylor University, Waco, Tex. *Botany*. Newton, Miss, 68. B.S. Baylor, 90; M.S. Chicago, 02, Ph.D. 07; Bonn, 10-11. Teacher, pub. schools, 90-04; *instr. bot*, *Baylor*, 04-10, *asst. prof*, 10-15, *prof*, 15- A.A; Bot. Soc. Morphological and cytological botany.
- Pack, Prof. Fred(erick) J(ames)**, University of Utah, Salt Lake City, Utah. *Geology*. Bountiful, Utah, Feb. 2, 75. B.S.(M.E), Utah, 04; A.M. Columbia, 05, Ph.D. 06. *Prof. geol. and miner*, Brigham Young, 06-07; *Deseret prof. geol*, *Utah*, 07- A.A; fel. Royal Scottish Geog. Soc. Cambrian faunas of Pioche, Nevada; Carboniferous fauna, Cretaceous vertebrates and marine Triassic of Utah; terraces of Lake Bonneville.
- Pack, B(ober) W(allace)**, Sun Co, Beaumont, Tex. *Geology*. Berkeley, Calif, June 15, 85. B.S. California, 08, fellow, 09-10. *Asst. miner. and petrog*, California, 08-09; *asst. and later assoc. geologist*, *U. S. Geol. Surv*, 10-13, *paleontologist*, 14-15, *geologist*, 16-17; *Sun Co*, 17-19, *chief geologist*, 20, *gen. supt*, *Gulf Coast div*, 20- *Geol. Soc*; *Paleont. Soc*; *Min. Eng*; *Ass. Petrol. Geol*; *Wash. Geol. Soc*; *Wash. Acad. Geology of petroleum*; California stratigraphy and tertiary paleontology; petroleum deposits of Central and South America, Texas, Louisiana and California.
- Packard, Prof. Charles**, Peking Union Medical College, Peking, China. *Biology*. Boston, Mass, 84. B.S. Syracuse, 07, M.S. 08; Ph.D. Columbia, 14. *Instr. zool*, Williams, 08-10; Columbia, 14-18; *asst. prof*, *Peking Union Med. Col*, 18-A.A; Soc. Zool. Effect of radium on living matter.
- Packard, Prof. H(arl) L(eroy)**, University of Oregon, Eugene, Oregon. *Paleontology*. East Charlemont, Mass, April 10, 85. A.B. Washington (Seattle), 11, A.M. 12; Ph.D. California, 15. *Instr. geol*, Washington (Seattle), 15-16; *asst. prof*, Oregon, 16-17; *head of dept*, Miss. Agr. Col, 17-18; *prof*, *Oregon*, 18- A.A; *Paleont. Soc*; *West. Soc. Nat*; *Calif. Acad. Mezo-zoic and Cenozoic Mastrinae of the Pacific Coast*; fauna of the Cretaceous of the Santa Ana Mountains; quantitative analysis of the molluscan fauna of San Francisco Bay.
- Packard, Prof. W(ales) H(arrison)**, Bradley Polytechnic Institute, Peoria, Ill. *Physiology*. Chatham, Ohio, Nov. 12, 70. B.S. Olivet, 94; Chicago, 94-98, Ph.D. 08. *Instr. zool*, Woods Hole, 95-99; *biol*, *Bradley Polytech. Inst*, 98-04, *prof*, 04- *Instr. physiol*, Chicago, summer, 03; *zool*, Illinois, summer, 14. A.A; Cent. Ass. Sci. and Math. Teachers; Ill. Acad. Resistance to lack of oxygen; functions of semicircular canals.
- Paddock, Prof. F(loyd) B.**, Ames, Iowa. *Zoology*. Three Oaks, Mich, Nov. 21, 84. B.S. Colo. Agr. Col, 09; M.S. Ohio State, 15. *Agr. experimentalist*, Great West. Sugar Co, 10-11; *instr. entom*, Tex. Col, 11-12, *asst. prof*, 12-13, *assoc. prof*, 13-14, *entomologist*, *Exp. Sta*, 14-19; *assoc. prof. in charge apiculture*, *Iowa State*, 19- *Asst. state entomologist*, Tex, 14-15, *state entomologist*, 15-19. A.A; Ass. Econ. Entom; Entom. Soc. Entomology; Hemiptera; apiculture.
- Paddock, Dr. George Frederic**, Mt. Hamilton, Calif. *Astronomy*. Providence, R. I, 79. Ph.B. Brown, 02; fellow, Virginia, 02-06, A.M. 06, Ph.D. 12. *Asst. south. sta.* (Santiago, Chile), *Lick Observatory*, 06-12, Mt. Hamilton, Calif, 12-18, *acting astronomer in charge*, *Santiago sta*, 18- *Astron. Soc*; *Pacific Astron. Soc*. Radial velocities of stars; spectroscopy.
- Paddock, Prof. W(endell)**, Ohio State University, Columbus, Ohio. *Botany*. Three Oaks, Mich, July 12, 66. B.S. Mich. Agr. Col, 93, M.S. 98. *Asst. hort*, N. Y. Exp. Sta, Geneva, 93-00; *prof. bot. and hort*, Colo. Agr. Col, 98-09; *hort*, *Ohio State*, 09- A.A; Soc. Hort. Sci. Plant diseases.
- Padgett, Prof. Fred Warde**, University of Oklahoma, Norman, Okla. *Chemistry*. Ft. Scott, Kans, Oct. 10, 88. B.S. Pittsburgh, 13, M.S. 14. Fellow, Mellon Inst, 12-17; *assoc. prof. chem*, *Oklahoma*, 17- *Chem. Soc. Petroleum*; pyrogenesis of hydrocarbons; emulsification; recovery of used lubricating oils; natural gas.
- Page, Dr. Calvin G(ates)**, 117 Marlboro St, Boston, Mass. *Bacteriology*. Boston, July 9, 67. A.B. Harvard, 90, M.D. 94. *Physician, orthop. dept*, Boston Dispensary, 96-16; *asst. bacter*, *Harvard Med. Sch*, 99-12, *instr*, 12-20, *asst. prof*, 20- *House officer*, Children's Hosp, 93-94; Boston City Hosp, 95. *Ass. Path. and Bact*; *Soc. Bact*; *Pub. Health Ass*; *Am. Med. Ass*; *Ass. Tuber. Bacteriology of scarlet fever*; sporotrichosis; milk.
- Page, Frederick S(myth)**, Dartmouth College, Hanover, N. H. *Botany*. Candia, N. H, Oct. 28, 89. B.S. Dartmouth, 13; M.S. Vermont, 14. *Asst. bot*, Vermont, 13-15; *instr. biol*, *Dartmouth*, 15- *U. S. Exp. Sta*, Burlington, Vt. 14-15. A.A; Bot. Soc. Mycorrhizas of white pine; transpiration of forest seedlings.
- Page, Prof. J(ames) M(orris)**, University of Virginia, Charlottesville, Va. **Mathematics*. Cobham, Va, March 4, 64. A.M. Randolph-Macon, 85; Ph.D. Leipzig, 87. *Head master, private sch*, 88-95; *adj. prof. math* *Virginia*, 96-98, *assoc.*

- prof, 98-01, *prof*, 01-, dean, acad. faculty, 00-02. Assoc. ed, 'Annals of Math,' 96-99. A.A.; Math. Soc. Applications of the infinitesimal calculus to geometry.
- Page, Dr. Leigh**, Yale University, New Haven, Conn. **Physics*. South Orange, N. J, Oct. 13, 84. Ph.B, Yale, 04, Ph.D, 13. Instr. *physics*, Yale, 12-16, *asst. prof*, 16- Silliman lecturer, 17; judge, Einstein contest, 'Scientific Am.' Physical Soc. Principle of relativity; photoelectric effect; electrodynamics; atomic structure.
- Paige, Prof. James B(reckenridge)**, 42 Lincoln Ave, Amherst, Mass. *Veterinary science*. Prescott, Mass, Dec. 28, 61. B.S, Mass. Col, 82; V.S, Montreal Vet. Col, 88; D.V.S, McGill, 91; Royal Vet. Col, Munich, 95-96. *Prof. vet. science*, Mass. Col, 90- Veterinarian, Mass. State Board Agr; lecturer apiculture, Smith's Agr. Sch, Northampton. Vet. Med. Ass. Bacteriology; the transmission of tuberculosis to bovines through milk; rabies in cattle; cattle poisoning with arsenate of lead.
- Paige, Sidney**, U. S. Geological Survey, Washington, D. C. *Geology*. Washington, Nov. 2, 80. Michigan, 02-03; Yale, 08. Mem. Nicaragua Canal Commission, 98-00; *asst. geologist*, U. S. *Geol. Surv.*, 02-07, *geologist*, 13-, in charge west. areal geol, 16-18, in charge, *div. geol.*, 18- *Asst. geologist*, Panama Canal Commission, 07. *Geol. Soc*; Min. Eng; Wash. *Geol. Soc*; Wash. Acad. (assoc. ed, 'Jour'). *Geology of Alaska and the western United States*.
- Paine, Prof. Ellery B(urton)**, 606 Pennsylvania Ave, Urbana, Ill. *Electrical engineering*. Wilmington, Conn, Oct. 9, 75. B.S, Worcester, 97, M.S, 98, E.E, 04. With Gen. Elec. Co, Schenectady, N. Y, 99; elec. engineer, Lehigh Valley Coal Co, Wilkes-Barre, Pa, 99-02; *prof. physics*, Stetson, 02-04; *physics and elec. eng.*, N. C. Col, 04-07; *asst. prof. elec. eng.*, Illinois, 07-13, *prof. in charge of dept.*, 13- A.A.; Elec. Eng; Eng. Educ. High potential discharges in dielectrics; combinations of harmonic motions; lightning; magnetic properties of iron alloys.
- Paine, Dr. George Porter**, 20 Walker St, Cambridge, Mass. *Meteorology*. Dutch Island, R. I, Sept. 12, 76. A.B, Harvard, 05, A.M, 07; Ph.D, Wisconsin, 18. *Prof. math.*, Ripon, 07-09; *asst. prof.*, Minnesota, 09-12; research instr, Wisconsin, 14-19; *Nat. Research fellow*, Harvard, 19- Mem. Geophys. Union. *Fel. Meteorol. Soc.* Circulation of the atmosphere; free air humidities.
- Paine, Mrs. Robert (Mary Esther Trueblood)**, 94 Panoramic Way, Berkeley, Calif. *Mathematics*. Richmond, Ind, May 6, 72. Ph.B, Earlham, 93; Ph.M, Michigan, 96; fellow, Woman's Educ. Ass. (Göttingen), 00-01. *Instr. math.*, Earlham, 97-99; Mt. Holyoke, 02-10; *exten. div.*, California, 15- A.A.; Math. Soc. History of mathematics.
- Painter, H(enry) R(aymond)**, U. S. Entomological Laboratory, Box 95, West Lafayette, Ind. *Entomology*. Big Springs, Kans, Sept. 10, 88. B.S, Okla. Col, 12, M.S, 16. *Asst. entomologist*, Okla. Col, 12-18; *scientific asst.*, *bur. entom.*, U. S. *Dept. Agr.*, 18- A.A.; *Ass.* Econ. Entom. San Jose scale; fowl tick; locust borer.
- Painter, Prof. Theophilus S(hickel)**, University of Texas, Austin, Tex. *Zoology*. Salem, Va, Aug. 22, 89. A.B, Roanoke, 08; A.M, Yale, 09, Ph.D, 13. Instr. *zool.*, Yale, 14-16; *adj. prof.*, Texas, 16- Soc. Nat; Soc. Zool; Ass. Anat. Experimental zoology; cytology.
- Palache, Prof. Charles**, 106 Appleton St, Cambridge, Mass. **Mineralogy*, *Geology*. San Francisco, Calif, July 18, 69. B.S, California, 91, fellow, 92-94, Ph.D, 94. Instr. *miner.*, Harvard, 96-01, *asst. prof.*, 02-12, *prof.*, 12- A.A.; *Geol. Soc*; Am. Acad. Mineralogy; crystallography and paragenesis of American minerals.
- Pallister, Prof. Hugh D(avidson)**, University of Alabama, University, Ala. *Mining*. Cleveland, Ohio, May 31, 83. B.S, Case, 06, E.M, 14. Mining and consulting engineer, 06-10; instr. mech. and hydraul. eng, Case, 08-10; metal and mining, Pa. State, 10-12, *asst. prof.*, 12-15; *prof. geol. and mining*, Texas Sch. of Mines, 15-19; *supt. coal mines*, McKinney Steel Co, 19-21; *prof. mining*, Alabama, 21- A.A.; Min. Eng; Coal Min. Inst. *Geology*, mining and metallurgy of quicksilver.
- Palmer, Prof. A(lbert) deForest**, Brown University, Providence, R. I. **Physics*. Tewksbury, Mass, July 26, 69. Ph.B, Brown, 91, Ph.D, 95; Hopkins, 91-93. Instr. *physics*, Brown, 93-96, *assoc. prof.*, 96- A.A.; Physical Soc; Soc. de Physique. Wave-length of helium line; condensation in steam jet; effect of high pressure on electrical resistance of mercury; dielectric constants of solutions; changes in the dielectric constant of water with frequency of the electric field and with temperature; thermoelectric measurement of temperatures between 0° and 200° C; measurement of small changes in elliptically polarized light produced by strain and surface films.
- Palmer, Andrew H(enry)**, U. S. Weather Bureau, San Francisco, Calif. *Meteorology*. Dubuque, Iowa, May 1, 86. A.B, Minnesota, 08; A.M, Harvard, 09. *Asst. observer*, Blue Hill Observatory, 08-09, *research asst.*, 09-12; instr. geog, State Nor. Sch, Salem, Mass, 12-13; magnetic observer, Carnegie Institution, 13-14; *meteorologist*, U. S. *Weather Bur.*, 14- A.A.; Seismol. Soc; Am. Geog. Soc; Calif. Acad. Climatology; seismology; water power.
- Palmer, Dr. C(harles) S(keele)**, United Fuel Gas Co, Charleston, W. Va. *Chemistry*. Danville, Ill, Aug. 4, 58. A.B, Amherst, 79, A.M, 82; fellow, Hopkins, 85-86, Ph.D, 86; Leipzig, 92. *Prof. chem.*, Colorado, 87-02; *pres.*, Colo. Sch. of Mines, 02-03; *chief chemist*, A. C. M. Co, Anaconda, Mont, 03-04; *assoc. ed.*, 'Eng. and Mining Jour,' 04-06; *natural science ed.*, D. Appleton and Co, 06-07; *consulting chemist*, various industrial firms, 07-15; fellow, Mellon Inst, 15-17; *chief chemist*, United Fuel Gas Co. A.A.; Chem. Soc; Chem. Eng; Electrochem. Soc; West. Pa. Eng. Soc; Colo. Sci. Soc. (pres, 04); Colo. State Teachers Ass. (pres, 02). Chemical engineering; educational chemistry; wool grease; fuel engineering; storage batteries; gasoline.
- Palmer, Dr. Chase**, Southern Pacific Co, San Francisco, Calif. **Chemistry*. Saco, Maine, Sept.

- 19, 56. Princeton, 74-76; A.B., Hopkins, 79, fellow, 80-82, Ph.D., 82. Instr. chem., Mass. Inst. Tech., 82-83; State Nor. Sch., Salem, Mass., 83-87; Tufts, 87-88; prof., Wabash, 88-90; manager of lead and zinc mines, Aurora and Alba, Mo., 91-94; chemist, Dupont Manual Training High Sch., Louisville, Ky., 95-01; prof. chem., Cent. Univ. of Ky., 01-05; Ky. State, 05-06; chemist, U. S. Geol. Surv., 07-19; *chief chemist, Southern Pacific Co.*, 19- A.A.; Chem. Soc.; Franklin Inst.; Chem. Gesell. Thorium compounds; allyl cyanid; aromatic substitution products; ore deposition; rock analysis; enrichment of silver and copper ore deposits; geochemistry and chemical classification of natural waters; natural relations of oils to waters.
- Palmer, Prof. C(laude) I(rwin)**, 6440 Greenwood Ave., Chicago, Ill. *Mathematics*. Battle Creek, Mich., May 31, 71. A.B., Michigan, 03; Chicago. *Assoc. prof. math, Armour*, 03- A.A.; Math. Soc.; Math. Ass. Applied mathematics; geometry; trigonometry.
- Palmer, Prof. E(phraim) Laurence**, New York State College of Agriculture, Ithaca, N. Y. *Botany*. McGraw, N. Y., July 8, 88. A.B., Cornell, 11, A.M., 13, fellow, 16-17, Ph.D., 17. Asst. bot., Cornell, 10-13; prof., Iowa Teachers' Col., 13-19; *asst. prof. rural educ., N. Y. State Col. Agr., Cornell*, 19- Ed., 'Cornell Rural Sch. Leaflet', 19- A.A.; Bot. Soc.; Ecol. Soc.; Iowa Acad. Seeds of pernicious weeds.
- Palmer, E(rik) S(chj  th)**, Winchester Repeating Arms Co., New Haven, Conn. *Engineering*. Cleveland, Ohio, Dec. 31, 85. Ph.B., Yale, 06; Columbia, 11-12. Instr. math., Rollins, 08-09; Rutgers, 09-12; prof. math. and chem., Rollins, 12-17; *ballistic engineer, Winchester Repeating Arms Co.*, 17- A.A.; Physical Soc.; Chem. Soc.; Math. Soc.; Math. Ass.; Circolo Mat. di Palermo. Ballistics; patents.
- Palmer, Prof. F(ederic), Jr.**, Haverford, Pa. *Physics*. Brookline, Mass., Oct. 17, 78. A.B., Harvard, 00, A.M., 04, Ph.D., 13. Instr. math., Asheville Sch., N. C., 00-01; math. and physics, Worcester Acad., 01-03; *physics*, Haverford, 04-08, *assoc. prof.*, 08-16, *prof.*, 16- Lecturer physics, Harvard, 18-19; mem. Lick Observatory solar eclipse exped. to Spain, 05. A.A.; Physical Soc. Ionization by Schumann rays.
- Palmer, Dr. H(arold) K(ing)**, 528 Federal Building, Los Angeles, Calif. *Astronomy, Irrigation engineering*. Berkeley, Calif., Jan. 20, 78. B.S., California, 98, fellow, Lick Observatory, 98-02, Ph.D., 03. Asst., D. O. Mills exped. to Southern Hemisphere, 03-05; Lick Observatory, 05-06; solar observatory, Carnegie Institution, 06; with Western Elec. Co., 07; Lucile Oil Co., 08; *engineer, U. S. Indian Service*, 09- Instr. practical astron., California, 03. Spectra of faint nebulae; celestial photography; hydraulics of irrigation.
- Palmer, Howard**, Hotel Mohican, New London, Conn. *Geography*. Norwich, Conn., Nov. 28, 83. A.B., Yale, 05; LL.B., Harvard, 08. *Explorer*. Exploring and mapping, North. Selkirk Mountains, B. C., Can., 08-12, 15; exploring Can. Rockies between Mt. Columbia and Mt. Robson, 16, 19, 20. A.A.; Explorers' Club; cor. mem. Phila. Geog. Soc.; Harvard Travellers Club; fel. Royal Geog. Soc. Mountain exploration; motion of glaciers; history and topography of the Canadian Cordillera.
- Palmer, Prof. Leroy S(heldon)**, 2262 Carter Ave., St. Paul, Minn. *Biochemistry*. Rushville, Ill., March 23, 87. B.S., Missouri, 09, A.M., 11, Ph.D., 13. Chemist, dairy div., U. S. Dept. Agr., 09-13; *asst. prof. dairy chem.*, Missouri, 13-19; *assoc. prof. agr. biochem., Minnesota*, 19- A.A.; Chem. Soc. Agricultural and dairy chemistry; milk; yellow pigments; physical chemistry of churning.
- Palmer, Dr. Samuel C(opeland)**, 712 Ogden Ave., Swarthmore, Pa. *Zoology*. Concord, Pa., April 27, 74. A.B., Swarthmore, 95, A.M., 07; fellow, Harvard, 07-08, 10-11, A.M., 09, Ph.D., 12. Asst. zool. lab., Harvard, 07-09; Radcliffe, 08-09; acting *asst. prof. zool. and geol., Swarthmore*, 09-10, *asst. prof.*, 10- Lecturer, Wagner Inst., 11. Soc. Zool.; Del. Valley Ornith. Club (treas., 12-). Histology of the vertebrate retina.
- Palmer, Dr. T(heodore) S(herman)**, 1939 Biltmore St., Washington, D. C. *Zoology*. Oakland, Calif., Jan. 26, 68. A.B., California, 88; M.D., Georgetown, 95. Field agent, U. S. Dept. Agr., 89-90, first *asst. ornithologist*, 90-96, *asst. chief, biol. surv.*, 96-02, *asst. in charge of game preservation*, 02-10, *asst. chief*, 10-14, in charge of game preservation, 14-16, *expert game conservation*, 14- A.A.; Soc. Nat.; fel. Ornith. Union (sec'y, 17-); Bison Soc.; Fisheries Soc.; Forestry Ass.; Nat. Ass. Audubon Societies (v. pres., 05-); Cooper Ornith. Club; Calif. Acad.; N. Y. Zool. Soc.; Wash. Acad.; Wash. Biol. Soc. (v. pres., 02-08, pres., 09). Nomenclature of mammals and birds; index of genera of mammals; game protection; biography of zoologists.
- Palmer, Prof. W(alter) W(alker)**, Johns Hopkins Hospital, Baltimore, Md. *Medicine*. Southfield, Mass., Feb. 27, 82. B.S., Amherst, 05; M.D., Harvard, 10, fellow, 12-13, 14-15; grad., Mass. Gen. Hosp., 11. Instr. *physiol. chem.*, Harvard, 12-13; house physician, Mass. Gen. Hosp., 13-15; *asst. med., Rockefeller Inst.*, and *asst. res. physician*, Hosp., 15-17; *asst. prof. med.*, med. col., Cornell, 17; *assoc. prof. med. and acting director of dept.*, Columbia, 17-19; *assoc. prof. med., Hopkins*, 19- Mem. Amherst paleont. exped. to Wyoming, 04; visiting physician and acting director, med. service, Presb. Hosp., N. Y. City, 17-19; *assoc. visiting physician*, Hopkins Hosp., 19- A.A.; Am. Physicians; Soc. Biol. Chem.; Soc. Exp. Biol.; Soc. Clin. Invest. (sec'y, 17); Am. Med. Ass. (council pharmacy and chem.); Harvey Soc.; Boston Med. Library. Metabolism; acid-base equilibrium; diabetes mellitus; nephritis.
- Palmer, W(illiam) M.**, U. S. National Museum, Washington, D. C. *Ornithology*. Penge, England, Aug. 1, 56. Pub. schools. *Taxidermist and zool. modeler, U. S. Nat. Museum*, 74- A.A.; fel. Ornith. Union; Wash. Biol. Soc.; Linnean Fern Chapter. Feather structure; comparative feather growth and molts; fern variations; Virginia flora and fauna; Miocene fossil mammals.
- Palmi   Prof. Anna H(elene)**, Western Reserve University, Cleveland, Ohio. *Mathematics*. Brooklyn, N. Y., May 21, 63. Ph.B., Cornell, 90, fellow, 90-91; Chicago, 96; G  ttingen, 98-

99. Instr. German and math, Horace Mann Sch, 91-92; math, Col. for Women, Western Reserve, 92-93, assoc. prof, 93-95, prof, 95-Math. Soc.
- Pammel, Prof. L(ouis) H(ermann)**, Ames, Iowa. *Botany. LaCrosse, Wis, April 19, 62. B.Agr, Wisconsin, 85, M.S, 89; Ph.D, Washington (St. Louis), 99. Private asst. to Dr. W. G. Farlow, Cambridge, Mass, 85, 86; asst, Shaw Sch. of Bot, Washington (St. Louis), 86-89; prof. bot, Iowa State, 89- Special work, Tex. Exp. Sta, div. veg. path, U. S. Dept. Agr, 89, div. agrost, 97, bur. forestry, 99-02, bur. plant indust, 02; Iowa Forestry Commission; Iowa Geol. Board, 94; chairman, Iowa State Board of Conservation, 10- A.A. (v. pres, G, 19); Bot. Soc. (pres, taxon. sect, 20); Phytopath. Soc; Ecol. Soc; Soc. Foresters; Soc. Bact; Soc. Prom. Agr. Sci; Iowa Acad. (pres, 93); Wash. Acad; Wash. Biol. Soc; St. Louis Acad; British Ecol. Soc; Bot. Gesell. Anatomical characters of the seeds of Leguminosae; grasses of Iowa; gases produced by certain bacteria; flora of central Iowa, and of the Uintahs; weeds of Iowa; poisonous plants; ecology; seeds; fungi.
- Papez, Prof. James W(encelas)**, Cornell University, Ithaca, N. Y. Anatomy. Glenco, Minn, Aug. 18, 83. A.B, Minnesota, 09, fellow, 09-11, M.D, 11. Prof. anat, histol. and embryol, Emory, 12-16, gross anat. and neur, 16-19, applied anat, 19-20; asst. prof. anat. and neur, Cornell, 20- Sec'y, Ga. Anat. Board, 13- Ass. Anat. Musculature and innervation of the heart; development of human mesentery; variations in region of the kidney.
- Pappenheimer, Prof. Alwin M(ax)**, Hartsdale, N. Y. Pathology. New York, Dec. 4, 78. A.B, Harvard, 98; M.D, Columbia, 02. Intern, Bellevue Hosp, 03-05, pathologist, 05-10; assoc. visiting pathologist, Presb. Hosp, 05-12; demonstrator path, Columbia, 09, assoc, 09-14, asst. prof, 14-19, assoc. prof, 19- Ass. Path. and Bact; Soc. Exp. Biol; N. Y. Path. Soc. (pres, 15-17); Harvey Soc. (treas, 19). Pneumococcus in human mouth and lungs after death; spirochaetal infection; filiform bacterium in case of vegetative endocarditis; progressive muscular dystrophy; histology of the thymus gland; tumors of the pineal gland; thymectomy in rats; lymphocytes; tumors of the pineal gland; trench fever; war-gas poisoning.
- Pardee, Prof. Arthur M(cCay)**, Vermilion, S. Dak. Chemistry. Rochester, N. Y, March 27, 85. A.B, Washington and Jefferson, 07; Ph.D, Hopkins, 16. Instr. chem, Tarkio, 07-08, prof, 08-10, chem. and physics, 11-18; chem, Washington and Jefferson, 18-20; prof. and head of dept, South Dakota, 20- Chem. Soc. Conductivities of alcoholic solutions; alcoholysis.
- Parish, S(amuel) B(onsall)**, 1624 Scenic Ave, Berkeley, Calif. Botany, Phytogeography. Paterson, N. J, Jan. 13, 38. A.B, N. Y. Univ, 58. A.A; Bot. Soc; Ecol. Soc; hon. mem. Calif. Acad; S. Calif. Acad. The flora of southern California.
- Park, Prof. Charles F(rancis)**, Massachusetts Institute of Technology, Cambridge, Mass. Mechanical engineering. Boston, Mass, April 11, 69. B.S, Mass. Inst. Tech, 92. Asst. mech. eng, Mass. Inst. Tech, 92-94, instr, 94-00, asst. prof, 00-06, assoc. prof, 06-12, prof. mechanism, 12- Director, mech. laboratories and Lowell Inst. Sch, Mass. Inst. Tech. A.A; Mech. Eng; Am. Acad.
- Park, Prof. Edwards A(lbert)**, Johns Hopkins Hospital, Baltimore, Md. Pediatrics. Gloversville, N. Y, Dec. 30, 77. A.B, Yale, 00; M.D, Columbia, 05. Instr. path, Columbia, 09-11; assoc. prof. pediat, Hopkins, 14- Soc. Exp. Biol; Pediat. Soc.
- Park, Prof. Jay B(oardman)**, Ohio State University, Columbus, Ohio. Agronomy. Clarence, Ill, Jan. 30, 84. A.B, Illinois, 08, M.S, 12; Sc.D, Harvard, 16. Asst. chem, Ill. Exp. Sta, 08-11, assoc. plant breeding, 11-14; prof. farm crops, Ohio State, 16- A.A; Soc. Agron. Plant genetics; self-sterility; cereal breeding.
- Park, Dr. W(illiam) H(allock)**, 315 W. 76th St, New York, N. Y. *Bacteriology, Hygiene. New York, Dec. 30, 63. A.B, Col. City of N. Y, 83; M.D, Columbia, 86; Vienna, 89-90; LL.D, Queen's (Can), 10. Director, research lab, Health Dept, N. Y. City, 95-10, bur. of laboratories, 10-; adj. prof. bacter. and hygiene, Univ. and Bellevue Hosp. Med. Col, 98-01, prof, 01- Knight of Royal Order of Isabella the Catholic, 13. A.A; Ass. Path. and Bact; Soc. Bact; Soc. Exp. Path. (pres, 20); Soc. Pharmacol; Am. Physicians; Soc. Exp. Biol; Pub. Health Ass; N. Y. Path. Soc. Diphtheria; influenza; tuberculosis; exanthemata; milk.
- Parker, Arthur C(aswell)**, Education Building, Albany, N. Y. Archeology. Iroquois, N. Y, April 5, 81. Williamsport Dickinson Sem, 98-01; special courses in anthrop. under Prof. F. W. Putnam, 01-03. Special asst. archeol, Am. Museum Nat. Hist, 01-02; field archeologist, Peabody Museum Archeol. and Ethnol, 03; ethnologist, N. Y. State Dept. Educ, 04-06; archeologist, N. Y. State Museum, 06-; Indian commissioner, N. Y. State, 19- Chief, N. Y. State Museum archeol. exped, 06-; ed, 'Am. Indian,' 12-16. Cornplanter medal, Sociol. Soc, 18. A.A; Soc. Am. Indians (pres, 16); Anthropol. Ass; N. Y. Archeol. Soc. (founder); Albany Philos. Soc. (pres, 16); Ethnol. Soc. Anthropology; ethnology; New York Indians.
- Parker, C(harles) E(dwin)**, Long Beach, Calif. Chemistry. Horseheads, N. Y, May 3, 61. Kansas, 81; Columbia, 82; Ph.C, Michigan, 85; B.S, George Washington, 07. Chemist, Parke, Davis and Co, 87-89; Seabury and Johnson, 89-02; Johnson and Johnson, 02-05; asst. chemist, bur. chem, U. S. Dept. Agr, 05- Chem. Soc; Soc. Chem. Indust. Pharmacy; drugs and surgical materials; laboratory devices; methods of food and drug analysis.
- Parker, Edward W(heeler)**, 437 Chestnut St, Philadelphia, Pa. Mineralogy. Port Deposit, Md, June 16, 60. Baltimore High Sch. Statistician, U. S. Geol. Surv, 91-07, chief, div. mineral resources, 07-15, director of anthracite information, 15- Mem. jury of awards, Columbian Expos, 93; expert special agent, U. S. Census, 00-; La. Purchase Expos, 03-04; ed, 'Eng. and Min. Jour,' 01-02; mem. Anthracite Coal Strike Commission, 02-03. Silver medal, Paris Expos, 00; Pan-Am. Expos, 01; com-

- memorative medal, La. Purchase Expos, 04. Min. and Metal. Eng; Statist. Ass; Min. Cong; Coal Min. Inst; Wash. Geol. and Econ. Societies. Anthracite.
- Parker, Prof. G(eorge) H(oward)**, 16 Berkeley St, Cambridge, Mass. **Zoology*. Philadelphia, Pa, Dec. 23, 64. Acad. Nat. Sciences, Philadelphia, 79-82; B.S., Harvard, 87, Sc.D., 91, Parker fellow, at Leipzig, Berlin, Freiburg and Naples, 91-93. Asst. zool., *Harvard*, 86-88, instr., 88-91, 93-99, asst. prof., 99-06, *prof.*, 06- Clark lecturer, Amherst, 14; U. S. investigator, Pribilof seals, 14. Nat. Acad; A.A. (v. pres, 16); Soc. Nat; Soc. Zool; Physiol. Soc; Ass. Anat; Soc. Exp. Biol; Ecol. Soc; Philos. Soc; Am. Acad; hon. mem. Calif. Acad; Wash. Acad; N. Y. Acad; Phila. Acad; Boston Soc. Nat. Hist; cor. mem. London Zool. Soc; assoc. mem. Soc. Belge de Biol. Biology and social problems; the elementary nervous system; anatomy and physiology of sense organs and of central nervous organs; reactions of organisms.
- Parker, Prof. Gordon**, Colorado Springs, Colo. *Forestry*. Wantagh, N. Y., April 26, 79. A.B., Columbia, 00; M.F., Harvard, 11. Field asst., forest asst., forest examiner and forest supervisor, U. S. Forest Service, 10-19; *asst. prof. forestry, Colo. Col.*, 19- A.A.; Forestry Ass; Am. Geog. Soc.
- Parker, Prof. H(arry) G(eorge)**, Liberty, Mo. *Chemistry*. London, England, Nov. 15, 65. A.B., William Jewell, 92, A.M., 93; Ph.D., Harvard, 96. *Prof. chem. and physics, William Jewell*, 96-13, *chem.*, 13- Chem. Soc; Mo. Soc. Math. and Sci. Teachers (v. pres). Atomic weight of magnesium; centrifugal quantitative analysis.
- Parker, Prof. Herschel C(lifford)**, 21 Fort Greene Place, Brooklyn, N. Y. **Physics*. Brooklyn, July 9, 67. Ph.B., Columbia, 90, fellow, 90-91. Asst. physics, Columbia, 91-93, tutor, 93-01, instr., 01-03, asst. prof., 03-11. A.A.; Physical Soc; Elec. Eng; Electrochem. Soc; Am. Alpine Club; fel. Am. Geog. Soc; Explorer's Club; fel. N. Y. Acad; Can. Alpine Club. Methods of electrical measurement; electrical resistances; electrical investigations with very brief intervals of contact; electrical properties of materials at high incandescence; new method of reducing metallic iridium; formation and electrical properties of helium.
- Parker, Horatio N(ewton)**, Eng. Building, Jacksonville, Fla. *Public health*. Cambridge, Mass, Feb. 3, 71. Mass. Inst. Tech. Asst. biologist, Boston Water Works, 96-99; asst. and chief biologist, Metropolitan Water Works, 00-01; health officer, Montclair, N. J., 01-04; asst. hydrographer and asst. engineer, U. S. Geol. Surv., 04-10; dairy bacteriologist, Illinois, and asst., Exp. Sta., 10-17; lecturer, municipal sanit., Indiana, 17; bacteriologist and program ed., 'De lineator' seventh baby campaign, 17-18; *city bacteriologist and chemist, Jacksonville, Fla.*, 18- Soc. Bact; Pub. Health Ass; Chem. Soc; Dairy Science Ass; Water Works Ass; Int. Ass. Dairy and Milk Inspectors; New Eng. Water Works Ass. Field work on surface water supplies; effect of dissolved gases in water on micro-organisms; water and milk supply and typhoid fever.
- Parker, Prof. J(ohn) B(ernard)**, 1217 Lawrence St, N. E., Washington, D. C. *Biology*. Danville, Ohio, Sept. 24, 70. A.B., Ohio State, 98, fellow, 98-00, A.M., 00, Ph.D., 15. Asst. English, Ohio State, 98-00; instr. biol., S. High Sch., Cleveland, Ohio, 00-06; asst. entomologist, Kansas State, and Exp. Sta., 08-10; instr. *biol. Catholic Univ.*, 10-13, assoc. prof., 13-18, *prof.*, 18- A.A.; Entom. Soc; Wash. Entom. Soc. Entomology.
- Parker, Prof. John H(untington)**, 1809 Leavenworth St, Manhattan, Kans. *Agronomy*. St. Paul, Minn., Aug. 13, 91. B.S., Minnesota, 13; M.S.A., Cornell, 16. Scientific asst. cereal investigations, bur. plant indust., U. S. Dept. Agr., 13-17; *assoc. prof. farm crops, Kansas State*, 17- A.A.; Soc. Agron. Rust resistance in cereals; inheritance in wheat, oats and sorghum.
- Parker, Prof. Matthew A(rchibald)**, University of Manitoba, Winnipeg, Can. *Chemistry*. Glasgow, Scotland, 71. B.S., Glasgow, 02; Heidelberg, 07. Lecturer and demonstrator, Glasgow Tech. Col., 94-01; lecturer org. chem., Glasgow, 01-04; *prof. chem, Manitoba*, 04- A.A.; Chem. Soc; Soc. Chem. Indust; fel. Royal Soc. Can; Can. Inst. Chem; fel. London Chem. Soc.
- Parker, Dr. R(alph) R(obinson)**, Montana State College, Bozeman, Mont. *Entomology*. Malden, Mass, Feb. 23, 88. B.S., Mass. Col., 12, M.S., 14, Ph.D., 15. Asst. zool., Mass. Col., 11-12, instr., 12-13, lecturer entom., 13-14; *asst. entomologist, Mont. State Board Entom.*, 15- A.A.; Entom. Soc; Ass. Econ. Entom. Sarcophagidae; flies; sanitation; dispersion of house fly; Rocky Mountain spotted fever tick.
- Parker, W(illiam) E(dward)**, Kensington, Md. *Civil engineering*. Newton, Mass, March 21, 76. B.S., Mass. Inst. Tech, 99. Aid, asst. and later *hydrog. and geod. engineer, U. S. Coast and Geod. Surv.*, 01- Chief, div. hydrog. and topog., U. S. Coast and Geod. Surv. Civil Eng; Wash. Soc. Eng. Hydrographic surveying; oceanography.
- Parker, Dr. William H(untington)**, 177 State St, Boston, Mass. *Physiological chemistry*. Worcester, Mass, July 31, 69. B.S., Worcester, 93; Mass. Inst. Tech, 93-94; Ph.D., Yale, 99. Instr. chem, med. sch., Yale, 94-00; asst. physiol., Harvard Med. Sch., 00-01; *chemist in charge, U. S. Lab, Boston*, 01- Chemist and bacteriologist, Conn. State Board of Health, 94-00. Physiol. Soc; Soc. Bact; Soc. Biol. Chem; Soc. Chem. Indust. Lactose formation after complete removal of the mammary glands; maximum production of glycocoll in protein decomposition; occurrence of xanthin basic in the feces; osmotic properties of colloidal solutions; peripheral neurons on the course of vaso-dilator nerves; action of bile acids on solubility of soaps; arsenic in commercial hypophosphites.
- Parkhurst, John A(delbert)**, Yerkes Observatory, Williams Bay, Wis. **Astronomy*. Dixon, Ill, Sept. 24, 61. Wheaton, 78-81, A.B., 06; B.S., Rose, 86, M.S., 97. Instr. math., Rose, 86-88; *asst., Yerkes Observatory*, 98, 00-04, instr. *practical astron.*, 05-12, asst. prof., 12-19, *assoc. prof.*, 19- A.A.; Astron. Soc; fel. Royal Astron. Soc; Astron. Gesell. Variable stars; stellar photometry; spectra of stars of Type IV; photometric and photographic determination of standards for

- faint stellar magnitudes; photographic and visual magnitudes and star-colors for standard catalogue; photographic magnitudes of faint comparison stars in Hagen fields; classification of spectra.
- Parkins, Dr. A(lmon) E(rnest)**, George Peabody College for Teachers, Nashville, Tenn. *Geography*. Marysville, Mich. Jan. 10, 79. A.B. Mich. State Nor. Col. 11; B.S. Chicago, 12, fellow, 13-14, Ph.D. 14. Asst. chem. Mich. State Nor. Col. 03-04; instr. high sch. Holland, Mich. 04-07; *geog.* Mich. State Nor. Col. 07-10; Missouri, 14; *prof.* Peabody Col. for Teachers. A.A.; Ass. Geog.; Tenn. Acad. Historical geography of Detroit; development of transportation in Pennsylvania.
- Parks, Rear Admiral C(harles) W(ellman)**, U. S. N., Pearl Harbor, Honolulu, Hawaii. *Physics, Engineering*. Woburn, Mass. March 22, 63. C.E. Rensselaer, 84; LL.B. George Washington, 99. Instr. physics, Rensselaer, 86-93; *civil engineer, U.S.N.*, 97-, *chief, bur. yards and docks, Navy Dept.*, 17- Rear admiral, U.S.N. Supt. liberal arts, Paris Expos, 89; special agent, interior dept, Columbian Expos, 93. Officier de l'Instruction Pub; Commandeur Légion d'honneur; D. S. medal. A.A.; Civil Eng; Elec. Eng; Am. Geog. Soc; Rensselaer Soc. Eng. Heat and electricity as applied to industrial development.
- Parks, Prof. T(haddeus) H(edges)**, Ohio State University, Columbus, Ohio. *Entomology*. Ashville, Ohio, Feb. 14, 87. B.S.(Agr), Ohio State, 09. Scientific asst, bur. entom. U. S. Dept. Agr, 09-13; exten. entomologist, Idaho, 13-15; Kansas State, 15-17; asst. prof. entom. exten. service, Ohio State, 18-19, *prof.*, 19- Ass. Econ. Entom; Ohio Acad. Cereal and forage insects.
- Parks, Prof. W(illiam) A(rthur)**, 69 Albany Ave, Toronto, Can. *Geology, Paleontology*. Hamilton, Ont. Dec. 11, 68. B.A. Toronto, 92, fellow, 93, Ph.D. 00. Instr. geol. Toronto, 96-02, lecturer, 02-05, asst. prof. 05-15, *prof. paleont.*, 15- Director, Royal Ont. Mus. Paleont. Geologist, Bur. of Mines, Ont, summers, 95-00; Can. Geol. Surv. 00- Geol. Soc; fel. Royal Soc. Can; Can. Inst; Can. Min. Ass. Economic geology; invertebrate paleontology; American stromatoporids.
- Parmelee, Prof. Cullen W(arner)**, University of Illinois, Urbana, Ill. *Ceramics*. Brooklyn, N. Y. 74. B.S. Rutgers, 96. Director, dept. ceramics, Rutgers, 03-16; *prof. ceramic eng.*, Illinois, 16- Ceramic Soc; Chem. Soc; Soc. Test. Mat; British Ceramic Soc. Clays, bodies and glazes.
- Parmelee, Dr. H(oward) C(oon)**, Tenth Ave. and 36th St, New York, N. Y. *Chemistry*. Omaha, Nebr. Dec. 4, 74. B.S. Nebraska, 97, A.M. 99; hon. Sc.D. Colo. Col. 17. Chief chemist, Globe plant, Am. Smelting and Refining Co. 00-02; ed, 'Mining Reporter,' 05-07; 'West. Chemist and Metallurgist,' 07-10; western ed, 'Metal. and Chem. Eng.' 10-16; pres. Colo. Sch. Mines, 16-17; ed, 'Chem. and Metal. Eng.' 17- Chem. Soc; Electrochem. Soc. (manager and v. pres. 14-19); Min. and Metal. Eng; Colo. Sci. Soc. (sec'y, 10-16, pres. 16).
- Parmelee, Prof. Maurice**, Department of State, Washington, D. C. *Sociology, Anthropology*. Constantinople, Turkey, Oct. 20, 82. A.B. Yale, 04, A.M. 08; Ph.D. Columbia, 09. Prof. sociol. and econ. Kansas, 09-10; Missouri, 10-13; Col. City of N. Y. 13-14; sociol. and anthrop. Minnesota, 15-16; sociol. and econ. Missouri, 17-18; representative in London, W. T. B. 18-19; *economic adviser, American commission, Berlin*, 20- Grant Squires prize, Columbia, 15. A.A.; Sociol. Soc; Anthropol. Ass; Econ. Ass; Statist. Ass. Human behavior; social evolution.
- Parmenter, Dr. Charles Leroy**, University of Pennsylvania, Philadelphia, Pa. *Zoology*. Ohio, 82. A.B. Southern California, 10, A.M. 12; fellow, Pennsylvania, 17-18; Ph.D. 18. Instr. zool. Southern California, 10-12; asst. Wisconsin, 12-15; Minnesota, 15-16; *Pennsylvania*, 16-17, *instr.*, 18- Instr. zool. Woods Hole, 18- A.A. Cytology; amphibian cytology; chromosomes in parthenogenetic frogs.
- Parmenter, Dr. Geo(rge) F(reeman)**, Waterville, Maine. *Chemistry*. Dover, Mass. March 26, 77. B.S. Mass. Col. and Boston, 00; A.M. Ph.D. Brown, 03; Sc.D. Colby, 16. Instr. chem. Mass. Col; chemist, R. I. Exp. Sta. 01; instr. chem. Brown, 01-03; asst. prof. Colby, 03-04, *prof.*, 04- Asst. chemist, Hatch Exp. Sta. Mass. A.A.; Chem. Soc; New Eng. Ass. Chem. Teachers; Maine Sci. and Math. Ass. (pres). The action of acetic anhydride on acids of the phenylpropionic series; the composition of casein; acids of the phenylpropionic series; quantitative methods.
- Parmlay, Walter Camp**, 1270 Broadway, New York, N. Y. *Engineering*. Center, Wis. B.M.E. Wisconsin, 87, M.S. 93. Engineer, Calif. and Utah, 87-91; city engineer, Ogden, Utah, 91-93; asst. city engineer, Peoria, Ill. 93-95; Cleveland, Ohio, 96-04; *consulting engineer*, 04- A.A.; Civil Eng; Cleveland Eng. Soc. (v. pres. 01, 02, pres. 03). Hydraulics; sewers; arches; reinforced concrete.
- Parobek, Anastasius**, City Hall, Trenton, N. J. *Chemistry*. Nagy Varad, Hungary, 76. Chem.G. Ph.R. Polytech, Brunswick, Germany, 01. Indust. and pharmaceut. research chemist, Cologne, Germany, 01-07; *city chemist, Trenton, N. J.* Assoc. ed, 'Chem. Indust,' Budapest, Hungary; consulting chemist. A.A.; Chem. Soc; Electrochem. Soc; Pub. Health Ass; Soc. Munic. Improv; Chem. Gesell. Engineering chemistry; municipal chemistry.
- Parr, Prof. Harry L(ienthal)**, Columbia University, New York, N. Y. *Mechanical engineering*. Yonkers, N. Y. March 20, 80. A.B. Columbia, 02, M.E. 04. Asst. mech. eng. Columbia, 05-06; eng. dept. Power Specialty Co. 06-07; *instr. in charge, mech. eng. exp. laboratories, Columbia*, 07-12, *asst. prof.*, 12- Consulting mech. engineer. A.A.; Mech. Eng. Steam and gas power generation; power plant economics; heat transfer.
- Parr, Dr. Rosalie M(ary)**, University of Illinois, Urbana, Ill. *Chemistry*. Peoria Co. Ill. Ph.D. Illinois, 16. Asst. bot. Illinois, 10-16; assoc. science, State Nor. Sch. Santa Barbara, Calif. 16-17; *instr. chem. Illinois*, 18- A.A.; Chem. Soc; Bot. Soc. Chemical factors in botanical problems; catalytic action of light; chlorophyll reactions.

- Parr, Prof. S(amuel) W(ilson)**, 1011 W. Green St, Urbana, Ill. **Chemistry*. Granville, Ill, Jan. 21, 57. B.S, Illinois, 84; M.S, Cornell, 85; Berlin and Zürich, 00-01. Instr. and prof. science, Illinois Col, 85-91; *prof. chem, Illinois*, 91-A.A.; Chem. Soc; Electrochem. Soc; Soc. Test. Mat; Chem. Eng; Min. and Metal. Eng; Wash. Acad. Composition, weathering and spontaneous combustion of coals; calorimetry of fuels; metallurgical chemistry; boiler waters; low temperature carbonization of coals; acid-resisting alloys; platinum substitutes; potash shales of Illinois.
- Parrott, P(ercival) J(ohn)**, Geneva, N. Y. *Entomology*. Croydon, England, May 28, 74. A.B, Kansas, 97, A.M, 98. Asst. entomologist, Kans. Exp. Sta, 98-99; N. Y. Exp. Sta, Geneva, 00-02; *entomologist*, Ohio Exp. Sta, 02-04; N. Y. Exp. Sta, Geneva, 04- Entomologist, Kans. Hort. Soc, 99-00. A.A.; Ass. Econ. Entom. (v. pres, 10, pres, 13); Entom. Soc. Economic entomology.
- Parshley, Prof. H(oward) M(adison)**, Smith College, Northampton, Mass. *Entomology*. Hallowell, Maine, Aug. 7, 84. A.B, Harvard, 09, A.M, 10, Sc.D, 17. Instr. *zool*, Maine, 11-14; asst. prof, *Smith*, 17-19, *assoc. prof*, 19- Assoc. field *zool*, biol. lab, Cold Spring Harbor, 19-A.A.; Soc. Zool; Entom. Soc; Ecol. Soc; Soc. entom. de France; Soc. entom. de Belgique. North American Hemiptera.
- Parsons, Arthur L(eonard)**, University of Toronto, Toronto, Can. *Mineralogy*. Mt. Morris, N. Y, Sept. 16, 73. A.B, N. Y. Univ, 96. Asst. *miner*, N. Y. State Museum, 00-02; field asst, U. S. Geol. Surv, 02-03; instr, Minnesota, 03-07; lecturer, *Toronto*, 07-13, asst. prof, 13-19, *assoc. prof*, 19- Asst. in charge of N. Y. state sci. exhibit, Pan-Am. Expos. 01; field geologist, Ont. Bur. Mines, 07, 10-12, 14-20. A.A.; fel. Mineral. Soc; Can. Min. Inst. Crystallography; economic geology of iron; crystallography of gōthite; a new sclerometer.
- Parsons, Dr. Charles L(athrop)**, Bureau of Mines, Washington, D. C. **Chemistry*. New Marlboro, Mass, March 23, 67. B.S, Cornell, 88; hon. Sc.D, Maine, 11; hon. D.Chem, Pittsburgh, 14. Asst, N. H. Exp. Sta, 88; instr. chem, N. H. Col, 90-92, prof, 92-11; chief mineral chemist, U. S. Bur. Mines, 11-16, chief chemist, 16-19; *sec'y*, *Chem. Soc*, 19-; *consulting chemist*, 19- Nichols medal, Chem. Soc, 04; mem. Nitrate Commission; advisory board on gas warfare; chairman, committee on use of zirconium in light armor; special investigator in Europe on nitrogen fixation, War Dept, 19. Chairman, inorg. sect, Eighth Int. Cong. Applied Chem; v. pres, Interallied Union of Pure and Applied Chem. A.A. (*sec'y*, C, 04-08); Chem. Soc. (*sec'y*, 07-). Mineralogy; crystallography; blow pipe analysis; atomic weights; compounds of beryllium; solution in binary solvent; basic nitrate polyiodides; mineral waters; fuller's earth; extraction of radium from its ores; cyanids; nitrogen fixation.
- Parsons, Cha(rle)s W(esley) D(arwin)**, 1612 Oak Ave, Evanston, Ill. *Physics*. Clifton Springs, N. Y, Aug. 25, 72. A.B, Cornell, 97; A.M, Northwestern, 09. Instr, secondary schools, 97-07; prof. physics, Colorado Col, 07-09; asst, Northwestern, 09-10; *with Cent. Scientific Co, Chicago*, 10-18, 19- Lieut, Air Service, 18-19. Assoc. mem. Physical Soc. Experimental evidence for the presence of ions.
- Parsons, Dr. Elsie Clews**, 7 E. 76th St, New York, N. Y. *Ethnology*. New York, 75. A.B, Columbia, 96, A.M, 97, Ph.D, 99. Hartley House fellow, Barnard, Columbia, 99-02, lecturer, 02-05. A.A.; Ethnol. Soc. (treas, 16-); Anthropol. Ass. (mem, council, 19); Folk-lore Soc. (pres, 19-, asst. ed, 'Jour'); Southwest Soc. (*sec'y*, 18-). The family; Pueblo Indians; negro folk tales.
- Parsons, Miss Harriet McW(illiams)**, Vassar College, Poughkeepsie, N. Y. *Astronomy*. Troy, Pa, Dec. 17, 92. A.B, Vassar, 15, fellow, at Chicago, 15-16, 19-21, M.S, Chicago, 16. Asst. *astron*, *Vassar*, 16-18, *instr*, 18- Astron. Soc. Photographic photometry; proper motions of stars.
- Parsons, Prof. H(arry) de B(erkeley)**, 22 William St, New York, N. Y. *Engineering*. New York, Jan. 6, 62. B.S, Columbia, 82; M.E, Stevens, 84. Prof. steam eng, *Rensselaer*, 91-07, *emer. prof. practical eng*, 07- Chairman, Commission on Street Cleaning and Waste Disposal, N. Y. City, 07; mem. Metropolitan Sewage Commission, 08-14; mem. various commissions; consulting engineer. Mech. Eng; Civil Eng; Naval Archit. and Marine Eng. Steam boilers, their theory and design; disposal of municipal refuse; displacement and the area curves of fish; influence of sugar on cement; fire-proofing tests; fire hazards; tidal phenomena of the waters of New York Bay.
- Parsons, Dr. J(oseph) G(reeley)**, Paulton Building, Sioux Falls, S. Dak. *Ophthalmology*. Pawlet, Vt, 71. M.D, Minnesota, 98. *Practising physician*. Lecturer hygiene, S. Dak. Col; Sioux Falls Col; Lutheran Nor. Sch. Delegate, Fourth Int. Cong. Sch. Hygiene. A.A.; Am. Med. Ass; fel. Acad. Ophthal. and Oto-Laryngol; S. Dak. Sch. Hygiene Ass. (pres). Otolaryngology; public health.
- Parsons, Dr. Leon W(oodman)**, 78 Chester Road, Belmont, Mass. *Chemistry*. Newburyport, Mass, Sept. 22, 91. B.S, Mass. Inst. Tech, 13; A.M, Harvard, 16, Ph.D, 17. *Asst. director, research lab. applied chem, Mass. Inst. Tech*, 19- Capt, C.W.S, 17-19. Chem. Soc. Inorganic and physical chemistry; industrial chemistry.
- Parsons, Dr. Louis A(lexander)**, Pennsylvania College, Gettysburg, Pa. *Physics*. Burlington, Iowa, April 9, 72. A.B, Iowa, 95, A.M, 99; fellow, Hopkins, 00-02, Ph.D, 02. Instr, high sch, Burlington, Iowa, 95-98; asst. *physics*, Hopkins, 08-03; instr, Utah, 03-04; California, 04-07; *prof, Pennsylvania Col*, 07- Physical Soc; Electrochem. Soc. The spectrum of hydrogen; electric discharge in gases.
- Parsons, Prof. T(homas) S(mith)**, Laramie, Wyo. *Agronomy*. Ivinghoe, England, Aug. 5, 73. B.S, S. Dak. Col, 97, M.S, 99. Principal and instr. science, high schools, 00-10; prof. agron, *Wyoming*, and agronomist, Exp. Sta, 10-18, *specialist, agron, extension div*, 18- State seed analyst, Wyo. Soc. Agron. Soils; forage crops; irrigation.

- Parsons, W(illia)m Barclay**, 35 E. 50th St, New York, N. Y. **Engineering*. New York, April 15, 59. A.B, Columbia, 79, C.E, 82; LL.D, St. John's (Md), 09. Chief engineer, Rapid Transit Commission of New York, 94-05; advisory engineer, Royal Commission London Traffic, 04; mem. Isthmian Canal Commission, 04-05; *practising engineer*. Engineer of extensive surveys and explorations in China. Civil Eng; Min. Eng; Am. Acad; British Inst. Civil Eng; Soc. des Ing. de France. Hydraulics.
- Partridge, Dr. Edw(ard) A(nson)**, 250 Farragut Terrace, Philadelphia, Pa. *Mathematics, Physics*. Philadelphia, Feb. 18, 69. B.S, Pennsylvania, 89, Ph.D, 98. *Prof. physics and head, dept. science*, Cent. Manual Training Sch, Phila, 91-12; *West Phila. High Sch. for Boys*, 12- A.A; Math. Soc; Math. Ass; Physical Soc; Circolo Mat. di Palermo. Atomic weight of cadmium; radioactivity; color photography; electron theory; relativity.
- Partridge, Dr. G(eorge) E(verett)**, 6 Charlotte St, Worcester, Mass. *Psychology*. Worcester, May 31, 70. Harvard, 89-90; Ph.D, Clark, 99. Instr. psychol, State Nor. Sch, Mankato, Minn, 00-04; lecturer, Clark, 04-06. Psychology of individuals; psychology of intemperance; psychology of nations; principles of sciences.
- Partridge, Dr. Newton L(yman)**, Michigan Experiment Station, East Lansing, Mich. *Horticulture*. Chicago, Ill, Dec. 10, 90. B.S, Illinois, 13, M.S, 14, Ph.D, 17. Research horticulturist, Del. Exp. Sta, 19-20; exten. asst. prof. pomol, Iowa State, 20; *research asst. hort. Mich. Agr. Col.*, 20- Lieut. and capt, F.A, A.E.F. A.A; Ass. Econ. Entom; Soc. Hort. Sci.
- Paschal, Prof. Franklin Cressey**, University of Arizona, Tucson, Ariz. *Psychology*. Chillicothe, Ill, Feb. 6, 90. A.B, DePauw, 11; A.M, Pennsylvania, 16, fellow, 16-17, Ph.D, 18. Director of research, Ind. Reformatory, 12-16; asst. psychol, Pennsylvania, 17-18; *asst. prof. Arizona*, 19- A.A; Psychol. Ass; Ass. Clin. Criminal; Ind. Acad. Attention; psycho-motor tests.
- Passano, Prof. L(eonard) M(agruder)**, Massachusetts Institute of Technology, Cambridge, Mass. *Mathematics*. Baltimore, Md, March 3, 66. A.B, Hopkins, 89. Asst. math, Hopkins, 89-90; instr, asst. prof. and later *assoc. prof. Mass. Inst. Tech.*, 92- A.A; Eng. Educ.
- Patch, Clyde L(ouis)**, Victoria Memorial Museum, Ottawa, Can. *Biology*. Hiawatha, Kans, June 30, 87. Pub. Schools. Taxidermist, Am. Museum Nat. Hist, 10-13; *chief taxidermist, Victoria Mem. Museum*, 13-, *herpetologist*, 18-Mem. biol. exped. to Vancouver Isl, 15; Queen Charlotte Islands, 19. Ottawa Field-Nat. Club (sec'y, 18-). Herpetology; ornithology; mammalogy.
- Patch, Prof. Edith M(arion)**, Orono, Maine. *Entomology*. Worcester, Mass, July 27, 76. B.S, Minnesota, 01; M.S, Maine, 10; Ph.D, Cornell, 11. Instr. English and zool, high sch, Hastings, Minn, 01-02; Crookston, 02-03; entom, Maine, 03-04; *entomologist, Maine Exp. Sta.*, 04- A.A; Soc. Nat; Soc. Zool; Entom. Soc; Ass. Econ. Entom; Ass. Prof. Economic and ecological entomology; life histories of migratory aphids.
- Patch, Dr. F(rank) S(tewart)**, 33 Bishop St, Montreal, Can. *Medicine*. Kingston, Ont, Sept. 19, 78. B.A, McGill, 99; M.D, C.M, 03; Bonn, Vienna, London, 05-06; Vienna, 11. Intern, Montreal Gen. Hosp, 03-05, med. supt, 07-09, genito-urinary surgeon, 16; *clin. prof. urol, McGill*, 20- Col, C.A.M.C, C.E.F, 15-19. Ass. Path. and Bact; Col. Surg; Can. Med. Ass. Urology; surgical pathology; syphilis; infective nephritis.
- Patch, Dr. R(ichard) H(arkness)**, 500 Midvale Ave, Philadelphia, Pa. *Chemistry*. Fitchburg, Mass, April 15, 88. A.B, Harvard, 10, Ph.D, 14. Austin teaching fellow, Harvard, 11-13; metal. engineer, *Midvale Steel Co*, 14-17, *armor supt*, 17- Steel; amino-aryl carbinols; alloy steels.
- Paterson, Donald G(ildersleeve)**, Drexel Building, Philadelphia, Pa. *Psychology*. Columbus, Ohio, Jan. 18, 92. A.B, Ohio State, 14, A.M, 15, 16. Asst. psychol, Ohio State, 16; instr, Kansas, 16-17; *applied psychologist, Scott Co*, 19- Capt, Sanit. C, 17-19. Psychol. Ass. Applied psychology; deafness; standardization of mental and performance tests; rating scales for employees.
- Paterson, Dr. Robert C(hilds)**, 8 Church St, Saranac Lake, N. Y. *Medicine*. Montreal, Can, April 29, 78. B.A, McGill, 98, M.D, C.M, 02. *Attending physician, Reception Hosp, Saranac Lake; instr, Trudeau Sch. Tuber.*, 15- Ass. Path. and Bact; Climat. Ass; Soc. Thoracic Surg. Tuberculosis; pleurisy.
- Paton, Dr. Stewart**, Princeton, N. J. *Psychiatry*. New York, N. Y, 65. A.B, Princeton, 86, A.M, 89; M.D, Columbia, 89. Assoc. psychiat, Hopkins; *lecturer neurol, Princeton*, 11- Director, lab, Sheppard and Enoch Pratt Hosp; trustee, Carnegie Institution. A.A; Soc. Nat; Ass. Anat; Neur. Ass; Psychopath. Ass; Eugenics Research Ass. (pres); Philos. Soc; N. Y. Acad. Med. Development of cerebral cortex; clinical psychiatry; reactions of vertebrate embryo to stimulation and the associated changes in the nervous system; correlation of structure and function of the nervous system in vertebrate embryo; education in war and peace; human behavior; signs of sanity.
- Patrick, Prof. G(eorge) T(homas) W(hite)**, Iowa City, Iowa. **Philosophy, Psychology*. North Boscawen, N. H, Aug. 19, 57. A.B, Iowa, 78; B.D, Yale, 85; fellow, Ph.D, Hopkins, 88; Leipzig, 94. *Prof. philos, Iowa*, 87- Philos. Ass; Psychol. Ass; West. Philos. Ass. (pres, 03). Heraclitus; play; work; psychology of social reconstruction.
- Patrick, Dr. Walter A.**, Johns Hopkins University, Baltimore, Md. *Chemistry*. Syracuse, N. Y, Jan. 6, 88. B.S, Syracuse, 10; Ph.D, Göttingen, 14. Research assoc, Mass. Inst. Tech, 10-12; research asst, Univ. Col, London, 14-15; instr. *physical chem*, Mass. Inst. Tech, 15-16; Syracuse, 16-17; *assoc. Hopkins*, 17- Metalurgy of iron and steel; galvanized iron; colloids; swelling of gels; catalysis.
- Pattee, Prof. E(mest) N(oble)**, 408 Euclid Ave, Syracuse, N. Y. *Chemistry*. Ottawa, Can, July 21, 64. B.S, Rochester, 86, M.S, 90. Teacher, Greece, N. Y, 86-87; teacher science, Heyward Col. Inst, Fairfield, Ill, 89-90; instr. *chem*,

- Syracuse*, 90-94, adj. prof, 94-95, assoc. prof, 95-97, *prof*, 97-, col. med, 08-19. Chem. Soc. Mineral springs of Onondaga County, New York.
- Patten, Andrew J(arvis)**, East Lansing, Mich. *Chemistry*. Cherryfield, Maine, July 1, 74. B.S., Maine, 97; Heidelberg, 02-03. Asst. chemist, Maine Exp. Sta, 97-00; N. Y. Exp. Sta, Geneva, 00-05; *chemist*, Mich. *Exp. Sta*, 05- A.A.; Chem. Soc; Agr. Chem; Mich. Acad. Separation of histidin and arginin; phytin; acidity of soils.
- Patten, Prof. B(radley) M(errill)**, Western Reserve Medical School, Cleveland, Ohio. *Zoology*, *Physiology*. Milwaukee, Wis, June 14, 89. A.B., Dartmouth, 11; A.M., Harvard, 12, Ph.D, 14. Instr. *histol. and embryol*, *Western Reserve*, 14-18, *asst. prof*, 18- Oceanographer, U. S. Fish Commission, 14. A.A. Physiology of light reactions; experimental embryology.
- Patten, Dr. Harrison E(astman)**, Silver Springs, Montgomery Co, Md. *Chemistry*. Crete, Ill, May 29, 73. A.B., Northwestern, 94, fellow, 95, A.M., 96; fellow, Wisconsin, 01-02, Ph.D, 02. Asst. chem, Northwestern, 93-94; instr, Wisconsin, 02-06; soil chemist, bur. soils, U. S. Dept. Agr, 06-11, physical chemist, bur. chem, 11-18; capt, U.S.A., 18-19; physical chemist, bur. chem, U. S. Dept. Agr, 19-20; *chief chemist*, *Provident Chem. Wks*, *St. Louis, Mo*, and consulting chem. engineer, 20- Teacher, high schools, Joliet, Elgin and Sycamore, Ill. Chem. Soc; Electrochem. Soc; Soc. Agron; Wash. Philos. Soc. Precipitation; adhesion; absorption and flocculation; electrical conductivity in non-aqueous solution; decomposition point and single potential in aqueous and non-aqueous solution; electrolytic reduction of nitric acid; soils with reference to absorption, percolation, bleaching and heat conductance; fertilizers; spray materials; fixation of atmospheric nitrogen; gas manufacture; baking powders; phosphoric acid; foods; hydrogen-ion concentration; carbonation of beverages; purification of mercury.
- Patten, Prof. William**, Hanover, N. H. **Biology*. Watertown, Mass, March 15, 61. B.S., Harvard, 83, Parker fellow, 83-86; Ph.D, Leipzig, 84. Asst, Lake Lab, Milwaukee, 86-89; *prof. biol*, North Dakota, 89-93; *zool*, *Dartmouth*, and *head, dept. biol*, 93- Trustee, Woods Hole. Walker nat. hist. prize, 79. A.A. (v. pres, F, 19); Soc. Nat; Soc. Zool. (v. pres, 06); Ass. Anat; Paleont. Soc; Ecol. Soc; St. Petersburg Imp. Soc. Nat. Anatomy and embryology of arthropods; embryology of mollusks; variation in *Limulus*; visual organs; origin of vertebrates; physiology of the nervous system of *Limulus*; embryology of arachnids; structure of the fossil fishes and arthropods of the Devonian and Silurian formations; the evolution of vertebrates and their kin; the grand strategy of evolution.
- Patterson, Prof. A(ndrew) H(enry)**, Chapel Hill, N. C. *Physics*. Salem, N. C, Sept. 28, 70. Ph.B, B.E, North Carolina, 91; A.B., Harvard, 92, A.M., 93; Berlin and Charlottenburg Tech. Hochschule, 05-06; Cambridge, 06. Electrician, Cons. Traction Co, 93-94; instr. *physics*, Georgia, 94-97, adj. prof, 97-98, *prof*, 98-08; *North Carolina*, 08-, *dean, sch. of applied sciences*, 11- A.A.; Physical Soc; Eng. Educ; N. C. Acad. (pres, 19). X-rays; high tension phenomena; lightning discharges; astronomy.
- Patterson, Dr. Austin M(cDowell)**, Xenia, Ohio. *Chemistry*. Damascus, Syria, May 31, 76. A.B., Princeton, 97; Ph.D, Hopkins, 00. Instr. chem, Centre (Ky), 00-01; Rose, 01-03; ed. for chem. and allied terms, 'Webster's New Int. Diet,' 03-07; assoc. ed, 'Chem. Abstracts,' 08-09, ed, 09-14; *ed. and author*, 15- Chemist, U. S. Bur. Mines and War Dept, 18-19. A.A.; Chem. Soc. Permanganic acid and new permanganates; structure of camphor; organic nomenclature.
- Patterson, Mrs. Flora W(ambaugh)**, U. S. Department of Agriculture, Washington, D. C. *Vegetable pathology*. Columbus, Ohio, Sept. 15, 47. Antioch, 60; Cincinnati Wesleyan, 65, A.M., 83; Radcliffe, 92-95; A.M., Iowa, 95. Asst, Gray Herbarium, Harvard, 95; instr. biol, private sch, Boston, 96; asst. pathologist in charge, herbarium, div. veg. physiol. and path, U. S. Dept. Agr, 96-01, *mycologist in charge path. collections, taxonomy of fungi and mycol. exchange, bur. plant indust*, 01- Assoc. ed, 'Econ. Fungi,' 94-95. A.A.; Bot. Soc; Phytopath. Soc; Wash. Biol. Soc. Fungous diseases of plants and insects; systematic mycology.
- Patterson, G(eorge) W(arren)**, Naval Proving Ground, Indian Head, Md. *Chemistry*. Worcester, Mass, 68. B.S., Worcester, 88. Lab. asst, Worcester, 88-89; asst. to Dr. Wolcott Gibbs, 89-90; asst. chemist, Naval Torpedo Sta, Newport, R. I, 90-99; chief chemist, *Naval Smokeless Powder Factory*, 99-08, *powder expert*, 09- Mem. Int. Cong. Applied Chem, Berlin, 03, London, 09. Chem. Soc. Nitrocellulose and smokeless powder.
- Patterson, Prof. George W(ashington)**, 2101 Hill St, Ann Arbor, Mich. **Electrical engineering*, *Physics*. Corning, N. Y, Feb. 1, 64. A.B., Yale, 84, A.M., 91; B.S., Mass. Inst. Tech, 87; Harvard Law Sch, 88-89; Ph.D, Munich, 99. Asst. math, Mass. Inst. Tech, 87-88; instr. physics, *Michigan*, 89-92, *asst. prof*, 92-98, *junior prof*, 98-01, *elec. eng*, 01-05, *prof*, 05-14, *eng. mech*, 14- A.A.; fel. Elec. Eng; Physical Soc; Electrochem. Soc. Standard of electrical current.
- Patterson, Dr. G(uillermo), Jr**, Apartado 716, Panama City, Panama. *Chemistry*. Panama, Feb. 13, 83. B.C., Cooper, 10; Ch.E, N. Y. Univ, 11; M.S., Notre Dame, 11, Ph.D, 12. Asst. chemist, Lederle Laboratories, 06-08; med. col, Cornell, 08-12; asst. prof. chem, Notre Dame, 11-12; *prof. math*, *Panama Nat. Inst*, 12-13, *chem. and in charge of dept*, 13-14, 16-; *prof. math. and chem. and in charge of departments*, *Panama Nor. Col*, 14-16, *prof. chem. and in charge of dept*, 16-; *sch. of pharm*, 16- Laudy prize, 08, 09. Int. Cong. Applied Chem, 08, 12. A.A.; Chem. Soc; Pub. Health. Ass. Determination of lead; electrolytic separation of lead from copper; analysis of alloys; antimony tetrasulphid; physiological effects of radium; experimental chemistry.
- Patterson, Director H(arry) J(acob)**, College Park, Md. *Chemistry*, *Agriculture*. Yellow Springs, Pa, Dec. 17, 67. B.S., Pa. State, 86; Sc.D, Md. Col, 12. Asst. chemist, Pa. Exp. Sta, 86-88; chemist, *Md. Exp. Sta*, 88-98, *director*

- and chemist, 98-, pres. Md. Col., 13-17. Sec'y, Md. State Board of Agr., 08-16. A.A.; Chem. Soc.; Soc. Prom. Agr. Sci.; Agr. Chem. (pres, 12); Soc. Chem. Indust. Chemistry; feeding and fertilizing problems; methods of rendering phosphates available to crops.
- Patterson, Dr. James L(awson)**, Chestnut Hill, Philadelphia, Pa. *Mathematics*. Savannah, Ohio, Aug. 18, 49. Ph.B., Lafayette, 77; hon. Sc.D., Princeton. Instr. math. and physics, Hill Sch., 76-83; math. master, Lawrenceville Sch., 83-94; prof. math. Union, 94-97; head master, *Chestnut Hill Acad*, 97- A.A.; Math. Soc.
- Patterson, Prof. J(ohn) T(homas)**, University of Texas, Austin, Tex. **Zoology*. Piqua, Ohio, Nov. 3, 78. B.S., Wooster, 03; Ph.D., Chicago, 08. Prof. biol., Buena Vista, 03-05; asst. zool., Chicago, 05-08; instr. *Texas*, 08-11, adj. prof., 11-13, *prof*, 13- A.A.; Soc. Nat.; Soc. Zool.; Ass. Anat.; Tex. Acad. Avian embryology; embryology of the armadillo; polyembryony in insects.
- Patterson, Dr. Robert A(lexander)**, Yale University, New Haven, Conn. *Physics*. Enfield, Conn., July 12, 90. A.B., Yale, 11, A.M., 12, Ph.D., 15. Instr. physics, Yale, 13-17, 19; Nat. Research Fellow, Harvard, 19-20; asst. *prof. physics*, Yale, 20- Capt. and major, F.A., 17-18. A.A.; Physical Soc. Spectroscopy; X-ray spectra.
- Patterson, Dr. T(homas) L(eon)**, University of Iowa, Iowa City, Iowa. *Physiology*. Madison, Maine, Jan. 15, 84. A.B., Clark, 09; A.M., Kansas City, 11; Yale, 10-11; M.S., Chicago, 15, Ph.D., 20. Agent and expert, bur. entom. U. S. Dept. Agr., 09-10; asst. biol., Sheffield Sci. Sch., Yale, 10-11; prof. biol. science and director, micros. lab, Highland Park, 11-12; assoc. prof. biol. and physiол., Maryland, 12-15; asst. *prof. physiол.*, Queen's (Can), 15-20; Iowa, 20- A.A.; Royal Soc.; Royal Meteorol. Soc. Hunger contractions in mammals, amphibians and reptiles; gastric and pulmonary tonus.
- Pattillo, Prof. N(athan) A(llen)**, Randolph Macon Woman's College, Lynchburg, Va. *Mathematics*. Loachpoka, Ala., Nov. 7, 67. B.S., Southern, 87, A.M., 90; Ph.D., Hopkins, 97. *Prof. math*, Millsaps, 92-94; Ala. Nor. Col., 97-99; Randolph-Macon Woman's Col., 99- A.A.; Math. Soc.; Circolo Mat. di Palermo. Partial differential equations connected with the theory of surfaces.
- Patton, Prof. H(orace) B(ushnell)**, 911 Foster Building, Denver, Colo. *Geology*, *Mineralogy*. Chicago, Ill., Sept. 18, 58. A.B., Amherst, 81; Ph.D., Heidelberg, 87. Instr. science and math, Howard, 81-83; asst. miner. and petrog., Heidelberg, 87; asst. prof. geol., Rutgers, 88-90; asst. geologist, Mich. Geol. Surv., and instr., Mich. Col. Mines, 91-93; prof. geol. and miner., Colo. Sch. Mines, 93-17. A.A. (sec'y, E, 01); Geol. Soc. (mem. council, 07-10, v. pres, 14); Colo. Sci. Soc. Economic geology.
- Paul, Arthur E(rnest)**, 125 N. Elizabeth St., Chicago, Ill. *Chemistry*. Germania, Pa., Sept. 29, 74. B.S., Illinois, 97, M.S., 98; Ph.G., Chicago Col. Pharmacy. Chief chemist, Marnier and Hoskins, 99-09; chemist, bur. chem., U. S. Dept. Agr., 09- Chem. Soc. Analysis of fruit and dairy products.
- Paul, Prof. H(enry) M(artyn)**, U. S. N. (retired), The Ontario, Washington, D. C. *Astronomy*, *Engineering*. Dedham, Mass., June 25, 51. A.B., Dartmouth, 73, C.E., 75. Asst. astronomer, Naval Observatory, 75-80; prof. astron., Tokyo, 80-83; asst. astronomer, Naval Observatory, 83-97; prof. math., U. S. N., 97-13, engineer, Bur. Yards and Docks, 99-05, teacher math., U. S. Naval Acad., 05-12. Solar eclipse exped. to W. Las Animas, Colo., 78; mem. jury awards, Elec. Expos., Phila., 84; Pan-Am. Expos., 01. A.A. (sec'y, A, 87); Astron. Soc.; Wash. Acad.; Wash. Philos. Soc. Transit of Mercury, May, 78; eclipse of July, 78; semidiameter of the moon; longitude of Princeton; variable stars.
- Paul, Dr. Walter E(verard)**, 104 Marlborough St., Boston, Mass. *Neurology*. Auburn, Maine, Sept. 14, 61. A.B., Harvard, 83, M.D., 87. *Neurologist*, Mass. Gen. Hosp., 93- Neur. Ass.; Am. Med. Ass. Peripheral nerve injuries.
- Paulus, Dr. Max G(eorge)**, Standard Oil Co., Whiting, Ind. *Chemistry*. Baltimore, Md., Sept. 25, 91. A.B., Hopkins, 12, Ph.D., 15. *Chemist*, Standard Oil Co. of Ind.
- Pawling, Jesse**, U. S. Naval Observatory, Washington, D. C. *Astronomy*, *Mathematics*. Lower Merion, Pa., Oct. 29, 65. A.B., Cent. High Sch., Phila., 88, A.M., 93; B.S., Cornell, 93, 93-94; George Washington, 94-95; Hopkins, 95-96; Pennsylvania, 00-01, 03-05. Computer, 'Nautical Almanac' Office, 94-96; U. S. Coast and Geod. Surv., 95; instr. physics, Cent. High Sch., Phila., 96-03; instr. and asst., Randal Morgan Lab. of Physics, Pennsylvania, 03-05; computer, Isthmian Canal Commission, 05; computer and asst., U. S. Naval Observatory, 05- Astron. Soc.; Philos. Soc. The metric system; legislation on weights and measures; interpolation; trigonometry; analytic geometry.
- Pawlowski, Prof. Felix W(ladyslaw)**, University of Michigan, Ann Arbor, Mich. *Aeronautical engineering*. Near Warsaw, Poland, July 23, 86. Mech. and elec. eng., Tech. Col., Mitweide, Saxony, 96; Tech. Col., Brunswick, Germany, 08; Paris, 10; M.S., Michigan, 14. Designer and chief engineer, various machine industries in Europe, 97-08; motor car designer, 11-13; assoc. *prof. aeronaut. eng.*, Michigan, 13- Aeronautics; aerodynamics; theory of propellers; mechanics of flight; stress analysis of aeroplane structures; design of internal combustion motors.
- Payne, Pres. Bruce R(yburn)**, George Peabody College for Teachers, Nashville, Tenn. *Education*, *Psychology*. Morganton, N. C., Feb. 18, 74. A.B., Trinity (N.C.); A.M., Columbia, 03, Ph.D., 04. Prof. philos. and educ., William and Mary, 04-05; secondary educ., Virginia, 05-06, psychol., 06-11; pres., Peabody Col. for Teachers, 11- Prize and medal, Colonial Dames. A.A.; Psychol. Ass.; Philos. Ass.; Ass. Adv. Teaching; S. Soc. Philos. and Psychol. Comparison of elementary curricula of the United States, England, Germany and France; ethical theory and education; southern high schools.
- Payne, Dr. Charles Rockwell**, Wadhams, Essex Co., N. Y. *Psychiatry*. Wadhams, June 22, 80. A.B., Cornell, 02, M.D., 06. *Practising physician*,

- 06- Contract surgeon, U.S.A., 18-19. A.A.; Psychopath. Ass; Psychoanal. Ass; Am. Med. Ass. Psychopathology; psychoanalysis.
- Payne, Prof. Fernandus, Bloomington, Ind. **Zoology*. Shelbyville, Ind, Feb. 13, 81. A.B, Indiana, 05, A.M, 06; fellow, Columbia, 07-09, Ph.D, 09. Asst. *zool*, Indiana, 05-07, asst. prof, 09-12, assoc. prof, 12-19, prof, 19- A.A.; Soc. Nat; Soc. Zool; Ind. Acad. Cytology; genetics.
- Payne, Dr. George F(rederick), 50 Armstrong St, Atlanta, Ga. *Pharmacy*. Macon, Ga, April 7, 53. M.D, Columbia; Ph.G, N. Y. Col. Pharmacy; Atlanta Col. Physicians and Surg. State chemist, Ga, 90-98; mem. Ga. Board of Pharmacy, 91-98, chemist, 98-06; *prof. pharmacy*, Atlanta Col. Pharmacy, 91-, dean, 98- Prof. chem. analysis, Southern Dent. Col, 91- Chem. Soc; Pharmaceut. Ass. (past pres, past v. pres); Agr. Chem; Ga. Pharmaceut. Soc; fel. London Chem. Soc. Determination of potash; preservation of fruits; pharmaceutical formulae; chemical apparatus.
- Payne, H(enry) L(ansing), 223 W. First St, Los Angeles, Calif. *Chemical engineering*. Warrensville, Ohio, June 24, 62. B.S, Case, 86, M.S, 97. Chem. Soc. (pres. and sec'y, Cleveland and Los Angeles sections). Chemical analysis.
- Payne, Dr. Henry M(ace), 50 Church St, New York, N. Y. *Mining engineering*. New York, N. Y, Aug. 26, 68. McGill, 85-88; C.E, hon. Ph.D, Ark. Nor. Col, 00; hon. Sc.D, Shenandoah Nor. Col, 01. V. principal, Milton Acad, Baltimore, Md, 96; pres. and prof. eng. and math, Stewartstown Col. Inst, Pa, 97-01; *prof. mining eng*, West Virginia, 07-10; asst. to pres, Bertha Coal Co, 17-20; *consulting engineer*, Anrade-Eyre, Inc, 20- Consulting engineer, Fairmont Coal Co. and Beattyville Block Coal Co; mem. Board of Arbitration, Lena-Lenskoi, Siberia. 15-16. A.A.; Min. and Metal. Soc; Mil. Eng; Min. Cong; Appalachian Eng. Ass; Can. Min. Inst. Mine explosions; coal dust; the geology of West Virginia; comparative values of fuels; hygroscopic moisture; humidity in mine air; thawing frozen gold bearing gravels; coal mining.
- Payne, Prof. W(illiam) W(Wallace), Elgin, Ill. *Mathematics, Astronomy*. Somerset, Mich, May 19, 37. A.B, Hillsdale, 63, A.M, 65, hon. Ph.D, 91; Michigan, 64-65; L.L.B, Chicago, 66. Prof. math. and astron, Carleton, 71-09, acting dean, 96-99, *director*, Goodsell Observatory, 79-09; *observatory*, Nat. Watch Co, Elgin, Ill, 09-Ed, 'Sidereal Messenger'; 'Astron. and Astrophys'; 'Popular Astron,' 93- Astron. Soc.
- Paynter, Dr. Richard H(enry), Jr, 1209 Fulton St, Brooklyn, N. Y. *Psychology*. Brooklyn, March 27, 90. A.B, Columbia, 12, A.M, 13, fellow, 13-14, Ph.D, 17. Psychologist, legal dept, Coca-Cola Co, 15-16; asst. psychol, Columbia, 16-17; *merchant*, 19- Sergt, Sanit. C, 18-19. Advertising; trade-mark and patent infringing; tests for judges; judgments of character.
- Peabody, Prof. Cecil H(obart), Massachusetts Institute of Technology, Cambridge, Mass. *Naval architecture, Engineering*. Burlington, Vt, Aug. 9, 55. B.S, Mass. Inst. Tech, 77, D.Eng. Prof. math. and eng, Imperial Agr. Col, Japan, 78-80; asst. prof. mech. eng, Illinois, 81-83; steam eng, Mass. Inst. Tech, 84-93, prof. *naval archit. and marine eng*, 93-20, emer. prof, 20- Order of the Rising Sun, III Class, Japan. Naval Archit. and Marine Eng. (v. pres).
- Peabody, Dr. Charles, Peabody Museum, Cambridge, Mass. *Archeology*. Rutland, Vt, Nov. 9, 67. A.B, Pennsylvania, 89; Ph.D, Harvard, 93. *Curator European archeol*, Peabody Museum, Harvard, 13-; *director*, dept. archeol, Phillips Acad, 01- Officier de l'Acad. A.A.; Anthrop. Ass. (mem. council); Folk-lore Soc. (sec'y); fel. Royal Anthropol. Inst; mem. Prehist. Soc. East Anglia; cor. mem. Ass. pour l'Enseignement des Sci. Anthropol; Soc. préhistor. française. Prehistoric archeology in the Ozark region, in southern France, and in Syria.
- Peabody, Dr. F(rancis) W(eld), Peter Bent Brigham Hospital, Boston, Mass. **Medicine*. Cambridge, Mass, Nov. 24, 81. A.B, Harvard, 03, M.D, 07. Asst. prof. med, Harvard Med. Sch, 15-20, assoc. prof, 20-; *physician*, Peter Bent Brigham Hosp, 15- Consulting physician, Collis P. Huntington Hosp. Am. Physicians; Soc. Clin. Invest; Am. Med. Ass; Cong. Physicians and Surg. (treas. 17). Internal medicine.
- Peabody, J(ames) E(dward), Carhart Ave. White Plains, N. Y. *Biology*. Brookline, N. H, Aug. 21, 69. A.B, Williams, 92; A.M, Harvard, 96. Principal, high sch, Williamstown, 92-95; teacher biol, English High Sch, Boston, 96-97; *head*, dept. biol, Morris High Sch, N. Y. City, 97- Soc. Nat; N. Y. State Sci. Teachers Ass. (committee on study of alcohol and narcotics, sec'y, 90-01). Physiology; sense organs of selachians.
- Peairs, Prof. L(eonard) M(arion), West Virginia University, Morgantown, W. Va. *Entomology*. Lawrence, Kans, June 5, 86. B.S, Kansas State, 05, M.S, 07; Cornell, 09; fellow, Chicago, 16-17. *Instr. entom*, Md. Col, and asst. entomologist, Exp. Sta, 08-10; Kansas State and Exp. Sta, 10-12; *West Virginia and Exp. Sta*, 12- A.A.; Ass. Econ. Entom; Entom. Soc. Relation of temperature to insect development.
- Pearce, Pres. H(aywood) J(efferson), Gainesville, Ga. *Psychology*. Columbus, Ga, Aug. 26, 71. A.B, Emory, 91; A.M, Chicago, 00; Ph.D, Wurzberg, 01. Pres, Brenau, 93- Psychol. Ass; S. Soc. Philos. and Psychol. Visual, tactual and aural illusions; suggestion; the law of attraction in subjective space; suggestive therapeutics.
- Pearce, Prof. J(ames) Newton, 714 Iowa Ave, Iowa City, Iowa. *Chemistry*. Oswego, Ill, Dec. 21, 73. Ph.B, Northwestern, 96, Ph.M, 97; Ph.D, Hopkins, 07. Asst. chem, Northwestern, 96-97; chemist, Jas. S. Kirk and Co, 97-00; instr. chem. and physics, high sch, La Salle, Ill, 00-02; chem, Northwestern, 02-05; asst. prof, Iowa, 07-17, assoc. prof, 17-18, *physical chem*, 18-20, prof, 20- A.A.; Chem. Soc. (sec'y, Iowa sect, 10-13, v. pres, 13, pres, 14-16, counselor, 16); Electrochem. Soc; Iowa Acad. Physical chemistry and electrochemistry; clays of glacial drifts of Iowa.
- Pearce, Dr. Louise, 535 Park Ave, New York, N. Y. *Pathology*. Boston, Mass, March 5, 86. A.B, Stanford, 07; Boston, 07-09; M.D, Hopkins, 12. Med. house officer, Hopkins Hosp, 12-13; asst. path. and bacter, Rockefeller Inst, 13-

- 15, *assoc.*, 16- A.A.; Ass. Path. and Bact.; Soc. Exp. Biol.; Soc. Pharmacol.; Harvey Soc. Bacteriology; experimental trypanosomiasis and syphilis; experimental chemotherapy and pathology.
- Pearce, Dr. Richard M(ills), Jr.**, Rockefeller Foundation, 61 Broadway, New York, N. Y. *Pathology. Montreal, Can, March 3, 74. M.D., Harvard, 97; Sc.D., Lafayette, 15. Res. pathologist, Boston City Hosp, 96-99; instr. path, Harvard Med. Sch., 99-00; demonstrator and asst. prof., Pennsylvania, 00-03; prof. path. and bacter., Albany Med. Col. and director, Bender Hygienic Lab, 03-08; prof. path. and director, path. lab, Univ. and Bellevue Hosp. Med. Col., 08-10; prof. path, Pennsylvania, 10-11, research med., 11-19; *director, div. med. educ., Rockefeller Foundation*, 20- Hitchcock lecturer, California, 12. A.A. (v. pres, 15); Am. Physicians; Am. Med. Ass.; Soc. Exp. Path.; Philos. Soc.; Harvey Soc.; Phila. Col. Physicians. Medical education; experimental pathology; bacteriology.
- Pearce, Dr. R(oy) G(entry)**, 740 Hillsdale Ave., Akron, Ohio. *Physiology*. Madison, Wis, Aug. 28, 84. A.B., Wabash, 08; M.D., Western Reserve, 12; Bern, 13. Demonstrator, *physiol.* Western Reserve, 12-13, instr., 13-17, prof., dental sch., 12-17; asst. prof., med. dept., Illinois, 17; mem. research lab. clin. med., Lakeside Hosp., 17-20; *with research div., health dept., B. F. Goodrich Co*, 20- Major, C.W.S., 18. *Physiol. Soc.* Carbohydrate metabolism; innervation of the kidney; vasomotor nerves.
- Pearce, Prof. W(illiam) T(udor)**, Agricultural College, N. Dak. *Chemistry*. Norfolk, Va, Sept. 3, 90. A.B., Randolph-Macon, 10; M.S., Kentucky, 12; Ph.D., Chicago, 16. Asst. *chem.*, Kentucky, 10-12; instr., Clemson, 12-13, asst. prof., 13-14; asst., Chicago, 14-15; prof., Fargo, 15-16; asst. prof., N. Dak. Col., 16-18, *prof.*, 18-, *head, sch. chem.*, 19- Chem. Soc. Theory of solutions; varnishes.
- Pearl, Dr. Raymond**, School of Hygiene and Public Health, Johns Hopkins University, Baltimore, Md. *Biology, Statistics. Farmington, N. H., June 3, 79. A.B., Dartmouth, 99, hon. Sc.D., 19; Ph.D., Michigan, 02; LL.D., Maine, 19. Asst. zool., Michigan, 99-02, instr., 02-06; Pennsylvania, 06-07; biologist and head, dept. biol., Maine Exp. Sta., 07-18; *prof. biometry and vital statist., sch. hygiene and pub. health, Johns Hopkins*, 18- Asst., U. S. Fish Commission, summers, 01, 02; lecturer, Iowa State, 10; Mich. Agr. Col., 12; chief, statist. div., Food Ad., 17-18; consultant vital statist., U. S. Pub. Health Service, 19- Nat. Acad. (council, 19-); A.A.; Soc. Nat. (pres, 16); Soc. Zool. (sec'y eastern branch, 11, pres, 13); Statist. Ass.; Soc. Exp. Biol.; Philos. Soc.; Soc. Prom. Agr. Sci.; Am. Acad.; Wash. Acad.; Int. Ass. Investigators and Instructors in Poultry Husbandry (pres, 09, hon. sec'y, 12-19); hon. mem. Imp. Russian Soc. Rural Avicul. Genetics; biometry; physiology of reproduction; animal behavior; variation; growth; teratology.
- Pearse, Prof. A(rthur) S(perry)**, University of Wisconsin, Madison, Wis. *Zoology. Crete, Nebr., March 15, 77. B.S., Nebraska, 00, A.M., 04; Ph.D., Harvard, 08. Teacher biol., high sch., Omaha, Nebr., 00-04; high sch., Chicago, 05-06; Austin teaching fellow, Harvard, 07-08; instr. zool., Michigan, 08-10, asst. prof., 10-11; Univ. Philippines, 11; St. Louis, 11; *Wisconsin*, 11-12, *assoc. prof.*, 12-19, *prof.*, 19- Mem. staff, Woods Hole, 08, 09, 12. A.A.; Soc. Nat.; Soc. Zool.; Ecol. Soc.; Wis. Acad. Ecology; parasitology; behavior; Crustacea; fishes.
- Pearson, G(ustav) A(dolph)**, Flagstaff, Ariz. *Forestry*. Holdrege, Nebr., Nov. 14, 80. B.S., Nebraska, 06, A.M., 07. Silviculturist, U. S. Forest Service, 07-08, *director, Fort Valley Exp. Sta.*, 09- A.A.; Soc. Foresters (pres, southwest sect, 16); Ecol. Soc. Botany; growth and reproduction of forest trees; forest ecology; artificial reforestation; forest meteorology.
- Pearson, Joseph Cleaveland**, 6406 Ridgewood Ave., Chevy Chase, Md. *Physics*. Andover, Maine, May 25, 79. A.B., Bowdoin, 00; A.M., Harvard, 03. Instr. physics, Bowdoin, 03-06; magnetic observer, Carnegie Institution, 06-10; *physicist, Bur. Standards*, 10- Soc. Test. Mat.; Concrete Inst. Uses of concrete and cement.
- Pearson, Pres. Raymond A(llen)**, Iowa State College, Ames, Iowa. *Agriculture*. Evansville, Ind., April 9, 73. B.S., Cornell, 94, M.S., 99; LL.D., Alfred, 09; D.Agr., Nebraska, 17. Asst., dairy lab., Cornell, 94; asst. chief, dairy div., U. S. Dept. Agr., 95-02; gen. manager, Walker-Gordon Lab. Co., 02-03; prof., dairy indust., Cornell, 03-08; N. Y. state commissioner agr., 08-12; *pres, Iowa State*, 12- Medal, Paris Expos. Investigator food conditions in Europe during war for Fed. Committee. A.A. (sec'y, I, 01); Ass. Agr. Col. Agricultural production and cooperation.
- Pearson, Thomas Gilbert**, 1974 Broadway, New York, N. Y. *Ornithology*. Tuscola, Ill., Nov. 10, 73. B.S., Guilford; North Carolina. *Pres, Nat. Ass. Audubon Societies*, 05- Mem. Ornith. Union. Conservation of the wild bird and animal life of North America.
- Pearson, Prof. William A(lexander)**, 209 N. 50th St., Philadelphia, Pa. *Chemistry*. Van Wert, Ohio, April 6, 79. Ph.C., Ferris Inst., 98; Ph.D., Michigan, 02; M.D., Hahnemann Med. Col., 15. Research chemist, Parke, Davis and Co., 02-04; *prof. pharmacy*, Ferris Inst., 04-06; *chem. and toxicol., Hahnemann Med. Col., Phila.*, 08- Pharmaceut. Ass. (chairman, Phila. sect.); Chem. Soc. (chairman, Phila. sect.); Pa. Pharmaceut. Ass. Physiological chemistry; nitrogen metabolism; pharmacodynamics of drugs acting mainly on the heart.
- Pease, Prof. A(rthur) S(tanley)**, 1114 W. Oregon St., Urbana, Ill. *Botany*. Somers, Conn., Sept. 22, 81. A.B., Harvard, 02, A.M., 03, Ph.D., 05. Instr., Harvard and Radeliffe, 06-09; asst. prof., *assoc. prof. and later prof. classics, Illinois*, 09- New Eng. Bot. Club. Flora of Coös County, N. H.
- Pease, F(rancis) G(ladheim)**, Mt. Wilson Observatory, Pasadena, Calif. *Astronomy, Engineering*. Cambridge, Mass., Jan. 14, 81. B.S., Armour, 01. Optician and observer, Yerkes Observatory, 01-03; instrument designer, *Mt. Wilson Observatory, Carnegie Institution*, 04-07, 08-13; *astronomer*, 11-, *in charge of design*, 13- Supt. Sci. Shop Works, Chicago, Ill., 07-08; chief

- draftsman, eng. sect, Nat. Research Council, 18. Astron. Soc; Pacific Astron. Soc; Mech. Eng. (chairman, Los Angeles sect, 17); Franklin Inst. Photography and spectroscopy of nebulae and clusters; ellipticity of globular clusters; moon and planets; rotation of spiral nebulae; precision instruments.
- Pease, Herbert D(odge)**, 39 W. 38th St, New York, N. Y. *Bacteriology, Hygiene*. Boston, Mass, Oct. 25, 70. M.B. Toronto, 93; Hopkins, 93-94, fellow, 94-95. Res. pathologist, Thomas Wilson Sanitarium for Children, Baltimore, 94; first asst. bacteriologist, Dept. Health, Phila, 95-98; bacteriologist, N. Y. State Path. Lab, Buffalo, 98-00; instr. bacter, Sheffield Sci. Sch, Yale, 01; director, antitoxin hygienic lab, N. Y. State Dept. Health, Albany, 01-09; *consulting bacteriologist and hygienist*, 09-; sanit. expert, Board Water Supply, N. Y. City, 10-16; *director*, Lederle Laboratories, 09-18, *Pease Laboratories*, 18- Adj. prof. bacter, Phila. Polyclinic, 97; Int. Cong. Tuber, 08 (sec'y, N. Y. state commission); Int. Cong. Hygiene and Demog, 12. A.A.; Ass. Path. and Bact; Soc. Bact; Ass. Tuber; Am. Med. Ass; Pub. Health Ass. (recorder, lab. sect, 01-09, sec'y, sanit. eng. sect, 11-17); New Eng. Water Works Ass; N. Y. Acad. Med. Diphtheria and tetanus antitoxins and their standardization; bacteriology of summer diarrheas of children; malignant tumors; typhoid fever; sanitation of food supplies; water purification; effects of dyes and chemical products on skin and tissue.
- Pease, Dr. V(innie) A(rah)**, U. S. Department of Agriculture, Washington, D. C. *Botany*. Blue Earth, Minn. B.S. Puget Sound, 07; M.S. Washington (Seattle), 16; Ph.D. Minnesota, 19. Teaching fellow, Washington (Seattle), 14-16; asst. bot, Minnesota, 16-20; *microanalyst, bur. chem, U. S. Dept. Agr*, 20- A.A; Agr. Chem; Bot. Soc. Morphology; algae; economic plants; evergreen leaves.
- Peaslee, W(illis) D(hu) A(ine)**, 700 First National Bank, Huntington, W. Va. *Electrical engineering*. Grass Valley, Calif, June 19, 87. A.B. Stanford, 09; E.E. Oregon Col, 16; diploma, Paris, 19. Test. engineer, Gen. Elec. Co, 10-11, asst. sales manager, 11-14; consulting engineer and asst. prof. elec. eng, Oregon Col, 14-17; elec. engineer, *Jeffery-Dewitt Insulator Co*, 19-20, *gen. manager*, 20- With corps engineers, A.E.F. and Am. Commission to Negotiate Peace, 17-19. Elec. Eng; Illum. Eng. Soc; Nat. Elec. Light Ass; Soc. Test. Mat; Soc. des Ing. civils de France; Soc. française des Elec. High voltage transmission; gas power; hydraulics.
- Pechstein, Prof. L(ouis) A(ugustus)**, University of Rochester, Rochester, N. Y. *Psychology*. Clinton, Mo, Oct. 30, 88. A.B. B.S. Missouri, 12; fellow, Chicago, 14-16, Ph.D. 16. Teacher, pub. and nor. schools, 08-14; asst. psychol, Chicago, 14-16; *prof. psychol. and educ. and head of dept, Rochester*, 16- Capt. Sanit. C, A. E. F. A.A; Psychol. Ass; Soc. Col. Teachers Educ; Rochester Acad. Educational psychology; motor learning; mental tests; memory; retention.
- Peck, Prof. Frederick B(urritt)**, Lafayette College, Easton, Pa. *Geology, Mineralogy*. Seneca Castle, N. Y, Aug. 9, 62. A.B. Amherst, 86; Ph.D. Munich, 96. Teacher math. and science, Tillotson Acad, Trinidad, Colo, 86-90, principal, 90-91; asst. geol, Amherst, 91-93; teacher geol, Amherst and Smith, 93-94; *prof. geol. and miner, Lafayette*, 97- A.A; Geol. Soc. Crystallography of bournonite; origin of talc and serpentine; basal conglomerate and geology of cement belt in Lehigh and Northampton Counties, Pennsylvania.
- Peck, Prof. Henry A(llen)**, 220 Stratford St, Syracuse, N. Y. *Astronomy*. Mexico, N. Y, May 4, 63. A.B. Syracuse, 85, A.M. 88; Ph.D. Strasbourg, 96. Instr. math, Dickinson Sem, Williamsport, Pa, 85-87; *Syracuse*, 87-93, *prof. astron*, 93-18, *dean, col. liberal arts*, 17- Astron. Soc; Astron. Gesell. Definitive orbits of comets; meteoric astronomy.
- Peck, Prof. Morton E(aton)**, Willamette University, Salem, Oregon. *Botany*. La Porte City, Iowa, March 12, 71. A.B. Cornell (Iowa), 95, A.M. 11. Instr. *biol*, Marionville, 96-97; *prof*, Ellsworth, 97-05; Iowa Wesleyan, 07-08; *Willamette*, 08- Bot. collector, British Honduras, 05-07. Bot. Soc; Cooper Ornith. Club; fel. Iowa Acad. Taxonomy and distribution of seed plants.
- Peck, S(amuel) S(todole)**, Alexander and Baldwin, Honolulu, Hawaii. *Chemistry*. San Francisco, Calif, May 18, 70. B.S. California, 90, Ph.G. 92; Tulane, 99. Chemist, Exp. Sta, Hawaiian Sugar Planters' Ass, 00-15; *consulting chemist, Alexander and Baldwin, Ltd*, 15- A.A; Chem. Soc; Hawaiian Chem. Ass. (sec'y-treas). Agricultural chemistry; manufacture of sugar in Hawaii.
- Peckham, Mrs. Geo. W. (Dr. Elizabeth Gifford)**, 646 Marshall St, Milwaukee, Wis. *Biology*. Milwaukee, Dec. 19, 54. A.B. Vassar, 76, A.M. 89; Ph.D. Cornell, 16. Entomology; instincts of Hymenoptera; arachnology.
- Peckham, Prof. William C(lark)**, 132 St. James Place, Brooklyn, N. Y. *Physics*. South Royalston, Mass, Aug. 13, 41. A.B. Amherst, 67, A.M. 70. Principal, Leicester Acad, Mass, 67-68; teacher math. and astron, Williston Sem, Mass, 68-70; *prof. math, Adelphi Acad*, 75-83; *physics*, 83-96, *Adelphi*, 96- On staff, 'Scientific American,' 97-; lecturer, Board of Educ, N. Y. City. A.A; Physical Soc; fel. Brooklyn Inst. Electricity.
- Pedersen, Dr. Frederick M(alling)**, 452 W. 144th St, New York, N. Y. *Mathematical physics*. New York, Feb. 12, 69. B.S. Col. City of N. Y, 89; E.E. Columbia, 93; M.S. N. Y. Univ, 02, Sc.D. 05. Asst. engineer, Crocker Wheeler Co, 93-99; tutor *math, Col. City of N. Y*, 99-02, instr, 03-10, *asst. prof*, 10- Math. Ass. The influence of molecular structure upon the internal friction of gases.
- Peebles, Dr. Florence**, Bryn Mawr, Pa. **Biology*. Pewee Valley, Ky, June 3, 74. A.B. Goucher, 95; table at Woods Hole, 95, room, 96, 97, 02, 14, 16, 17; Mary E. Garrett scholar, Bryn Mawr, 95-96, fellow, 96-97, Mary E. Garrett European fellow (Halle and Munich), 98-99, Ph.D. 00; Am. Woman's table, Naples Zool. Sta, 98, 01, 07-13; Bonn, 05; Würzburg, 11; Freiburg, 13. Student asst. *biol*, Bryn Mawr, 97-98; instr,

- Goucher, 99-02, assoc. prof, 02-06; lecturer, Bryn Mawr, 13; prof. biol, Newcomb Col, Tulane, 15-17; assoc. prof. physiol, Bryn Mawr, 17-19. A.A.; Soc. Nat; Soc. Zool. Regeneration of hydroids; embryology; life history of *Haematococcus*; acelous flatworms.
- Peed, Prof. Mansfield Theodore, Emory University, Ga. *Mathematics*. Petersburg, Va, July 31, 57. A.M, Randolph-Macon, 78; Hopkins, 83-85, 88-89. *Prof. math, Emory, 89-92, pure math. and astron, 92-* A.A.; Math. Soc; Math. Ass.
- Peele, Prof. Robert, 490 West End Ave, New York, N. Y. *Mining engineering*. New York, N. Y. E.M, Columbia, 83. Engaged in field work, U. S, Peru, Bolivia, Columbia, and Dutch Guiana, 83-92; adj. prof. *mining, Columbia, 92-04, prof, 04-* Min. Eng; Min. and Metal. Soc. Compressed air plant; mining engineers handbook.
- Peffer, Prof. H(arry) C(reighton), Purdue University, Lafayette, Ind. *Chemistry*. Enon Valley, Pa, Aug. 15, 73. B.S, Pa. State, 95, M.S, 08. Chemist, Pa. Salt Mfg. Co, 96-00; chemist and supt, Aluminum Co. of Am, 00-03, gen. supt. and director of research, 03-08; consulting chemist, 08-11; *prof. and head, sch. chem. eng, Purdue, 11-* Ind. Acad. Industrial processes; chemical engineering; gas standards.
- Pegram, Dr. Geo(rge) B(raxton), Columbia University, New York, N. Y. **Physics*. Trinity, N. C, Oct. 24, 76. A.B, Trinity (N. C), 95, hon. Sc.D, 15; Columbia, 99-00, Ph.D, 03; Berlin; Cambridge. Teacher, high schools, N. C, 95-99; asst. *physics, Columbia, 00-02, tutor, 02-05, instr, 05-09, adj. prof, 09-13, assoc. prof, 13-16, prof, 16-*, dean, *faculty of applied science, 17-* Magnetic observer, U. S. Coast and Geod. Surv, 02-06. A.A.; Physical Soc. (treas, 18-); Eng. Educ; assoc. Radio Eng; Optical Soc; N. Y. Acad. (chairman, sect. astron, chem. and physics, 17-19). Radioactivity and electromagnetic theory.
- Pegram, Geo(rge) H(erndon), 165 Broadway, New York, N. Y. *Civil engineering*. Council Bluffs, Iowa, Dec. 29, 55. C.E, Washington (St. Louis), 77, hon. A.M, 05. *Chief engineer, Edgemoor Iron Co, 80-86; U. P. R. R, 93-98; Manhattan Ry. Co, N. Y. City, 98-05; Interborough Rapid Transit Co, Rapid Transit Subway Construction Co, and N. Y. Railways Co, N. Y. City, 05-* Civil Eng. (v. pres, 09, pres, 17); Omaha Tech. Club (past pres). Bridges and track.
- Peirce, Prof. G(eorge) J(ames), Stanford University, Calif. **Plant physiology*. Manila, P. I, March 13, 68. B.S, Harvard, 90, Parker fellow, 92-94; Ph.D, Leipzig, 94. Asst. bot, Harvard and Radcliffe, 90-92; asst. prof, Indiana, 95-97; *Stanford, 97-00, assoc. prof. plant physiol, 00-01, prof. bot, 10-* Collaborator, U. S. Forest Service, 09-10; special agent effects of smoke on vegetation, U. S. Dept. Justice, 10-11. A.A.; Bot. Soc; Bot. Gesell. Physiology; respiration; irritability; parasitic flowering plants; effect of smelting and other smoke, cement, etc, on vegetation.
- Peirce, Dr. Sidney J(ames) S(hepard), Clement Bloek, Brandon, Can. *Pathology*. Southampton, England. B.A, Manitoba, 98, M.D, C.M,
04. *Pathologist, Winnipeg Gen. Hosp, 08-* Lecturer path, Man. Med. Col, 08-15. A.A.; Ass. Path. and Bact; Soc. Bact; Pub. Health Ass. Anti-typhoid inoculation; cholesterin in bile.
- Peitersen, Dr. A(rne) K(ristopher), Colorado Agricultural College, Ft. Collins, Colo. *Botany*. Elk Horn, Iowa, March 9, 84. A.B, Nebraska, 11, A.M, 12; Ph.D, Vermont, 16. Instr. bot, Vermont, and asst. botanist, Exp. Sta, 12-15, asst. prof; 15-19; *prof. bot, Colo. Agr. Col, 19-* A.A.; Bot. Soc. Inheritance in Rubi.
- Pell, Prof. Alex(ander), Bryn Mawr, Pa. **Mathematics*. Moscow, Russia, Sept. 25, 57. Fellow, Ph.D, Hopkins, 97. Prof. math, South Dakota, 97-08; assoc. prof, Armour Inst, 08-14. Math. Soc; Kasan (Russia) Math. Soc. Differential geometry. [Died Jan. 26, 21.]
- Pell, Mrs. Alexander, (Dr. Anna Johnson), Bryn Mawr, Pa. **Mathematics*. Hawarden, Iowa, May 5, 83. A.B, South Dakota, 03; A.M, Radcliffe, 05; Alice Freeman Palmer fellow, Wellesley, at Göttingen, 06-07; Ph.D, Chicago, 10. Inst. math, Holyoke, 11-14, *assoc. prof, 14-18; Bryn Mawr, 18-* Math. Soc. Integral equations; functions of infinitely many variables.
- Pellow, Prof. Charles E(rnest), 7 W. 43d St, New York, N. Y. **Chemistry*. London, England, March 11, 63. E.M, Columbia, 84. Instr. and later demonstrator physics and chem, Col. Physicians and Surg, Columbia, 87-97, adj. prof. chem, 97-10. Chem. Soc; Soc. Chem. Indust; fel. N. Y. Acad; Chem. Verein. The manufacture of solid stannic tetrachlorid; ancient dyeing processes with modern dyestuffs; handiercraft dyeing; potassium salts from seaweed; poisonous properties of ferrosilicon.
- Peltier, Prof. Geo(rge) L(eo), University of Nebraska, Lincoln, Nebr. *Plant pathology*. Merrill, Wis, May 8, 88. A.B, Wisconsin, 10; A.M, Washington (St. Louis), 12; Ph.D, Illinois, 15. Teacher science, high sch, Wauwautosa, Wis, 10-11; teaching fellow, Shaw Sch. of Bot, Washington (St. Louis), 11-12; assoc, floricultural path, Illinois, 12-16; *prof. plant path, Ala. Polytech, and plant pathologist, Exp. Sta, 16-20; Nebraska and Exp. Sta, 20-* Assoc. ed, 'Phytopathology,' 19- Agent, bur. entom, U. S. Dept. Agr, summer, 11, bur. chem, 19-20. A.A.; Phytopath. Soc; Bot. Soc; Wis. Acad. Diseases of floricultural and ornamental plants; Rhizoctonia; citrus canker.
- Pelton, W(ard) C(leveland), State College, Pa. *Horticulture*. Erie, Pa, Aug. 27, 88. B.S, Pa. State, 11. Asst. horticulturist, Del. Exp. Sta, 11-13; exten. expert market gardening, Rutgers, 13-14; co. agr. agent, Sussex Co, Del, 14-17; investigator olericulture, Conn. Exp. Sta, 17-20; *prof. veg. gardening, Pa. State, 20-* Soc. Hort. Sci. Cover crops; uniformity of crops.
- Pember, F(rederick) R(ussell), Kingston, R. I. *Botany*. Putney, Vt, Jan. 27, 77. B.S, Vermont, 00, M.S, 08. Asst. soil fertility, bur. soils, U. S. Dept. Agr, 03-06; *plant physiol, R. I. Exp. Sta, 06-* A.A. Toxicology; plant physiology; nutrient requirement of plants; availability of fertilizer ingredients.

- Pemberton, C(yril) E(ugene)**, 2438 Koa Ave, Honolulu, Hawaii. *Entomology*. Los Angeles, Calif, Aug. 12, 86. A.B, Stanford, 11. Agent and expert, bur. entom, U. S. Dept. Agr, 11. scientific asst, 12-16, entom. asst, 16-18; asst. entomologist, *Exp. Sta. Hawaiian Sugar Planters Ass, Honolulu*, 19- Assoc. mem. Ass. Econ. Entom; Hawaiian Entom. Soc. (pres, 18). Citrous fruit insects; fruit flies in Hawaii; sugarcane leaf-hopper.
- Pemberton, Dr. Ralph**, 318 S. 21st St, Philadelphia, Pa. *Medicine*. Sept. 14, 77. B.S, Pennsylvania, 98, M.S, 99, M.D, 03, Woodward fellow, 08-10. Asst. visiting neurologist, Phila. Gen. Hosp, 05-08; out patient physician, Presb. Hosp, Phila, 05-13; asst. instr. and instr. med, Pennsylvania, 06-11; asst. visiting physician, Univ. Hosp, 10-11; *visiting physician, Presb. Hosp*, 13- Major, M.C, 18-19. Soc. Exp. Biol; Soc. Clin. Invest; Am. Med. Ass; Phila. Col. Physicians. Internal medicine; biochemistry; chronic arthritis; ductless glands.
- Pence, Prof. Forrest K(izer)**, 1325 Ashland Ave, Zanesville, Ohio. *Ceramic chemistry*. Sidney, Ohio, Nov. 30, 83. B.S, Ohio Northern, 03; A.B, Ohio State, 07, Cer.E, 09. Ceramic engineer, Am. Encaustic Tiling Co, 09-12; prof. ceramic eng, Ohio State, 12-13; *ceramic engineer and supt. of manufacture, Am. Encaustic Tiling Co*, 13- Ceramic. Soc; Chem. Soc. Matness in glazes; dust pressed bodies; colors produced by nickel oxid in ceramic mixtures containing zinc; hydrated silicic acid in clays; zinc in underglaze colors containing chromium; tiles; pyrometry of clay wares.
- Pender, Dr. Harold**, University of Pennsylvania, Philadelphia, Pa. **Electrical engineering*. Tarboro, N. C, Jan. 13, 79. A.B, Hopkins, 98, Ph.D, 01; Sorbonne, 03. Teacher, McDonough Sch, 01-02; instr. physics, Syracuse, 02-03; elec. engineer, Pittsburgh, 03-04; N. Y. City, 04-09; prof. theoret. and applied elec, Mass. Inst. Tech, 09-13, director, research div, *dept. elec. eng*, 13-14; *prof. in charge, Pennsylvania*, 14- Ed-in-chief, 'Pender's Handbook for Elec. Engineers,' 14. Elec. Eng. (manager, v. pres, 15-18); Philos. Soc; Am. Acad. Electricity and magnetism for engineers; electrical convection; magnetic action of charged carbonic acid stream; electric transmission of power.
- Pendleton, Pres. Ellen Fitz**, Wellesley, Mass. *Mathematics*. Westerly, R. I, Aug. 7, 64. A.B, Wellesley, 86, A.M, 91; Cambridge, England, 89-90; D.Litt, Brown, 91; LL.D, Mt. Holyoke, 12. Tutor and asst. math, *Wellesley*, 86-88, instr, 88-97, sec'y, 97-01, dean and assoc. prof. math, 01-11, *pres*, 11- A.A.
- Pendleton, Dr. Robert L(arimore)**, Department of Agriculture, Gwalior, India. *Agronomy*. Minneapolis, Minn, June 25, 90. B.S, California, 14, fellow, 16-17, Ph.D, 17. Asst. soil surv. California, 14-15; instr. soils, Ewing Christian, India, 18; *asst. director and officiating director agr, Gwalior State*, 19- A.A; Soc. Agron; Chem. Soc. Soil surveys; soils of central India.
- Pennell, Dr. Francis W(hittier)**, New York Botanical Garden, Bronx Park, New York, N. Y. *Botany*. Wawa, Pa, Aug. 4, 86. B.S, Pennsylvania, 11, Ph.D, 13, fellow, 13-14. *Assoc. curator, N. Y. Bot. Garden*, 14- Bot. expeditions in the U. S, 12, 13, 15, 17, 20; to Columbia, S. Am, 17-18. Bot. Soc; Torrey Bot. Club; Phila. Bot. Club. Scrophulariaceae.
- Pennington, Prof. L(eigh) H**, New York State College of Forestry, Syracuse, N. Y. *Botany*. Macon, Mich, Oct. 26, 77. A.B, Michigan, 07, Ph.D, 09. Asst. bot, Michigan, 06-09; instr, Northwestern, 09-10; asst. prof, Syracuse, 10-12, assoc. prof, 12-14; *prof. N. Y. State Col. Forestry, Syracuse*, 14- A.A; Bot. Soc; Phytopath. Soc; Soc. Foresters; N. Y. Forestry Ass. Mycology; forest pathology.
- Pennington, Dr. Mary E(ngle)**, 50 E. 42d St, New York, N. Y. **Chemistry*. Nashville, Tenn, Oct. 8, 72. Ph.D, Pennsylvania, 95, fellow, 95-97, research, 98-01; fellow, Yale, 97-98. Director, chem. lab, Woman's Med. Col. of Pa, 98-06; chief, Phila. Clin. Lab, 01-07; chief, food research lab, bur. chem, U. S. Dept. Agr, 08-19; *manager, research and development div, Am. Balsa Co, Inc*, 19- Bacteriologist, Phila. Bur. Health, 04-07; bacter. chemist, bur. chem, U. S. Dept. Agr, 05-07. A.A; Chem. Soc; Soc. Biol. Chem; Refrig. Eng. Columbium and tantalum; tungsten; chemico-physiology of *Spirogyra nitida*; diphtheria; chemico-bacteriology of milk; physiological chemistry; chemical, bacteriological and histological study of flesh foods; food refrigeration.
- Pennock, C(harles) J(ohn)**, Kennett Square, Chester Co, Pa. *Ornithology*. Kennett Square, Nov. 18, 57. Cornell, 76-79. *Ornithologist, Del. State Board Agr*, 03- Mem. Ornith. Union; Cooper Ornith. Club; Wilson Ornith. Soc; Del. Valley Ornith. Club (past pres); Del. Nat. Hist. Soc; cor. mem. N. Y. Linnean Soc. Birds of Delaware; migration of birds; birds of Wakulla County, Florida.
- Pennock, John D(owner)**, Solvay Process Co, Syracuse, N. Y. **Chemistry*. Morristown, Vt, Aug. 16, 60. A.B, Harvard, 83. Asst. chem. lab, Harvard, 84; asst. chemist, *Solvay Process Co*, 85-86, *chief chemist*, 86- Mem. Belgian jury of awards, La. Purchase Expos, 04. U. S. delegate, Int. Cong. Applied Chem, Berlin, 03. Chem. Soc; Soc. Chem. Indust; Min. Eng; Syracuse Chem. Soc. (pres, 02-). Retort coke ovens and chemical by-products; ammonia; heat conductivity of magnesia; quantitative analysis of aqua ammonia. [Died March 11, 21.]
- Pennypacker, Dr. John Y(oung)**, 1421 Arch St, Philadelphia, Pa. *Botany*. Kimberton, Pa, May 29, 85. B.S, Pennsylvania, 11, A.M, 12, Ph.D, 15. Instr. bot, Cent. High Sch, Phila, 12-15; *asst. prof, Germantown High Sch*, 15- Research asst. sta. for exp. evolution, Carnegie Institution. Pa. Bot. Soc. Plant morphology and variation.
- Penrose, Dr. Charles Bingham**, 1720 Spruce St, Philadelphia, Pa. *Surgery*. Philadelphia, Feb. 1, 62. A.B, Harvard, 81, A.M, Ph.D, 84; M.D, Pennsylvania, 84, LL.D, 09. *Surgeon, Gyneccean Hosp*, 87-; German Hosp, 90; prof. gynec, Pennsylvania, 93-99. Mem. advisory board, Pa. Dept. Health; pres, Pa. Board of Game Commissioners. A.A; Philos. Soc; Phila. Col. Physicians; Phila. Acad; Phila. Zool. Soc. (pres). Physics; comparative pathology; public hygiene.

Penrose, Prof. R(ichard) A(lexander) F(ullerton), Jr. 460 Bullitt Building, Philadelphia, Pa. **Geology*. Philadelphia, Dec. 17, 63. A.B., Harvard, 84, A.M., Ph.D., 86. With U. S. Geol. Surv., 85-86; asst. geologist, Tex. Geol. Surv., 88-89; Ark. Geol. Surv., 89-92; lecturer econ. geol., Stanford, 93; assoc. prof., Chicago, 92-95, prof., 95-11. Geologist, U. S. Geol. Surv., 94-96; co-editor, 'Jour. of Geol'; mem. Committee on Hayden Mem. Award, 02-; assoc. museum, Harvard, 03-06, mem. visiting committee, dept. geol., miner. and petrog., 15-; trustee, Pennsylvania, 11-; mem. various committees, div. geol. and geog., Nat. Research Council, 17- Delegate, Int. Geol. Cong., Stockholm, 10; Toronto, 13. A.A. (sec'y, E, 01); Geol. Soc. (councilor, 13-16, v. pres, 19); Min. Eng.; Philos. Soc. (councilor, 13, publication committee, 03-); Wash. Geol. Soc.; Phila. Acad.; Wash. Acad.; Colo. Sci. Soc. Economic and chemical geology; nature and origin of ore deposits.

Pepper, George H(ubbard), Museum of the American Indian, Broadway and 155th St., New York, N. Y. *Anthropology*. Tottenville, N. Y., Feb. 2, 73. Harvard, 95-96. Asst. archeol. of the southwest, Am. Museum Nat. Hist., 96-08; asst. curator Am. archeol. museum, Pennsylvania, 09-10, acting curator, 10-14; Heye Museum, 14-16; *Museum of Am. Indian, Heye Foundation*, 17-A.A. (sec'y, H, 04); Anthropol. Ass. (asst. treas., 03-05); fel. Ethnol. Soc. (treas., 01-08); Folklore Soc. Anthropology of the southwest, especially Chaco Cañon group in northwest New Mexico; folk-pottery of the modern Pueblos; southwestern textiles; archeology of Ecuador.

Pepper, Dr. O(liver) H(azard) Perry, 1811 Spruce St., Philadelphia, Pa. *Medicine*. St. Davids, Pa., 84. B.S., Pennsylvania, 05, M.D., 08. *Asst. prof. med., Pennsylvania*, 20- Asst. physician, Univ. Hosp., 12- A.A.; Ass. Path. and Bact.; Soc. Exp. Biol.; Soc. Clin. Invest.; Phila. Col. Physicians; Ass. Prof.; Phila. Path. Soc.

Pepper, Dean William, 1813 Spruce St., Philadelphia, Pa. *Medical education*. Philadelphia, 74. A.B., Pennsylvania, 94, M.D., 97. Asst. prof. clin. path., Pennsylvania, 08-18, dean, sch. med., 12- Trustee, Phila. Free Library. Am. Med. Ass. (mem. council on med. educ. and hospitals); Ass. Med. Col. (pres, 20); Phila. Col. Physicians.

Perdew, W(illiam) E(dward), 940 Widener Building, Philadelphia, Pa. *Chemical engineering*. Monte Vista, Colo., May 1, 89. A.B., Stanford, 11. Chemist and chem. engineer, South. Pacific R. R. Co., 11-17; chem. engineer, Bur. Mines, 17-19; *Union Petrol. Co.*, 19- Mem. various inter-allied commissions on petroleum. A.A.; Chem. Soc.; Petrol. Inst. Petroleum technology; oil shale.

Perisho, Pres. Ellwood C(happelle), Ipswich, S. Dak. *Geology*. Westfield, Ind. B.S., Earlham, 87, A.M., 00; fellow, Chicago, 93-95, M.S., 95. Prof. math., Guilford, 88-93; geol., South Dakota, dean, col. arts and sciences, and state geologist, S. Dak., 03-14; pres., S. Dak. Col., 14-19; Govt. lecturer, 18-19; mem. educ. corps, U.S.A., and mem. faculty, A.E.F. Univ., Beaune, 18-19; lecturer, dept. educ., *Inter-Church World Movement*, 19- Wis. Acad.; Chicago Acad.; Lennox Acad. Early erosion history of southwestern Wisconsin;

lead and zinc ores in southwestern Wisconsin; general geological conditions in South Dakota; geology of the Rosebud Reservation; South Dakota artesian basin and its wells.

Perkins, Dr. Cha(rles) A(ibert), 1547 W. Clinch Ave., Knoxville, Tenn. **Physics*. Ware, Mass., Oct. 31, 58. A.B., Williams, 79; fellow, Hopkins, 83-84, Ph.D., 84. Prof. math., Lawrence, 80-81; asst. physician, Hopkins, 84-87; assoc., Bryn Mawr, 87-91; prof., Hampden-Sidney, 91-92; physics and elec. eng., Tennessee, 92-07, elec. eng., 07- Mem. Nat. Conference of Electricians, Phila., 84. Elec. Eng. Magnetism of nickel; vapor tension of sulphuric acid; electricity; magnetism.

Perkins, E(dmund) T(aylor), First National Bank Building, Chicago, Ill. *Civil engineering*. Scottsville, Va., Sept. 8, 64. A.B., C.E., Union, 85, A.M., 88. Topographer, U. S. Geol. Surv., 85-92, 94-02; engineer, State Wagon Road Commission, Idaho, 93; U. S. Reclamation Service, 02-09; consulting engineer, 10- A.A.; Civil Eng.; Ass. Eng. (past pres); West. Soc. Eng. Irrigation and reclamation of lands; conservation of natural resources.

Perkins, F(rank) W(alley), 302 South St., Morristown, N. Y. *Geodesy, Hydrography*. Staten Island, N. Y., June 24, 44. Grad., Eagleswood Inst., 61. Special relief agent, U. S. Sanit. Commission, 62-63; aid, U. S. Coast Surv., 63-69, sub-asst., 69-75, asst., U. S. Coast and Geod. Surv., 75-01, asst. supt., 01-15. Asst., Transatlantic Longitude, Cambridge and Greenwich, 66; mem. eclipse exped., 69; acting commissioner, U. S., Canada and Alaska boundaries. A.A.; Wash. Soc. Eng.; Perm. Int. Ass. Navigation Cong.

Perkins, Prof. G(eorge) H(enry), University of Vermont, Burlington, Vt. *Geology, Anthropology*. Cambridge, Mass., Sept. 25, 44. A.B., Yale, 67, Ph.D., 69; LL.D., Vermont, 11. *Howard prof. nat. hist., Vermont*, 69-, dean, dept. arts, 95-; state geologist, Vt., 98- A.A. (sec'y, H, 82, 83, 96, v. pres, E, 17); Geol. Soc.; Anthropol. Ass.; Ethnol. Soc. Archeology of New England, especially of Vermont; geology of Vermont; building stones; geological survey of Vermont; Ordovician rocks.

Perkins, Prof. Henry A(ugustus), 55 Forest St., Hartford, Conn. *Physics*. Hartford, Nov. 14, 73. A.B., Yale, 96, 00, 02; E.E., A.M., Columbia, 99; Paris, 08-09. With Hartford Elec. Light Co., 99-00; lab. asst. physics, Yale, 01-02; prof., *Trinity (Conn.)*, 02-, acting pres., 15-16, 19-20. A.A.; Physical Soc.; assoc. Elec. Eng.; Explorer's Club; Am. Alpine Club. Velocity of propagation of magnetism; theory of Wheatstone's bridge sensibility; efficiency of sparking apparatus; rectification effect in Geissler tube discharge; discontinuity in electric discharges; thermodynamics.

Perkins, Prof. H(enry) F(arnham), 205 S. Prospect St., Burlington, Vt. *Zoology*. Burlington, May 10, 77. A.B., Vermont, 98; Ph.D., Hopkins, 02. Instr. zool., Vermont, 02-05, asst. prof., 05-12, prof., 12- Research asst., Carnegie Institution, 03-04; scientific asst., U. S. Bur. Fisheries, 06, 08. A.A.; Soc. Nat.; Soc. Zool.; Ecol. Soc.; Boston Soc. Nat. Hist. Morphology and

- embryology of Medusae; fresh-water mollusks; animal behavior.
- Perkins, Dr. Jay**, 106 Waterman St, Providence, R. I. *Medicine, Anatomy*. Penobscot, Maine, Oct. 15, 64. Colby, 87-88; M.D., Harvard, 91; Vienna, 98. Pathologist, R. I. Hosp, 94-90; demonstrator human anat, Brown, 97-05; physician to out-patients, dept. pulmonary tuberculosis, R. I. Hosp, 00-20. House physician, R. I. Hosp, 91-93; Boston Lying-in Hosp, 93-94; med. examiner, Dist. No. 10, Providence Co, R. I., 96-09; bacter. work, R. I. State Board of Health, 94-05; visiting physician, St. Joseph's Hosp; Providence City Hosp, 15- Climat. Ass; Am. Med. Ass; R. I. and Mass. Medico-Legal Soc. (pres, 97, 98); Providence Tuber. League (pres, 06). Air embolism; tuberculosis; fresh-air schools.
- Perkins, Prof. Perry B(laine)**, Mt. Allison University, Sackville, N. B., Can. *Physics*. Centreville, N. B., April 16, 77. A.B., New Brunswick, 02; Harvard, 03; A.M., Yale, 04, fellow, 06-08, Ph.D., 08; Göttingen, summer, 12; fellow, Sir Ernest Rutherford's lab, Manchester, 13-14. Principal, schools, New Brunswick, 95-99; Leland and Gray Sem, 04-05; prof. *physics*, Western Md. Col, 05-06; substitute prof, Trinity (Conn), 08-09; prof, Howard, 09-13; asst. prof, Brown, 14-17; prof, Mt. Allison, 17- Governor general's gold medal, 02. A.A.; Physical Soc; N. S. Inst. Radioactivity; ionization; action of X-rays and Y-rays on fungi.
- Perkins, Dr. R(oger) G(riswold)**, Western Reserve Medical School, Cleveland, Ohio. *Bacteriology*. Schenectady, N. Y., May 17, 74. A.B., Union, 93; A.B., Harvard, 94; M.D., Hopkins, 98; fellow, Rockefeller Inst, 01-02. Res. pathologist, Lakeside Hosp, Cleveland, 98-01; demonstrator path, med. sch, *Western Reserve*, 99-01, lecturer bacter. and asst. path, med. sch, and lecturer bacter, dental sch, 01-04, prof. bacter, dental sch, 04-06, asst. prof. path. and bacter, med. sch, 04-08, assoc. prof. path. and hygiene, 08-10, prof. *hygiene and prev. med.*, 10-; chief, bur. laboratories, *Cleveland Div. Health*, 12- Major, Red Cross Commission to Roumania, 17-18, to Balkans, 19; med. assoc. to scientific attaché, Am. Embassy, Paris, 18. A.A.; Soc. Bact; Ass. Path. and Bact; Pub. Health Ass; Am. Med. Ass; Cleveland Acad. Med. Preventive medicine; hygiene; diphtheria; typhoid epidemiology.
- Perlzweig, Dr. W(illiam) A(lexandre)**, U.S.P.H.S. Research Laboratory, 400 E. 29th St, New York, N. Y. *Physiological chemistry*. Ostrog, Russia, April 23, 91. B.S., Columbia, 13, A.M., 14, Ph.D., 15. Asst. biol. chem. and research asst, Columbia, 13-16; director, chem. lab, Beth Israel Hosp, 16; research chemist, Rockefeller Inst, 16-17; asst. prof. elect, biochem, Creighton, 17; lieut. Sanit. C, 17-19; biochemist, U. S. Pub. Health Service, 19- A.A.; Chem. Soc. Nutrition; mineral metabolism; immunochemistry.
- Pernot, Prof. Frederick E(ugene)**, University of California, Berkeley, Calif. *Physics*. Corvallis, Oregon, Feb. 5, 90. B.S., Oregon Col, 10; M.S., California, 12, Ph.D., 15. Asst. prof. elec. eng, California, 15- Capt, Sig. C, 18. Elec. Eng.
- Electrical engineering; mathematics; electrical transmission; tables of hyperbolic functions.
- Perrin, Prof. F(leming) A(llen) C(lay)**, University of Texas, Austin, Tex. *Psychology*. La Harpe, Ill, April 29, 84. Ph.B., Chicago, 09, Ph.D., 13. Instr. *psychol*, Pittsburgh, 12-14; asst. prof, 14-17; adj. prof, Texas, 17- Psychol. Ass. The learning process; character analysis; mental tests.
- Perrine, Prof. C(harles) D(illon)**, Argentine National Observatory, Cordoba, Argentina. **Astronomy*. Steubenville, Ohio, July 28, 67. Steubenville High Sch; Lick Observatory; hon. Sc.D., Santa Clara, 05. In business up to 93; see'y, Lick Observatory, 93-05, asst. astronomer, 95-05, astronomer, 05-09; director, Arg. Nat. Observatory, 09- Acting astronomer, Lick Observatory, 01. Lalande prize, Paris Acad, 97; gold medal, Soc. Astron. de Mex. A.A.; Astron. Soc; Pacific Astron. Soc. (pres, 02); for. assoc. Royal Astron. Soc; Soc. astron. de France; Astron. Gesell. Discovery, observations and orbits of comets; solar eclipse problems; observations for solar parallax; physical and other observations of the nebulae; discovery and observations of the sixth and seventh satellites of Jupiter; definitive orbit of comet 1895 IV; observations of southern nebulae and clusters; Wolf-Rayet and other early type stars.
- Perrine, Dr. Irving**, Baum Building, Oklahoma City, Okla. *Geology*. Walkkill, N. Y., Aug. 5, 84. A.B., Cornell, 07, A.M., 11, Ph.D., 12. Instr. geol, Cornell, 08-11; prof, Oklahoma, 12-15; chief geologist, Pierce Oil Corp, 15-16; petrol. geologist and oil producer, 17- Asst. state geologist, La, 08-09; field asst, U. S. Geol. Surv, 08-09; chief geologist, Marland Refining Co, 13-14. A.A.; Min. Eng; Ass. Petrol. Geol; Kans. Acad. Paleontology of the Claiborne Eocene; oil and gas in Louisiana, southwestern, mid-continental and coastal fields; stratigraphy.
- Perrow, Dr. Mosby G(arland)**, Lynchburg, Va. *Chemistry, Biology*. Campbell Co, Va., Sept. 20, 76. A.B., Washington and Lee, 97, A.M., 06, Ph.D., 08. Director science, pub. schools, Lynchburg, Va, 02-09; city chemist and bacteriologist, 06-, health officer, 10-, director pub. health, 20- A.A.; Chem. Soc; Pub. Health Ass; Anti-Tuber League (pres, 05-15); Water Works Ass; Va. Pub. Health Ass. (pres, 13); Soc. Bact. Chemistry and bacteriology of milk; housefly; sewage; food preservation; infant mortality; filtration of water.
- Perry, Arthur C(ecil)**, 226 Halsey St, Brooklyn, N. Y. *Astronomy*. Rocky Hill, Conn, April 10, 52. Self-educated. *Cashier, U. S. Life Ins. Co.* Officer, astron. dept, Brooklyn Inst, 90-00. A.A.; British Astron. Ass. Variable stars.
- Perry, Joseph H(artshorn)**, 276 Highland St, Worcester, Mass. *Chemistry, Geology*. Dudley, Mass, March 23, 58. A.B., Amherst, 82. Teacher chem. and geol, high sch, Worcester, 82-92, *English High Sch*, 92- Asst. geologist, U. S. Geol. Surv, 83-02. Geol. Soc; Chem. Soc; Soc. Chem. Indust. Fossil coal plant found at the graphite deposit in mica schist at Worcester, Massachusetts; geology of Mount Kearsarge and Monadnock Mountain, New Hampshire; green

- schists, associated granites and porphyries of Rhode Island; geology and physical geography of Worcester, Massachusetts.
- Perry, Prof. Ralph Barton**, 138 Irving St, Cambridge, Mass. *Philosophy*. Poultney, Vt, July 3, 76. A.B. Princeton, 96; A.M. Harvard, 97, Ph.D. 99. Instr. *philos.*, Williams, 99-00; Smith, 00-02; *Harvard*, 02-05, asst. prof. 05-12, *prof.*, 12- Philos. Ass. (pres. 20). Introduction to philosophy; ethics; epistemology; contemporary philosophy; philosophy of William James.
- Pershing, Dr. Howell T(erry)**, 1169 Race St, Denver, Colo. *Medicine*. Johnstown, Pa, March 18, 58. Ph.B. Lafayette, 78, M.S. 81, LL.D. 08; M.D. Pennsylvania, 83. Teacher math. and nat. sciences, Wilkesbarre Acad, 78-80; science master, Lawrenceville Sch, N. J., 84-89; *prof.* nervous and mental diseases, Gross Med. Col, 90-92; Denver, 92-10; *neur. and psychiat.*, Colorado, 11-A.A.; Am. Med. Ass. (chairman, sect. nervous and mental diseases, 04-13); Neur. Ass. Nervous and mental diseases; disorders of speech; optic atrophy and neuritis; pelvic measurements.
- Peter, Alfred M(eredith)**, Agricultural Experiment Station, Lexington, Ky. *Chemistry*. Lexington, May 25, 57. B.S. Kentucky, 80, M.S. 85, Sc.D. 13. Asst. chemist, Ky. Geol. Surv, 78-86; asst. chemist and later *chemist*, Ky. *Exp. Sta.*, 86-, acting director, 12, 15, 16-18; Ky. Geol. Surv, 04-12. Adj. prof. chem, Transylvania, 78; chem. and nat. hist, Kentucky, 80; reporter on soils and ash, Agr. Chem, 94-95; mem. Ky. State Board Agr; Ky. State Live-Stock Sanit. Board. A.A.; Chem. Soc; Soc. Chem. Indust; Ky. Acad. (sec'y, 16-); Chem. Gesell. Agricultural analysis; soils; composition of Kentucky forage plants and mineral waters.
- Peter, Dr. Luther C**, 1529 Spruce St, Philadelphia, Pa. *Ophthalmology*. St. Claireville, Pa, Feb. 14, 69. A.B. Pennsylvania Col, 91, A.M. 94; M.D. Pennsylvania, 94. *Prof.* diseases of the eye, Temple, 17-19; *ophthal.*, Pennsylvania, 19- Acad. Ophthal. and Oto-Laryngol. (sec'y, 18, 19); Col. Surg; Phila. Col. Physicians. Perimetry.
- Peters, Dr. Amos W(illiam)**, College of Medicine, University of Nebraska, Omaha, Nebr. *Physiology*, *Biochemistry*. Delphos, Ohio, Aug. 10, 71. B.L. Western Reserve, 97; A.M. Harvard, 01, Austin teaching fellow, 02-03, Ph.D. 03, Harvard Med. Sch, 09-10, Austin teaching fellow, 10-11. Instr. chem. and biol. high sch, Warren, Ohio, 97-00; zool, Illinois, 03-07, assoc. 07-09; with nutrition lab, Carnegie Institution, 10-12; biochemist, N. J. Training Sch. for Feeble-Minded Boys and Girls, 12-15; *prof. biochem.*, Nebraska, 16- Asst. zool, Harvard, 01-03. A.A.; Soc. Zool; Physiol. Soc; Chem. Soc; Soc. Biol. Chem. Protozoa; physiology of the cell; enzymes of liver and muscle; chemical pathology.
- Peters, Prof. C(harles) A(dams)**, Sunset Place, Amherst, Mass. *Chemistry*. Worcester, Mass, June 29, 75. B.S. Mass. Col, 97; Ph.D. Yale, 01; Berlin, 08. Prof. chem, Idaho, 01-09; exchange teacher, Oberrealschule, Berlin, 09-10; *prof. inorg. and soil chem.*, Mass. Col, 11- A.A.; Chem. Soc. Analytical chemistry; insecticides.
- Peters, Chauncey G**, Bureau of Standards, Washington, D. C. *Physics*. Emerald, Wis, Feb. 6, 87. A.B. Ripon, 11; Wisconsin, 12. *Assoc. physicist*, Bur. Standards, 13- A.A.; Physical Soc; Optical Soc; Wash. Philos. Soc. Interferometry; dimensional changes of materials; index of refraction; length standards; thermal expansion.
- Peters, Dr. Fredus N(elson)**, 3447 S. Flower St, Los Angeles, Calif. *Chemistry*. Epworth, Iowa, Jan. 26, 64. A.B. Missouri, 87, A.M. 90; Chicago, 98, 01, 02; Ph.D. Ill. Wesleyan, 03. Principal, high sch, Mexico, Mo, 87-89; Nevada, Mo, 90-92; supt. schools, Carrollton, Mo, 92-95; instr. chem, Cent. High Sch, Kansas City, Mo, v. principal. A.A.; Chem. Soc; Federation Teachers Math. and Nat. Sci; Central Ass. Sci. and Math. Teachers (chairman, chem. sect, 08); Mo. Ass. Math. and Sci. Teachers (pres, 09). Acetylene; migration of ions; ionization; modern chemistry; applied chemistry.
- Peters, G(eorge) H(enry)**, U. S. Naval Observatory, Washington, D. C. *Astronomy*. Hartford, Conn, Nov. 25, 63. High sch. and special study in astron. physics and optics. *Asst. astronomer*, U. S. Naval Observatory. A.A.; Astron. Soc; Optical Soc. Solar eclipses; spectroscopy; sun-spot record; solar corona; photographic observations of minor planets; properties of lenses and optical construction.
- Peters, William J(ohn)**, 3931 Morrison St, Chevy Chase, Md. *Terrestrial magnetism*. Oakland, Calif, 63. High sch. Mem. various expeditions, U. S. Geol. Surv; Ziegler polar exped; magnetic surv. Pacific Ocean. A.A.; Wash. Philos. Soc.
- Petersen, Max (Heinrich)**, University of Wisconsin, Madison, Wis. *Physics*. Dundee, Ill, 90. B.S. Northwestern, 13, A.M. 14. *Asst. physics*, Wisconsin, 14-17, *instr.*, 17- Interim solar observer, Yerkes Observatory. Physical Soc; Astron. Soc.
- Petersen, Dr. William F(erdinand)**, 31 E. Elm St, Chicago, Ill. *Pathology*. Chicago, March 25, 87. B.S. Chicago, 09, M.D. Rush Med. Col, 12; Harvard; Columbia. Asst. prof. path. and exp. med, Vanderbilt, 14-17; *assoc. path.*, Illinois, 19- With U. S. A., 18-19. Soc. Exp. Biol; Soc. Clin. Invest; Am. Med. Ass. Enzymes; pella-gra; tuberculosis.
- Peterson, Prof. Alvah**, Rutgers College, New Brunswick, N. J. *Entomology*. Galesburg, Ill, Sept. 13, 88. B.S. Knox, 11; A.M. Illinois, 13, Ph.D. 16. *Asst. prof. entom.*, Rutgers, 16- A.A.; Entom. Soc; Ass. Eeon. Entom. Economic entomology; morphology.
- Peterson, Pres. E(imer) G(eorge)**, Agricultural College of Utah, Logan, Utah. *Bacteriology*. Plain City, Utah, Aug. 26, 82. B.S. Utah Col, 04; Chicago, 06; A.M. Cornell, 09, Ph.D. 11. Instr. bacter. Cornell, 09-10, asst. prof. 10; prof. Oregon Col, and bacteriologist, Exp. Sta, 10-11; prof. bacter. Utah Col, 11-12, bacteriologist and director exten. div, 12-16, *pres.*, 16- A.A.; Soc. Bact. Soil and pathogenic bacteriology.
- Peterson, Dr. Frederick**, 20 W. 50th St, New York, N. Y. *Nervous and mental diseases*. Faribault, Minn, March 1, 59. M.D. Buffalo,

- 79; hon. Ph.D, Niagara, 88; LL.D, Pennsylvania, 19. Prof. path, Buffalo, 82-84; nervous and mental diseases, Vermont, 88-89; chief of clinic, Columbia, 88-03, clin. prof. psychiat, 03-15. Pres, board of managers, Craig Colony for Epileptics, 94-01; pres, N. Y. State Lunacy Commission, 01-04. A.A.; Neur. Ass; Psychopath. Ass; Am. Med. Ass; N. Y. Neur. Soc. (pres, 99-01); N. Y. Acad. Med; fel. N. Y. Acad.
- Peterson, Prof. H(arvey) A(ndrew)**, Normal, Ill. *Educational psychology*. St. Louis, Mo, 73. A.B, Chicago, 97; A.M, Harvard, 00; Ph.D, Chicago, 09. *Prof. psychol*, Peabody Col. for Teachers, 03-08; *State Nor. Univ, Normal, Ill*, 09- *Psychol. Ass. Educational psychology*.
- Peterson, Prof. Joseph**, George Peabody College for Teachers, Nashville, Tenn. *Psychology*. Huntsville, Utah, Sept. 8, 78. B.S, Chicago, 05, fellow, 05-07, Ph.D, 07. Principal, grammar and high schools, Utah and Idaho, 99-04; *prof. psychol*, Brigham Young, 07-11; Utah, 11-15; professorial lecturer, Minnesota, 15-16. asst. prof, 16-18; *prof, Peabody Col. Teachers*, 18- Instr, Drake, summer, 07; *prof. psychol*, Chicago, summer, 14. A.A.; Psychol. Ass; S. Soc. Philos. and Psychol; Tenn. Acad. Combination tones and binaural beats; musical harmony; selective factors in learning; intelligence tests; handling men in armies; transfer of learning in mental maze; comparative intelligence of negroes and whites; summation of stimuli in learning.
- Peterson, O(lof) A(ugust)**, Carnegie Museum, Pittsburgh, Pa. *Vertebrate paleontology, Geology*. Hellgum och Rådom, Westernorlands Län, Sweden, Jan. 2, 65. Common sch. Asst. field work in paleont. and geol, Yale, 88-92; Am. Museum Nat. Hist, 92-97; asst, Princeton Patagonian exped, 97-00; *field collector and preparator mammals, Carnegie Museum*, 00- A.A.; Paleont. Soc. Paleontology and geology of western Nebraska and eastern Wyoming; paleontology and geology of western United States.
- Peterson, Prof. P(eter) P(owell)**, 610 E. A St, Moscow, Idaho. *Agronomy*. Hooper, Utah, Sept. 14, 74. B.S, Brigham Young, 05; Ph.D, Chicago, 09. Instr. *soils*, Wisconsin, 09-10, asst. prof, 11; *prof, Idaho*, 12- Stereoisomers of chlorimido ketones; phosphorus in the soil; rotation of fertilization systems; acid and non-acid soils.
- Peterson, William**, 389 E. Second St, N. Logan, Utah. *Geology*. Bloomington, Idaho, May 24, 74. B.S, Utah Col, 99; Chicago, 01-03. Asst. prof. geol. and physics, Utah Col, 03-08; mining engineer, 08-10; *prof. geol, Utah Col*, 10-; *state geologist, Utah*, 17- A.A.; fel. Utah Acad. Ground water; origin of alkali.
- Peterson, Prof. W(illiam) H(arold)**, University of Wisconsin, Madison, Wis. *Agricultural chemistry*. Libertyville, N. Y, Nov. 14, 80. B.S, Wesleyan, 07; A.M, Columbia, 09; Ph.D, Wisconsin, 13; fellow, Kaiser Wilhelm Inst, Berlin, 14. Asst. *agr. chem, Wisconsin*, 09-10, instr, 10-14; asst. prof, 14-18, *assoc. prof*, 18- Asst. chem, Columbia, summer, 09, 10. A.A.; Soc. Biol. Chem; Chem. Soc. Composition of plants; animal nutrition; microbiology; biochemical changes of light.
- Petrunkévitch, Prof. Alexander**, Yale University, New Haven, Conn. **Zoology*. Pliski, Russia, Dec. 22, 75. Moscow, 94-98; Ph.D, Freiburg, 00. Privatdozent, Freiburg, 01-03; lecturer, Harvard, 03-04; acting prof. zool, Indiana, 06; hon. curator Arachnida, Am. Museum Nat. Hist, 09-11; *prof. zool, Yale*, 18- Southern Mexico exped, Am. Museum Nat. Hist, 09. Int. Cong. Zool, Boston, 07 (chairman, sect. comp. physiol). A.A.; Soc. Nat; Soc. Zool; Entom. Soc; Soc. Nat; Paleont. Soc; Ecol. Soc; Conn. Acad; fel. N. Y. Acad. Cytology; physiology; psychology; experimental zoology; paleontology; microphotography; morphology of invertebrates; heredity; synonymic catalogue of American spiders; anatomy of spiders; sense of sight; mating.
- Petry, Prof. E(dward) J(acob)**, 722 E. Eighth St, Brookings, S. Dak. *Botany*. Gnadenhütten, Ohio, June 24, 80. B.S, Ohio State, 07; M.S, Purdue, 14; Michigan, 18-19. Asst. bot, Cornell, 07-10; instr. agron, Purdue, 11-16, asst. prof. agr. bot, 16-18; instr. bot, Michigan, 18-20; *prof, S. Dak. Col*, 20- A.A.; Bot. Soc; Soc. Agron; Phytopath. Soc; Ecol. Soc; Mich. Acad; Ind. Acad. Nutrients in green shoots of trees; resin content of Podophyllum; cherry gum; morphology of Coprinae; mycorrhizae of woody plants.
- Petry, Dr. Loren C(lifford)**, Syracuse University, Syracuse, N. Y. *Botany*. New Paris, Ohio, Sept. 22, 87. B.S, Earlham, 07; Haverford, 08; M.S, Chicago, 11, fellow, 11-13, Ph.D, 13, 13-14. Instr. bot, Syracuse, 14-16, asst. prof, 16-20, *assoc. prof*, 20- A.A.; Bot. Soc. Vascular anatomy of Ophioglossaceae.
- Pettee, Dean C(harles) H(olmes)**, Durham, N. H. *Mathematics, Civil engineering*. Manchester, N. H, Feb. 2, 53. A.B, Dartmouth, 74, C.E, 76, A.M, 77; LL.D, N. H. Col, 13. Instr. civil eng, Thayer Sch. Civil Eng, Dartmouth, 76-77; N. H. Col, 76-80, prof. math, 80-17, *dean*, 80- A.A.; Eng. Educ. Road improvement.
- Pettibone, Dr. C(hauncey) J. V(allette)**, University of Minnesota, Minneapolis, Minn. *Biological chemistry*. Fond du Lac, Wis, 84. B.S, Chicago, 07; Berlin and Koenigliche Tech. Hochschule, 07-08; Halle, 11-12; Ph.D, Harvard, 13. Instr. *physiol. chem, Minnesota*, 12-17, asst. prof, 17-20, *assoc. prof*, 20- Chem. Soc. (treas, Minneapolis sect, 17-); Soc. Biol. Chem.
- Pettis, C(lifford) R(obert)**, 365 Quail St. Albany, N. Y. *Forestry*. Delancey, N. Y, Aug. 10, 77. F.E, Cornell, 01. Deputy director grounds, Chautauqua, N. Y, 01-02; state forester, N. Y, 02-10, *supt. state forests*, 10-; collaborator, U. S. Forest Service, 06-09, *forest expert*, 09- Lecturer forestry, Vermont, 08; consulting forester, Vt. Exp. Sta, 07-09. Soc. Foresters (chairman, N. Y. sect, 18); Forestry Ass. Silviculture; seed collecting; reforestation; forest fires; albinism in brook trout; the growing and planting of conifers in the northeastern states; seed bed soil tests.
- Pettit, Dr. Edison**, Mt. Wilson Observatory, Pasadena, Calif. *Astrophysics*. Peru, Nebr, Sept. 28, 89. B.E, Nor. Sch, Peru, Nebr, 11; Ph.D, Chicago, 20. Teacher science, high sch,

- Minden, Nebr, 11-14; astron. and physics, Washburn, 14-15, astron, 15-18; *asst*, Yerkes Observatory, 18-20; *Mt. Wilson Observatory, Carnegie Institution*, 20- Mem. Washburn eclipse exped. to Matheson, Colo, 18. Astron. Soc; Pacific Astron. Soc. Astronomy; solar physics; double stars.
- Pettit, Dr. Hannah Steele**, *Mt. Wilson Observatory*, Pasadena, Calif. *Astronomy*. Coatesville, Pa, Nov. 6, 86. A.B. Swarthmore, 09, A.M, 12; Ph.D, Chicago, 19. Observer, Sproul Observatory, 12-16; *asst*, Yerkes Observatory, 16-20; *Mt. Wilson Observatory, Carnegie Institution*, 20- Mem. Yerkes Observatory and Washburn Col. solar eclipse exped. to Matheson, Colo, 18. A.A.; Astron. Soc. Astrophysics; stellar parallax; eclipse observations.
- Pettit, Prof. Rufus Hiram**, E. Lansing, Mich. *Entomology*. Baldwinville, N. Y., Jan. 11, 69. B.S., Cornell, 95. *Asst.* state entomologist, Minn, 95-97; *prof. entom.*, *Mich. Agr. Col.*, and *entomologist*, *Exp. Sta.*, 97- A.A.; Ass. Econ. Entom; Entom. Soc; Mich. Acad. Economic entomology; Coccidae.
- Pfaff, Dr. Franz**, 375 Commonwealth Ave, Boston, Mass. **Pharmacology, Therapeutics*. Grafenort, Silesia, March 16, 60. Ph.D, Zürich; M.D, Strasburg; L.S.A., London. Instr. physiol, Harvard, 94-95, pharmacol, 95-00, physiol. chem, 98-00, *asst.* *prof. pharmacol.* and *therapeut.*, 00-05, *prof.*, 05-16; *consulting physician*. Physiol. Soc; Am. Physicians; Therapeut. Soc; Soc. Exp. Biol.
- Pfeiffer, Dr. George Adam**, 56 Anderson Ave, Palisade, N. J. *Mathematics*. New York, N. Y., July 16, 89. M.E., Stevens, 10; Ph.D, Columbia, 14. *Instr. math.*, Col. City of N. Y., 14-15; Harvard, 15-16; Princeton, 16-18; *Columbia*, 19- Assoc. ed, 'Annals of Math.' Math. Soc. Conformal mapping; functional equations.
- Pfeiffer, Dr. John Arthur Franklin**, 1421 Edmondson Ave, Baltimore, Md. *Pathology*. Wilmington, Del, June 27, 83. M.D., Maryland, 08; A.M, George Washington, 16, Ph.D, 18. Physician and pathologist, City Hosp, Baltimore, 09-10; physician, Springfield State Hosp, Sykesville, Md, 10-11; *asst*, Munich and Frankfurt, 11-13; senior physician and director, path. lab, St. Elizabeth's Hosp, Washington, D. C, 11-18; lecturer path. med. officers training sch, U.S.A., 18. Lecturer path, George Washington, 14. Ass. Path. and Bact; Soc. Exp. Biol; Ass. Anat. Bacteriology; chronic chorea; pernicious anemia; Landry's paralysis; choroid plexus; lenticular degeneration; spinal fluid; Treponema pallidum; hereditary ataxia.
- Pfeiffer, Dr. Norma Etta**, University of North Dakota, University, N. Dak. *Botany*. Chicago, Ill, Jan. 13, 89. B.S., Chicago, 09, fellow, 10-12, Ph.D, 13. Instr. and later *asst. prof. bot.*, *North Dakota*, 12- A.A.; Bot. Soc. Fern prothallia; Isoetes.
- Pfister, Prof. Joseph Clement**, 240 Sixth Ave, Newark, N. J. *Mechanics, Mathematical physics*. Newark, March 10, 67. A.B., Columbia, 89, fellow, 89-92, A.M, 90. *Asst.* math. and astron, Columbia, 89-90, tutor higher math. and astron, 90-93, mech, 93-01, instr, 01-05, adj. prof, 05-11. A.A.; Math. Soc; fel. N. Y. Acad. Bibliography of mechanics.
- Pfund, Prof. August Herman**, Box 496, Johns Hopkins University, Baltimore, Md. **Physics*. Madison, Wis, Dec. 28, 79. B.S., Wisconsin, 01; fellow, Hopkins, 05-06, Ph.D, 06. Carnegie research *asst*, *Hopkins*, 03-05, *asst. physics*, 06-07, Johnston scholar, 07-09, *assoc.*, 09-10, *assoc. prof.*, 10- Physical Soc; Optical Soc. Light and radiant heat; the wave lengths of standard iron lines; the electrical and optical properties of selenium; colorimetry.
- Phalen, Dr. William Clinton**, Solvay Process Co, Syracuse, N. Y. *Geology*. Gloucester, Mass, Feb. 1, 77. B.S., Mass. Inst. Tech, 99, M.S, 02; Ph.D, George Washington, 09. Prof. chem. and geol, N. Mex. Sch. Mines, 99-01; *asst.* chem. and physical geol, U. S. Nat. Museum, 02-04; geol. aid, U. S. Geol. Surv, 04-07, *asst.* geologist and later geologist, 07-16; mineral technologist, U. S. Bur. Mines, 16-20; *geologist*, *Solvay Process Co*, 20- Geol. Soc; Min. and Metal. Eng; Wash. Geol. Soc. Stratigraphy; petrography; rocks of Greenland and Virginia; origin of certain iron ores of northeastern Kentucky; coal and clay resources of northeastern Kentucky and of the Kenova quadrangle; iron ores, barite and graphite deposits of Georgia; areal and economic geology of Ellijay quadrangle, Georgia, North Carolina and Tennessee; mineral resources of the United States; technology of salt mining; the geology and mineral resources of Johnstown, Pennsylvania, and vicinity; salt deposits in the United States.
- Phelan, Prof. Joseph Warren**, Massachusetts Institute of Technology, Cambridge, Mass. *Chemistry*. Boston, Mass, April 30, 71. B.S., Mass. Inst. Tech, 94. Instr. chem, *Mass. Inst. Tech*, 94-14, *asst. prof.* and later *prof.*, 14- Chem. Soc. Leather chemistry; manufacture of cerium and alloys.
- Phelps, Prof. Earle Bernard**, 46 Phelps Road, Ridgewood, N. J. *Chemistry*. Galesburg, Ill, July 10, 76. B.S., Mass. Inst. Tech, 99. *Asst.* bacteriologist, Lawrence Exp. Sta, Mass. Board of Health, 99-03; chemist and bacteriologist, sanit. research lab, Mass. Inst. Tech, 03-13, *asst. prof. chem. biol.*, 05-13, *assoc. prof.*, 13; prof. chem, hygienic lab, U. S. Pub. Health Service, 13-19; *private research*, 19- *Asst.* hydrographer, U. S. Geol. Surv, 05-10; special expert, U. S. Census Bur, 10; consulting sanit. engineer, Int. Joint Commission; mem. committee on sewage disposal, Nat. Research Council; N. Y. State Ventilation Commission. A.A.; Soc. Bact; Chem. Soc; Pub. Health Ass; Civil Eng; Water Works Ass. Sanitary chemistry; disinfection; re-aeration of water; ventilation; preservation of food.
- Phelps, Dr. Isaac King**, Bureau of Chemistry, Washington, D. C. **Chemistry*. Enfield, Conn, Feb. 16, 72. A.B., Yale, 94, Silliman fellow, 94-97, Ph.D, 97; Thayer scholar, Harvard, 97-98; Heidelberg, 02. *Asst.* chem, Yale, 95-97, 98-99, instr, 99-08; *asst. prof.*, George Washington, 09-10; *asst.* chemist, bur. chem, U. S. Dept. Agr, 10-12; org. chemist, U. S. Bur. Mines, 12-13; *chemist in charge* org. chem. investigations, *bur. chem.*, U. S. Dept. Agr, 13-16,

- food control lab, 16-* Chem. Soc; Chem. Gesell. The determination of carbon dioxide; dehydromucic acid; inorganic and organic analytical methods; organic syntheses; catalysis; food analysis, production, preparation and conservation.
- Phelps, Dr. Martha Austin**, 1410 M St, N. W, Washington, D. C. *Chemistry*. Georgia, Vt. B.S., Smith, 92; Ph.D., Yale, 98. Teacher, high sch, Saratoga, N. Y., 92-93; Holyoke, Mass., 93-96; analyst, R. I. Exp. Sta., 00-01; substituting in high sch work, 01-03; chem. and physics, Wilson, 03-04; analyst, Bur. Standards, 08-09. Catalysis; analytical chemistry; formation of amids and esters.
- Phillips, Prof. Alexander H(amilton)**, 54 Hodge Road, Princeton, N. J. *Mineralogy, Chemistry*. Lawrenceville, N. J., May 15, 66. B.S., Princeton, 87, Sc.D., 99. Instr. biol. and miner, Princeton, 89-95, miner, 95-99, asst. prof., 99-03, *prof.*, 03- A.A.; Soc. Nat; Geol. Soc; Mineral. Soc; Chem. Soc. Petrography; crystallography; chemical content and concentration of metals by organisms; radium.
- Phillips, Prof. Alfred E(dward)**, 307 Davis St, Evanston, Ill. *Civil engineering*. Rouses Point, N. Y., June 18, 63. A.B., C.E., Union, 87, A.M., 90, hon. Ph.D., 94. Prof. civil eng, Purdue, 87-94; acting prof. bridge and hydraul. eng, Wisconsin, 95-96; *prof. civil eng, Armour*, 99-Asst. engineer, N. Y. State Board of Health, 88; consulting engineer, 94-99. Civil Eng. Water supply; sewage treatment and disposal; streets and pavements.
- Phillips, Prof. Arthur**, 64 Brownell St, New Haven, Conn. *Metallurgy*. Troy, N. Y., Feb. 3, 92. Ph.B., Yale, 13, M.S., 15. Metallurgist, Bridgeport Brass Co, 15-19; *asst. prof. metal, Sheffield Sci. Sch, Yale*, 19- Chem. Soc; Min. Eng. Structure and properties of brasses and bronzes; malleable cast iron and zinc.
- Phillips, Rev. Edward C(harles)**, S.J., Woodstock College, Woodstock, Md. *Mathematics*. Germantown, Pa., Nov. 4, 77. A.B., St. Francis Xavier, 98; fellow, Hopkins, 06, fellow by courtesy, 07-08, Ph.D., 08. Prof. physics, Boston Col., 08-09; lecturer apologetics, Woodstock, 13-14, dogmatic theol., 15-19, *prof. math. and astron.*, 19- Astron. Soc; Math. Ass.
- Phillips, Dr. E(verett) F(ranklin)**, Chevy Chase, Washington, D. C. *Zoology*. Hannibal, Ohio, Nov. 14, 78. A.B., Allegheny, 99; Pennsylvania, 01-03, fellow, 03-04, Ph.D., 04. Teacher science, high sch, New Brighton, Pa., 99-00; Harrison fellow, Pennsylvania, 04-05; acting in charge *apiculture, bur. entom.*, U. S. Dept. Agr., 05-07, *in charge*, 07- A.A.; Soc. Nat; Soc. Zool; Ass. Econ. Entom; Ecol. Soc; Nat. State and City Bee Keepers' Associations; Wash. Entom. Soc. (cor. sec'y-treas., 08); Wash. Acad. Variation of drones and workers of the honey-bee; parthenogenesis; development of the compound eye of the honey-bee; rearing of queen bees; apiculture; bee diseases.
- Phillips, Prof. H(enry) B(ayard)**, Massachusetts Institute of Technology, Cambridge, Mass. *Mathematics*. Yadkin College, N. C., Sept. 27, 81. B.S., Erskine, 00; Ph.D., Hopkins, 05. Instr. math, Cincinnati, 05-07; *Mass. Inst. Tech.*, 07-14, *asst. prof.*, 14- Math. Soc; Physical Soc; Chem. Soc; Am. Acad. Vector analysis; matrices; kinetic theory of gases.
- Phillips, Prof. James David**, 1925 West Lawn Ave, Madison, Wis. *Mechanical drawing*. Chicago, Ill., June 1, 69. B.S.(Archit), Illinois, 93. Instr. pattern making and turning, machine design, gen. eng. drawing, asst. prof., 92-01; drawing, Wisconsin, 02-05, prof., 05-09, *asst. dean, col. eng.*, 10- Director, U. S. A. Vocational Sch, Wisconsin, 18. Eng. Educ; Wis. Acad; Wis. Sch. Arts and Home Econ. Ass. Descriptive geometry; mechanical drawing for the elementary and secondary schools; industrial, manual and trades training.
- Phillips, Dr. John C(harles)**, Wenham, Mass. *Zoology*. Boston, Mass., Nov. 5, 76. Harvard, 99, M.D., 04. *Assoc. curator of birds, museum comp. zool, Harvard*. Private collecting expeditions for museum comp. zool, Harvard. A.A.; Soc. Nat; mem. Ornith. Union; Am. Acad; Boston Soc. Nat. Hist. General and systematic ornithology and genetics; hybridization of pheasants and ducks.
- Phillips, Prof. J(ohn) L(loyd)**, Piedmont Orchard Co, Linden, Va. *Entomology, Botany*. Nandua, Va., Dec. 30, 75. B.S., Va. Polytech, 97, M.S., 00. Instr. entom. Va. Polytech, 00; asst. entomologist, Va. State Crop Pest Commission, 00-03, *state entomologist, Va.*, 03- A.A.; Ass. Econ. Entom. Fumigation and other treatment for San José scale; crown gall; peach yellows; pear blight.
- Phillips, Prof. Paul C(hrysostom)**, Amherst, Mass. *Physical education, Hygiene*. Groton, Mass., Dec. 20, 65. A.B., Amherst, 88; M.D., Columbia, 95. Physical director, Y. M. C. A., Kansas City, Louisville, N. Y. City and Chicago, 88-96; *prof. physical educ. and hygiene, Amherst*, 96- Instr., summer sch, Western Secretarial Inst., 91-99. A.A.; Physical Educ. Ass. (councilor); Soc. Col. Gym. Directors (past pres, sec'y-treas., 08-19); Soc. Research Physical Educ. Athletics and scholarship; relation of certain height measurements to stature; physical efficiency.
- Phillips, P(hilip) Lee**, 1308 20th St, Washington, D. C. *Cartography, Bibliography*. Chief, div. maps and charts, Library of Congress, 97- Maps and bibliography; list of atlases in the Library of Congress; a list of books and magazine articles on maps and map makers; first map of Kentucky, by John Filson; bibliographies of Brazil, Chile and Central America; rare maps of Virginia, Maryland, the Northwest, Ohio, Washington, California and Tennessee.
- Phillips, Dr. T(homas) G(uthrie)**, Ohio State University, Columbus, Ohio. *Chemistry*. West Derby, Vt., Nov. 18, 87. B.S.(Agr), Ohio State, 12, M.S., 13; Ph.D., Chicago, 18. Instr. *agr. chem. and soils, Ohio State*, 12-15, *asst. prof.*, 15- A.A.; Chem. Soc; Soc. Agron. Agricultural chemistry; chemical changes during geotropic response; soy beans.
- Phillips, Dr. W(illiam) F(owke) R(avenel)**, Medical College of South Carolina, Charleston, S. C. *Anatomy, Medical climatology*. Bedford Co, Va., July 13, 63. M.D., George Washington, 90. Prosector anat, George Washington, 90-93; medico-climatologist, U. S. Weather Bur,

- 95-04; demonstrator anat, George Washington, 00-04, prof. hygiene, 95-09, practical anat. and dean, 05-09; *prof. anat.*, Alabama, 11-15; *Med. Col. of S. C.*, 15- A.A.; Am. Med. Ass. (mem. special committee on preliminary educ. requirements); Climat. Ass. (v. pres, 02, pres, 04); assoc. Ass. Med. Col. (v. pres, 08, mem. committee, med. educ. and pedagogics, 15-20, chairman, 19); Wash. Philos. Soc. Sun-stroke; relation of clothing to temperature; sensible temperature; seasonal prevalence of pneumonia; seasonal influence on suicide; relation of temperature, humidity and winds to chronic nephritis; anatomy of lungs and acute lobar pneumonia; innervation of axillary arch muscles; Rolandic angle in negro brains; orthograde posture and pulmonary tuberculosis.
- Phillips, W(illiam) J(eter)**, U. S. Entomological Laboratory, Charlottesville, Va. *Entomology*. Accomac Co, Va, Dec. 23, 79. B.S. Va. Polytech, 01, M.S., 03. Asst. state entomologist, Va, 03-04; *entom. asst. bur. entom.*, U. S. Dept. Agr, 04- A.A.; Ass. Econ. Entom; Entom. Soc. The spring grain aphid or 'green bug.'
- Phinney, J(ohn) I(nglee)**, 9 Chauncy St, Cambridge, Mass. *Chemistry*, *Physics*. Machias, Maine, Nov. 25, 68. Scott Hurtt scholar, Yale, 91-92, A.B., 92, Silliman fellow, 92-94; Thayer scholar, Harvard, 94-95. Asst. chem. lab, Yale, 92-94; private asst. org. chem, Harvard, 94-95; *head, dept. chem. and physics*, Brockton High Sch, 95-97; Cambridge Latin Sch, 97-15; *Browne and Nichols Sch*, 15- Asst. physics, Harvard, 17- Chem. Soc; East. Ass. Physics Teachers. Spectroscopic analysis; piceryl malonic ester derivatives; electrolytical deposition of cadmium.
- Picard, Rev. Maurice**, Barnard College, New York, N. Y. *Botany*, *Nyack*, N. Y., July 18, 90. A.B., Columbia, 10, A.M., 11; Ph.D., N. Y. Univ, 19. Instr., Lincoln, 11-12; asst. prof. bot., Middlebury, 13-14; *lecturer philos.*, Barnard, Columbia, 19- Philos. Ass. Psychology; philosophy.
- Pickard, Greenleaf W(hittier)**, 59 Dalton Road, Newton Center, Mass. *Electrical engineering*. Portland, Maine, Feb. 14, 77. Harvard, 99; Mass. Inst. Tech, 00; Blue Hill Observatory, 90-00. Elec. engineer, Am. Telephone and Telegraph Co, 02-06; *consulting engineer*, 06- A.A.; Radio Eng. (pres, 13); fel. Elec. Eng; Chem. Soc; London Soc. Chem. Indust. Radio communication.
- Pickering, Prof. W(illiam) H(enry)**, Mandeville, Jamaica, W. I. *Astronomy*. Boston, Mass, Feb. 15, 58. B.S., Mass. Inst. Tech, 79. Asst. and instr. physics, Mass. Inst. Tech, 80-87; asst. and asst. *prof. astron.*, Harvard Col. Observatory, 87- Lalande prize, Paris Acad, 05; Janssen medal, 09; two medals, Soc. Astron. de Mex; Chevalier, Order of Saint James of Portugal. Astron. Soc; Inst. Social Sci; Appalachian Mt. Club (past pres); Am. Acad; N. Y. Authors Club; Harvard Travelers Club; hon. mem. Soc. Astron. de Mex; hon. mem. Royal Astron. Soc. Can; British Astron. Soc; assoc. Royal Astron. Soc. Photography; the solar system; Phoebe, Saturn's ninth satellite; the moon; great nebula in Orion; the leonids; brighter satellites of Jupiter; Themis, Saturn's tenth satellite; Mars; planet beyond Neptune; meteors and meteorites; photometry of sun and moon; volcanoes and volcanic phenomena; cometary investigations.
- Pickett, Prof. B(ethel) S(tewart)**, University of Illinois, Urbana, Ill. *Horticulture*. Tillsonburg, Ont, June 4, 82. Assoc. grad, Ont. Agr. Col, 00; B.S.A., Toronto, 04; M.S., Illinois, 06. Sec'y and registrar, Ont. Agr. Col, 02-05; lecturer and asst. pomol, Illinois, 06-08; *prof. hort.*, N. H. Col, 08-12; *prof. pomol.*, Illinois, 12- Soc. Hort. Sci. Spraying of apple trees; cold storage of apples; correlation in foliage and fruit of strawberries; heredity in muskmelons and squashes; formation of fruit buds in apples.
- Pickett, Prof. F(ermen) L(ayton)**, College Station, Pullman, Wash. *Botany*. Bakers Corner, Ind, Jan. 10, 81. A.B., Indiana, 10, A.M., 12, fellow, 13-14, Ph.D., 15. Critic teacher bot, Indiana, 09-13, instr, 10-14; assoc. prof, Wash. State, 14-18, *prof. and head of dept.*, 18- A.A.; Bot. Soc; Ecol. Soc; Micros. Soc; Torrey Bot. Club; Fern Soc; Sullivant Moss Soc; West. Soc. Nat; Ind. Acad. Morphology; ecology of ferns and mosses.
- Pickler, Dr. William E(uгене)**, 830 S. Fourth St, Louisville, Ky. *Forestry*. New Albany, Ind, Aug. 25, 92. A.B., Wabash, 14; Ph.D., Illinois, 18. *With bur. plant indust.*, U. S. Dept. Agr. Diastase production.
- Pidgeon, Dr. H(oward) A.**, Western Electric Co, New York, N. Y. *Physics*. Pennsville, Ohio. B.S., Ohio (Athens), 11, M.S., 12; Ph.D., Cornell, 18. Instr. physics, Ohio (Athens), 10-12; Cornell, 13-18; *research physicist*, West. Elec. Co, 18- Physical Soc. Magnetostriction; electron emission from hot bodies.
- Pienkowsky, Arthur T(haddeus)**, Bureau of Standards, Washington, D. C. *Physics*. Wis, 73. Ph.B., Chicago, 98. Teacher physics, high schools, Chicago and Indianapolis, 98-03; *assoc. physicist*, Bur. Standards, 05- Physical Soc; Wash. Philos. Soc. Constancy of standards of mass; high precision weighing.
- Pierce, Prof. C(larence) A(lbert)**, Worcester Polytechnic Institute, Worcester, Mass. *Physics*. Redding, Conn, Nov. 4, 78. B.S., Wesleyan, 02, M.S., 04; Ph.D., Cornell, 08. Asst. physics, Wesleyan, 02-04; instr, Cornell, 04-11; *asst. prof. elec. eng.*, Worcester, 11- Lab. asst, Bur. Standards, 02-04, asst. physicist, 06. A.A.; Physical Soc. Electrical engineering; fluorescence and phosphorescence.
- Pierce, Dr. G(eorge) W(ashington)**, Harvard University, Cambridge, Mass. *Physics*. Webberville, Tex, Jan. 11, 72. B.S., Texas, 93, A.M., 94; Harvard, 99, Ph.D., 00; Leipzig, 00-01. Instr. physics, Harvard, 03-07, asst. prof, 07-17, *prof. and director*, Croft lab, 17- Nat. Acad; Radio Eng. (past pres); Physical Soc; Elec. Eng; Inventors Guild; Am. Acad. Electrical resonance; electric waves; liquid diffusion and super-saturation; resonance in wireless telegraph circuits; measurement of intensity of sound; crystal rectifiers for alternating currents; electric oscillations and electric waves.

- Pierce, Prof. Norval H(arvey)**, 22 E. Washington St, Chicago, Ill. *Medicine*. Washington, D. C., May 13, 63. M.D., Illinois, 85. Prof. otol, Chicago Post Grad Sch, 91-95; Chicago Polyclinic, 95-00; *prof. laryngol, rhinol. and otol, med. dept, Illinois, 14-* Surgeon, various hospitals. Otol. Soc. (pres, 17); Laryngol. Ass. (pres, 19); Laryngol. Rhinol. and Otol. Soc. (pres, 04); Am. Med. Ass. (chairman, sect. laryngol. and otol, 15); Col. Surg. Otolology; rhinology; laryngology.
- Pierce, Roy G(ifford)**, U. S. Department of Agriculture, Washington, D. C. *Forestry*. Norfolk, Nebr., Oct. 22, 84. A.B., B.S., Nebraska, 07; M.S., Michigan, 08. Forest asst. and acting forest supervisor, U. S. Forest Service, 08-12; tree surgeon, Pa. Chestnut Blight Commission, 12-13; *forest pathologist, office blister rust control, bur. plant indust, U. S. Dept. Agr, 15-* A.A.; Soc. Foresters; Phytopath. Soc; Wash. Bot. Soc. Plant pathology; nursery practise; chestnut blight, white pine blister rust and nursery diseases.
- Pierce, Dr. W(illiam) Dwight**, 304 Continental Trust Building, Denver, Colo. *Entomology*. Champaign, Ill., Nov. 16, 81. A.B., Nebraska, 04, A.M., 07; Ph.D., George Washington, 17. Asst. state entomologist, Miss., 04; special field agent, bur. entom., U. S. Dept. Agr, 04-19; v. pres, Gage-Pierce Research Laboratories, 19-20; *third v. pres, trustee and managing director, biol. dept, The Mineral Metal and By-Products Co, 20-* A.A.; Ass. Econ. Entom.; Entom. Soc; Ecol. Soc; Wash. Entom. Soc. Strepsiptera; Rhipiphoridae; Rhynchophora and their parasites; biology of the Rhynchophora of North America; catalogue of Rhynchophora of the world.
- Pierpont, Prof. James**, Yale University, New Haven, Conn. **Mathematics*. B.S., Worcester, 86; Ph.D., Vienna, 94; LL.D., Clark, 09. *Prof. math, Yale*. A.A.; Math. Soc.
- Piers, Harry**, Provincial Museum, N. S. Technical College, Halifax, N. S., Can. *Zoology*. Halifax, Feb. 12, 70. High sch. Asst. librarian, Legislative Library, N. S., 89-92; engaged in special cataloguing work, 92-96; asst. librarian, Legislative Library, N. S., 96-99; *deputy keeper Pub. Records, N. S., 99-*; *curator, Prov. Museum, N. S., 99-*; *librarian, Prov. Science Library, 00-* Supt. mines building, Province Exhib, 03-; in charge Nova Scotian exhib, Jamestown Expos, 07; and Can. Nat. Exhib, Toronto, 08. N. S. Inst. (rec. sec'y, 94-; librarian, 02-; ed, 'Trans.'). hon. mem. Min. Soc. N. S. (librarian, 02-07 and ed, 'Jour.' volumes, 6-19); N. S. Hist. Soc. (cor. sec'y, 07-). Archeology; bibliography; reptiles; batrachians; Orthoptera; birds; fishes; mammals; geology.
- Piersol, Prof. Geo(rge) A(rthur)**, 4724 Chester Ave, Philadelphia, Pa. **Anatomy, Histology, Embryology*. Philadelphia, May 17, 56. C.E., Polytech. Col. of Pa, 74; M.D., Pennsylvania, 77; Berlin, 86-87, 91; Würzburg, 87-88. Asst. demonstrator histol, med. dept, Pennsylvania, 77-82, demonstrator, 82-00, *prof. histol. and embryol, 00-01, anat, 01-* Mem. board of editors, 'Am. Jour. Anat.' A.A.; Ass. Anat. (pres, 10); Soc. Zool; Philos. Soc; Phila. Col. Physicians; Phila. Acad. Histology and embryology relating to sense organs; development of the pharynx, monstrosities, pigment, etc; development of the sense organs.
- Piersol, Dr. G(eorge) Morris**, 1913 Spruce St, Philadelphia, Pa. *Medicine*. Philadelphia, Oct. 13, 80. B.S., Pennsylvania, 02, M.D., 05. Asst. instr. med, Pennsylvania, 07-09, instr. 09-12, assoc, 12-20, *prof, grad. sch. med, 20-*; *Woman's Med. Col. of Pa, 17-* Asst. physician, Univ. Hosp, 12-; Phila. Gen. Hosp, 17-; ed, 'Am. Jour. Med. Sci.' 11- A.A.; Am. Physicians; Am. Med. Ass; Therapeut. Soc; Gastro-Enterol. Ass; Climat. Ass; Phila. Path. Soc; fel. Phila. Col. Physicians. Internal medicine.
- Piersol, Prof. W(illiam) H(unter)**, 35 Dunvegan Road, Toronto, Can. *Embryology*. Philadelphia, Pa, Sept. 20, 73. B.A., Toronto, 95, M.B., 99; London and Edinburgh, 99-00. Demonstrator biol, McMaster, 96-98; lecturer biol. and histol, Toronto, 02-10, *assoc. prof. histol. and embryol, 10-* A.A.; Ass. Anat; Royal Can. Inst. Embryology and natural history of Amphibia.
- Pierson, C(harles) J**, College Park, Md. *Entomology*. Ohio, April 12, 66. A.B., Stanford, 96; A.M., California, 16. Teacher, pub. schools, 92-13; zool, State Nor. Sch, San Jose, Calif, 13-14; instr. zool. and entom. and asst. in research, Maryland, 14-19, *prof. vert. morphol, 19-* Asst. biol. surv, Panama Bay, 96. Gold medal, La. Purchase Expos, 04. A.A.; Entom. Soc. Geometrid moth, Sabulodes caberata.
- Pietenpol, Prof. W(illiam) B(rasser)**, 1429 Tenth St, Boulder, Colo. *Physics*. Newkirk, Iowa, March 26, 86. A.B., Cent. Col. (Iowa), 09; A.M., Wisconsin, 14, Ph.D., 16. Asst. physics, Wisconsin, 12-16; prof, Hope, 16-18; asst. prof, Pittsburgh, 18-20; *assoc. prof, Colorado, 20-* Physical Soc. Radiation; absorption; linear expansion at high temperatures.
- Pieters, Dr. A(drian) J(ohn)**, 7206 Blair Road, Takoma Park, D. C. **Botany*. Alto, Wis., Nov. 18, 66. B.S., Michigan, 94, Ph.D., 15. Asst. botanist, U. S. Dept. Agr, 95-00, botanist in charge seed and plant introduction and distribution, 00-06, seed grower, 06-10; instr. bot, Michigan, 10-15; *agronomist, U. S. Dept. Agr, 15-* A.A.; Bot. Soc; Ecol. Soc; Soc. Prom. Agr. Sci; Soc. Agron; Soc. Hort. Sci; Wash. Bot. Soc. Clover; green manuring.
- Pike, Prof. F(rank) H(enry)**, 437 W. 59th St, New York, N. Y. **Physiology*. Aurora, Ill., Jan. 20, 76. A.B., Indiana, 03; Ph.D., Chicago, 07. Instr. *physiol*, Chicago, 07-11; asst. prof, Columbia, 11-16, *assoc. prof, 16-* Instr. gen. and comp. physioli, Woods Hole, 09; embryol, biol. sta, Indiana, 04. A.A.; Physiol. Soc; Soc. Zool; Soc. Exp. Biol; Ecol. Soc; Harvey Soc; N. Y. Acad. (v. pres, 18). Effect of pressure in the coronary vessels upon the deportment of the heart; resuscitation of the central nervous system; automaticity of the respiratory and other bulbar nervous mechanisms; degenerate eyes of the Cuban cave shrimp; heredity of sex; mechanism of spinal shock; the phylogeny of function in the central nervous system, with special reference to the segmental theory and the theory of cerebral localization; the labyrinth, cerebellum and vertigo.

- Pilcher, Dr. Lewis Stephen**, 145 Gates Ave, Brooklyn, N. Y. *Anatomy, Surgery*. Adrian, Mich, July 28, 45. A.B, Michigan, 62, A.M, 63, M.D, 66, LL.D, 00; Dickinson, 00. Adj. prof. anat, L. I. Col. Hosp, 79-83; prof. surg, N. Y. Post-Grad. Med. Sch, 85-95. Ed, 'Annals Surg,' 85-; surgeon, M. E. Hosp, Brooklyn, 87-07; German Hosp, 00-08. Surg. Ass. (v. pres, 93, pres, 19); N. Y. State Med. Soc. (pres, 92); Kings Co. Med. Soc. (pres, 00); hon. mem. N. Y. Surg. Soc; hon. mem. Phila. Acad. Surg; assoc. fel. Phila. Col. Physicians.
- Pillsbury, Prof. J(oshua) P(lummer)**, Experiment Station, West Raleigh, N. C. *Horticulture*. Buena Vista, Ohio, Dec. 7, 73. Certificate, Mo. Bot. Garden, 95; B.S, Pa. State, 10. Head gardener, Pa. State, 95-98, asst. hort, 98-10, asst. prof. hort, 10-11; N. C. Col, 11- A.A; Soc. Hort. Sci; N. C. Acad. Small fruits; floriculture; landscape gardening; fruit growing; plant breeding.
- Pillsbury, Prof. W(alter) B(owers)**, University of Michigan, Ann Arbor, Mich. **Psychology*. Burlington, Iowa, July 21, 72. Penn (Iowa), 88-90; A.B, Nebraska, 92; Ph.D, Cornell, 96. Instr. math, Grand Island, 92-93; asst. psychol, Cornell, 95-97; instr, Michigan, 97-00, asst. prof. philos. and director, psychol. lab, 00-05, junior prof, 05-10, prof. psychol, 10- Collaborator, 'Am. Jour. Psychol,' 97; 'Psychol. Rev,' 10; 'Jour. Educ. Psychol,' 10; non-res. lecturer, Columbia, 08-09; Chicago, summer, 10. A.A; Psychol. Ass. (pres, 10); Physiol. Soc; West. Philos. Ass. (pres, 06). Reading; circulation in relation to consciousness; fatigue of sensory processes; attention; psychology of reasoning; standards of intensity of sound; psychology of nationality; language; luster.
- Pilsbry, Dr. H(enry) A(ugustus)**, Academy of Natural Sciences, Philadelphia, Pa. **Zoology, Paleontology*. Iowa City, Iowa, Dec. 7, 62. B.S, hon. Sc.D, Iowa. *Special curator, dept. Mollusca, Acad. Nat. Sciences, Phila, 88-* Ed, 'The Nautilus,' 89-20. Philos. Soc; Phila. Acad; cor. mem. London Zool. Soc; London Malacol. Soc; Soc. belge de Zool. et Malacol; Real Acad. Cien. Madrid. Systematics; anatomy and phylogeny of land mollusks, of Cirripedes, etc.
- Pinchot, Gifford**, Milford, Pa. **Forestry*. Simsbury, Conn, Aug. 11, 65. A.B, Yale, 89, hon. A.M, 01; Nancy, 90; hon. A.M, Princeton, 04; Sc.D, Mich. Agr. Col, 07; LL.D, McGill, 09. Consulting forester, 92-98; in charge forestry, Biltmore estate, 92-94; mem. Nat. Forest Commission, Nat. Acad, 95-96; confidential forest agent to Sec'y of the Interior, 97; forester, U. S. Dept. Agr, 98-10; pres, Nat. Conservation Ass, 10-; state forester, Pa, 20- Mem. Committee on Organization of Govt. Sci. Work and of Commission on Pub. Lands, 03-; Committee on Govt. Dept. Methods, 05-; Inland Waterways Commission, 07-; Nat. Conservation Commission (chairman, 08); Country Life Commission, 08-; Joint Committee on Conservation (chairman, 08); medal, Nat. Acad, 16. A.A; Forestry Ass; Soc. Prom. Agr. Sci; Ass. Agr. Col; Nat. Conservation Ass. (pres, 10-); Min. Eng; Civil Eng; Am. Geog. Soc; Econ. Ass; Acad. Polit. and Social Sci; Wash. Acad. (v. pres, 08-). Directing research covering nearly the whole field of forestry in the United States.
- Pinckney, R(euben) M(arion)**, Bozeman, Mont. *Chemistry*. Macksburg, Iowa, Dec. 3, 80. B.S, Nebr. Wesleyan, 06; A.M, Nebraska, 08. *Asst. chemist, Mont. Exp. Sta, 08-* Chem. Soc. Bleaching of wheat flour; effect of alkali on Portland cement; alkali soils; organic matter in soils.
- Pinney, Mrs. Augusta Robinson**, 178 Main St, Orange, N. J. *Entomology, Botany*. Orange, N. J. Private sch. Principal, intermediate dept, and teacher of physiol, zool. and art, Miss Robinson's Sch. for Young Ladies, 68-88. A.A; Springfield Zool. Club; Springfield Bot. Soc. Injurious insects and their enemies; earthworms; Coccinellidae in destroying the elm beetle; winter wild flowers of St. Petersburg, Florida.
- Pinney, Prof. Mary Edith**, Lake Erie College, Painesville, Ohio. *Biology*. Iowa City, Iowa. A.B, Kansas, 08, A.M, 10; Bonn and Heidelberg, 11-12; Ph.D, Bryn Mawr, 18. Instr. zool, Kansas, 12-13; demonstrator biol, Bryn Mawr, 13-17; instr. zool, Wellesley, 17-19; prof. biol, Lake Erie, 19- A.A. Cytology; spermatogenesis of insects; cytology of fish hybrids.
- Pintner, Prof. Rudolf**, Ohio State University, Columbus, Ohio. **Psychology*. Lytham, England, Nov. 16, 84. A.M, Edinburgh, 06; Ph.D, Leipzig, 11. Prof. psychol, Toledo, 12-13; instr, Ohio State, 13-14, asst. prof, 14-17, prof, 17- A.A; Psychol. Ass; Ohio Acad. Educational psychology; reading attention and reaction time of children; tests for mental classification of children; mental tests of the deaf.
- Pipal, F(rancis) J(ohn)**, Purdue University, Lafayette, Ind. *Botany*. Stermechy, Czechoslovakia, April 21, 81. A.B, Nebraska, 07, A.M, 11; Michigan, 07-08. Principal schools, Benkelman, Nebr, 09-10; asst. bot, Nebraska, 10-11; Purdue, 11-15, assoc, 15- Collaborator, bur. plant indust, U. S. Dept. Agr. A.A; Phytopath. Soc; Ind. Acad. Cereal smuts; eradication of weeds.
- Piper, Prof. Charles V(ancouver)**, U. S. Department of Agriculture, Washington, D. C. **Botany, Agronomy*. Victoria, B. C, June 16, 67. B.S, Washington (Seattle), 85, M.S, 92; M.S, Harvard, 00. Prof. entom, Wash. State, 92-93, bot. and zool, 93-03; syst. agrostologist, U. S. Dept. Agr, 03-04, agrostologist, 05- A.A; Soc. Agron. (pres, 13); Soc. Prom. Agr. Sci; Wash. Bot. Soc. (pres, 08); Wash. Biol. Soc. Taxonomy of spermatophytes; forage crops.
- Pitcher, Prof. A(rthur) D(unn)**, Adelbert College, Cleveland, Ohio. *Mathematics*. Havensville, Kans, June 17, 80. A.B, Kansas, 06, A.M, 07; fellow, Chicago, 08-10, Ph.D, 10. Instr. math, Kansas, 06-08, asst. prof, 10-11; Dartmouth, 11-15; prof, Adelbert, Western Reserve, 15- A.A; Math. Soc; Math. Ass; Circolo Mat. di Palermo. General analysis.
- Pitman, Prof. John H(imes)**, 328 Vassar Ave, Swarthmore, Pa. *Astronomy*. Conshohocken, Pa, April 7, 90. A.B, Swarthmore, 10, A.M, 11, Lippincott fellow, 11-12; Lick Observatory fellow, California, 12-13. Instr. math. and astron,

- Swarthmore*, 13-18, *asst. prof.*, 18- Astron. Soc. Stellar parallax.
- Pittier, Prof. H(enri François)**, Caracas, Venezuela, South America. *Botany*, *Ethnography*. Bex, Switzerland, Aug. 13, 57. A.B. Lausanne, 75, B.S., A.M., 76; C.E., Swiss Polytech, 80; Jena, 80-81. Swiss Topog. Surv., 81-82; prof. nat. hist., Inst. Henchoz, 82-85; physical geog., Lausanne, 85-87; director, Geog. and Nat. Hist. Surv., Costa Rica, 87-04; expert, United Fruit Co., 04-05; bionomic investigator, U. S. Dept. Agr., 05-19. A.A.; Anthropol. Ass.; Ass. Geog.; Wash. Anthropol. Soc.; Wash. Biol. Soc.; hon. cor. mem. Royal Geog. Soc. and Royal Scottish Geog. Soc.; hon. mem. Soc. des Sci. Nat.; Zürich Geog. Gesell.; Soc. Cient. Ant. Alz.; Acad. Cienc. y Let. de San Salvador; Soc. Geog. de Madrid; Soc. Helvétique des Sci. Nat.; Soc. Suisse de Bot.; Berlin Gesell. Anthropol. und Ethnog.; Soc. Belge de Bot. Geography, climate and native tribes of Costa Rica; flora of Central America and Colombia; economic plants of tropical America; Indians of Colombia; flora of Central and South America; languages of Costa Rican Indians.
- Plant, Prof. L(ouis) C(lark)**, Michigan Agricultural College, East Lansing, Mich. *Mathematics*. Nunica, Mich., Nov. 24, 70. Ph.B., Michigan, 97; Chicago, 97-98, M.S., 04. Asst. math., Bradley Polytech., 98-00, assoc., 00-04, instr., 04-07; assoc. prof., Montana, 07-08, *prof.*, 08-13; *Mich. Agr. Col.*, 13- A.A.; Math. Soc.; Eng. Educ.; Math. Ass. Geometrical applications of Jacobi's functions; optical transformations; introductory mathematical analysis; agricultural mathematics.
- Plaskett, Dr. J(ohn) S(tanley)**, Dominion Astrophysical Observatory, Victoria, B. C. *Astronomy*, *Astrophysics*. Near Woodstock, Ont., Nov. 17, 65. Woodstock Col. Inst., 78-80; B.A., Toronto, 99; Sc.D., Pittsburgh, 13. Asst. physics, Toronto, 90-03; astronomer, Dept. Interior, Can., 05-17; *director*, *Dominion Astrophysical Observatory*, 17- Lecturer, Toronto, 01; in charge observational work, Can. eclipse exped. to Labrador, 05. Fel. Royal Soc. Can.; fel. Royal Astron. Soc. Can. (past pres); fel. Royal Astron. Soc. Orbits of spectroscopic binary stars; optical properties of the telescope and spectrograph; orthochromatic and color photography; radial velocities of stars.
- Platt, Dr. Charles**, Roberts Road, Ardmore, Pa. *Physiological chemistry*. Montclair, N. J., March 16, 69. B.S., Lehigh, 90; Ph.D., Ohio (Athens), 92; M.D., Hahnemann Med. Col., Phila., 00; Hopkins, 93-94; Edinburgh, Paris, London, 94-00. Chemist with Thomas A. Edison, 90-91; prof. chem. and toxicol., *Hahnemann Med. Col., Phila.*, 94-09, *emer. prof.*, 09-; *practising physician*, 09- A.A.; fel. London Chem. Soc.; hon. fel. London Soc. Biol. Chem.
- Platt, Dr. Julia B(arlow)**, 105 Grand Ave., Pacific Grove, Calif. *Anatomy*. San Francisco, Calif., Sept. 14, 57. Ph.B., Vermont, 81; Ph.D., Freiburg, 97. Anat. Gesell. Morphology; origin of the nerves and head segments.
- Plaut, Dr. Edward**, 630 Park Ave., New York, N. Y. *Chemistry*. New York, Nov. 9, 91. A.B., Princeton, 12; A.M., Columbia, 13, Ph.D., 16.
- Plimpton, Dr. S(amuel) J(ames)**, Worcester Polytechnic Institute, Worcester, Mass. *Physics*. Hartford, Conn., March 9, 83. E.E., Yale, 08, Ph.D., 12. Student engineer, Gen. Elec. Co., 08-09; instr. *physics*, Yale, 12-13; Hopkins, 13-14; *Worcester*, 14-20, *asst. prof.*, 20- Assoc. Physical Soc. Conduction of electricity through gases.
- Plitt, Prof. Charles C(hristian)**, 3933 Lowndes Ave., Baltimore, Md. *Botany*. Baltimore, May 6, 69. Baltimore City Col., 81; Ph.G., Maryland, 91. *Teacher bot.*, *Baltimore City Col.*, 04-; assoc. bot. and mat. med. and *prof. veg. histol.*, *Maryland*, 07-20, *bot. and mat. med.*, 20- A.A.; Bot. Soc.; Sullivant Moss Soc.; Fern Soc.; Md. Acad. (chairman, bot. sect.). Microscopic investigation of drugs; lichens.
- Plotz, Dr. Harry**, 616 Bedford Ave., Brooklyn, N. Y. *Medicine*. Paterson, N. J., April 17, 90. M.D., Columbia, 13. Pathologist, Mt. Sinai Hosp., 13-17. Lieut. col., M.R.C.; mem. Red Cross Commission to Serbia; adviser to Bulgarian Govt. on control of typhus fever. Decorations, Serbian and Bulgarian Governments. Ass. Path. and Bact.; Soc. Exp. Biol.; Ass. Immunol.; Harvey Soc. Typhus fever; relapsing fever; control of vermin infestation.
- Plough, Prof. Harold H(enry)**, Amherst College, Amherst, Mass. *Biology*. New York, N. Y., April 5, 92. A.B., Amherst, 13; A.M., Columbia, 15, fellow, 16-17, Ph.D., 17. Instr. *biol.*, *Amherst*, 17-19, *assoc. prof.*, 19- A.A.; Ecol. Soc.; Micros. Soc.; Soc. Bact.; Pub. Health Ass. Genetics.
- Plowman, Dr. Amon B(enton)**, 346 Crown St., Akron, Ohio. *Botany*. Greenville, Ohio, May 14, 73. B.S., Ohio Wesleyan, 99; A.M., Ph.D., Harvard, 05. *Prof. nat. science*, Kans. State Nor. Sch., 05-06; *biol.*, Beaver, 06-09; Carroll, 09-15; *Akron*, 15- Director pub. health educ., Akron, Ohio. A.A.; Bot. Soc.; Pub. Health Ass.; Ohio Acad. Plant physiology and morphology; forestry; anatomy of the Cyperaceae and Juncaceae; biology applied to health education.
- Plum, Dr. H(arley) M(artin)**, Standard Chemical Co., Pittsburgh, Pa. *Chemistry*. Ashville, Ohio. A.B., Ohio State, 02, A.M., 09; Ph.D., Chicago, 14. Teacher chem., high sch., Colorado Springs, Colo., 02-07; Cent. High Sch., Columbus, Ohio, 07-10; East. Tech. High Sch., Cleveland, 10-12; assoc. prof. agr. chem., Nebraska, 13-16; prof., 16-18; *research chemist*, *Standard Chem. Co.*, 16-, *asst. pres.*, 18- A.A.; Chem. Soc. Radio-active constituents of carnotite; toxicity in soils.
- Plumb, Prof. C(harles) S(umner)**, Ohio State University, Columbus, Ohio. *Animal husbandry*. Westfield, Mass., April 21, 60. B.S., Mass. Col., 82. Asst. ed., 'Rural New Yorker,' 83-84; first asst., N. Y. Exp. Sta., Geneva, 83-87; prof. agr., Tennessee, and asst. director, Tenn. Exp. Sta., 87-90; prof. animal husbandry and dairying, Purdue, and director, Ind. Exp. Sta., 91-02; *prof. animal husbandry*, *Ohio State*, 02- Soc. Animal Production; Soc. Prom. Agr. Sci. Relationship of animal form to function; animal fibers and their uses; breed evolution.
- Plummer, F(rederik) B(yron)**, Bataafsche Petroleum Co., The Hague, Holland. *Geology*. Hanover, N. H., Aug. 31, 86. B.S., Dartmouth,

- 09; fellow, Chicago, 13-15. Asst. geol, Chicago, 10-11; instr, Vassar, 11-13; geologist, Roxana Petrol. Co, 15-20; *Bataafsche Petrol. Co, The Hague, Holland*, 20- . Geologist, Wis. Geol. Surv, summer, 14. A.A. Geology of the northern White Mountains, New Hampshire; iron ore districts in north-central Wisconsin; stratigraphy of Pennsylvanian formations of north Texas.
- Plummer, Dr. Geo(rge) W(illiam)**, Germantown High School, Philadelphia, Pa. *Chemistry*. Philadelphia, May 1, 86. B.S, Pennsylvania, 07, Ph.D, 10. Instr. gen. chem, Pennsylvania, 07-10, anal. chem, 10-15; *prof. chem, Germantown High Sch*, 15- . Chem. Soc. Inorganic chemistry.
- Plummer, Dr. J(ames) K(emp)**, Raleigh, N. C. *Chemistry*. Middleburg, N. C, Sept. 20, 86. B.S, N. C. Col, 07, M.S, 09; A.M, Cornell, 11, Ph.D, 15. Asst. chemist, N. C. Exp. Sta, 07-09; asst. chem, Cornell, 10-11; soil chemist, N. C. Exp. Sta, 11-18; *state chemist, N. C*, 18- . Chem. Soc. (pres, N. C. sect, 15); Soc. Agron. Soil chemistry; mineralogy; bacteriology.
- Plummer, Dr. S(amuel) C(raig)**, 4539 Oakenwald Ave, Chicago, Ill. *Surgery*. Rock Island, Ill, April 27, 65. A.B, Augustana, 83; A.M, M.D, Northwestern, 86, Ph.D, 00. Prof. anat, Northwestern, 92-95, operative surg, 95-05, clin. prof. surg, 05-08. Chief, surg. service, U.S.A. Base Hosp, A.E.F, 18. Surg. Ass. Anatomy of the middle meningeal artery; dystopic kidney.
- Poats, Prof. T(homas) G(rayson)**, Clemson College, S. C. *Physics*. Batesville, Va, Sept. 24, 71. M.E, E.E, Virginia, 06. Asst. eng, Mo. Sch. Mines, 92-95; Virginia, 05-06; assoc. prof. physics, Clemson, 98-10, prof, 10-19. A.A; assoc. mem. Elec. Eng; Am. Geog. Soc; St. Louis Acad. Mathematics.
- Poffenberger, Prof. A(bert) T(heodore), Jr**, Columbia University, New York, N. Y. *Psychology*. Dauphin, Pa, Oct. 23, 85. A.B, Bucknell, 09; A.M, Columbia, 10, Ph.D, 12. Asst. *psychol, Columbia*, 11-12, lecturer, 12-14, instr, 14-19, *asst. prof*, 19- . Capt. Sanit. C, 17-19. A.A; Psychol. Ass. Applied psychology; fatigue; speed of nerve conduction; transfer of training; mental effect of drugs; recognition memory.
- Pogue, Dr. J(oseph) E(zekiel)**, 29 Fifth Ave, New York, N. Y. *Industrial engineering*. Raleigh, N. C, June 6, 87. A.B, North Carolina, 06, M.S, 07; Ph.D, Yale, 09; Heidelberg, 11. Asst. geologist, N. C. Geol. Surv, 06-08; asst. miner, Sheffield Scientific Sch, Yale, 08-09; asst. curator, div. miner, U. S. Nat. Museum, 09-13; assoc. geologist, U. S. Geol. Surv, 13-19; assoc. prof. geol. and miner, Northwestern, 14-17; curator, div. mineral technol, U. S. Nat. Museum, 17-19; director, econ. research, Sinclair Consol. Oil Corp, 19-21; *consulting engineer*, 21- . Asst. director, bur. oil conservation, Fuel Ad, 17-19. A.A; Geol. Soc; Min. and Metal. Eng; Am. Geog. Soc; Statist. Ass; Automotive Eng; Petrol. Inst. Geology; geography; industrial economics; energy resources of the United States; petroleum.
- Pohlman, Prof. Augustus G(rote)**, St. Louis University, St. Louis, Mo. *Anatomy*. Buffalo, N. Y, Feb. 21, 79. M.D, Buffalo, 00; Freiburg, 01-03. Asst. *anat*, Cornell, 00-01, instr, 01-03; asst, Hopkins, 03-04; asst. prof, Indiana, 04-06, assoc. prof, 06-07, junior prof, 07-08, prof, 08-13; *prof. and director of dept, St. Louis*, 13- . Instr. anat, California, summer, 18. A.A; Ass. Anat; Am. Med. Ass; Ind. Acad; St. Louis Acad. Comparative anatomy and embryology; middle ear region in birds and mammals; vascular system.
- Poitevin, Eugene**, Geological Survey of Canada, Ottawa, Can. *Mineralogy*. Montreal, Que, Dec. 2, 88. B.A.Sc, Polytech. Sch, Montreal, 11; Harvard, 14; Cornell, 15. Asst. prof. mining eng, Polytech. Sch, Montreal, 11-13; *asst. mineralogist, Can. Geol. Surv*, 13- . Can. Min. Inst. Optical mineralogy; crystallography; geochemistry of eastern asbestos camps in Quebec; mineralogy of the Black Lake Area.
- Pollard, Charles L(ouis)**, Bethel, Maine. *Botany*. New York, N. Y, March 29, 72. A.B, Columbia, 93, A.M, 94. Asst. curator, U. S. Dept. Agr, 94-95; div. of plants, U. S. Nat. Museum, 95-03; consulting botanist, G. and C. Merriam Co, Springfield, Mass, 03-06; curator-in-chief, public museum, Staten Isl. Ass. Arts and Sciences, 07-13; *private tutor*, 13- . Ed, 'Plant World,' 99-07; contributor bot. terms, 'Suppl. Webster's Int. Diet,' 00; 'Century Diet,' 03; 'Webster's New Int. Diet,' 03-06. A.A; Wild Flower Preservation Soc. (sec'y, 02); fel. N. Y. Acad; hon. mem. Wash. Biol. Field Club (pres, 00); hon. mem. Phila. Bot. Club. Entomology and botany of North America; genetics.
- Pollitzer, Dr. S(igmund)**, 1 W. 70th St, New York, N. Y. *Medicine*. Richmond Co, N. Y, June 12, 59. A.B, Col. City of N. Y, 79, A.M, 82; M.D, Columbia, 84; Heidelberg, Berlin and Vienna, 84-86; Hamburg, 89-90. Adj. prof. dermat, N. Y. Post-Grad. Med. Sch, 06-09, prof, 10-15. A.A; Ass. Path. and Bact; Dermat. Ass. (pres, 14); Am. Med. Ass; N. Y. Acad. Med. (chairman, sect. dermat, 09-11); cor. mem. Ass. française de Dermat. Physiology; dermatology.
- Pollock, Dr. Ja(me)s B(arkley)**, 922 Church St, Ann Arbor, Mich. *Botany, Plant pathology*. Orangeville, Ill, Nov. 10, 63. B.S, Wisconsin, 93, M.S, 96; Sc.D, Michigan, 97; Leipzig, 97-98. Teacher biol, high sch, Austin, Ill, 94-95; asst. *bot, Michigan*, 95-97, instr, 98-06, asst. prof. and later *assoc. prof*, 06- . A.A; Soc. Nat; Bot. Soc; Bot. Cent. States; Mich. Acad. (sec'y and ed, 01-03, pres, 06). Mechanism of traumatic curvature of roots; transition from stem to root in *Echinoecystis lobata*; variation of the prothallium in pollen grains of *Picea excelsa* Link; *Polystichus hirsutus* as a wound parasite on mountain ash; fungi and soil biology; carbon nutrition of a fungus; Sclerotinia causing the brown rot of stone fruits; deposition of marl by blue-green algae.
- Pollock, Dr. Lewis John**, 25 E. Washington St, Chicago, Ill. *Neurology*. Moscow, Russia, April 18, 86. M.D, Illinois, 06. *Practising neuropsychiatrist*; asst. *prof. neur, Northwestern*. Neur. Ass. Neuropsychiatry; pathological anatomy; physiology of the nervous system.
- Pomeroy, Prof. J(ohn) C(alvin)**, 113 Mark Ave, Syracuse, N. Y. *Physics*. Kincardine, Ont, 77. B.A, Queen's (Can), 07; fellow, Princeton, 08-10, A.M, 09; McGill, 10-11; Iowa State,

- summers, 16, 17. Lecturer *physics*, Alberta, 11-12; instr., Iowa State, 12-17; prof., Mil. Col. of S. C., 17-18; Hedding, 18-19; *asst. prof.*, *Syracuse*, 19- A.A.; Physical Soc; fel. Iowa Acad. Electrification due to spraying; thermionics; selenium.
- Pomeroy, William Cyrus**, University of California, Berkeley, Calif. *Physics*. Chicago, Ill., Aug. 15, 91. B.S., California, 14. Supt., Univ. Apparatus Co., 14-18; *asst. physics*, *California*, 16-19, *instr.*, 19- Physical Soc; Elec. Eng. Engineering; electricity.
- Pond, Prof. F(rancis) J(ones)**, Stevens Institute, Hoboken, N. J. *Chemistry*. Holliston, Mass., April 8, 71. B.S., Pa. State, 92; Ph.D., Göttingen, 96. Instr. assaying, Pa. State, 96-01, metal, 99-01, *asst. prof.* assaying and chem, 01-03; *eng. chem.*, *Stevens*, 03-09, *prof.* and *director*, *Morton Lab. of Chem.*, 09- A.A.; Chem. Soc. (v. chairman, N. Y. sect., 07-09). Organic chemistry; chemistry of the terpenes; eugenol, safrol, anethol and apiol.
- Poole, Prof. Raymond J(ohn)**, Station A, Lincoln, Nebr. *Botany*. Wabash, Nebr., April 23, 82. A.B., Nebraska, 07, A.M., 08, Ph.D., 13; Chicago, summer, 08. *Asst. bot.*, *Nebraska*, 05-07, *instr.*, 07-09, *adj. prof.*, 09-10, *asst. prof.* and *curator* of herbarium, 10-11, *assoc. prof.*, 11-14, *prof.*, 14-, *head of dept.*, 15- Director, Nebr. Bot. Surv., 07-; on staff, *biol. sta.*, Michigan, 10. A.A.; Bot. Soc; Ecol. Soc; Torrey Bot. Club; Soc. Foresters; Forestry Ass; Bot. Cent. States; Nebr. Acad. (treas., 09, pres., 17); Wash. Biol. Soc. Plant histology, ecology and physiology; mycology; relations of industrial operations to vegetation.
- Poole, Prof. J(ames) P(lummer)**, 24 Prospect St., Gloucester, Mass. *Botany*. Gloucester, May 6, 89. B.S., Maine, 12; A.M., Harvard, 18. Instr. *bot.*, Washburn, 12-13; *asst.* Kansas State, 13-16; Austin teaching fellow, Harvard, 16-18; *asst. prof.*, *Wyoming*, 18-
- Poole, R(obert) Frank**, New Jersey Agricultural Experiment Station, New Brunswick, N. J. *Plant pathology*. Gray Court, S. C., Dec. 2, 93. B.S., Clemson, 16; M.S., Rutgers, 18. *Asst. plant path.*, Clemson, 16-17; *Rutgers*, 17- Celery diseases; root rots of truck crops.
- Poor, Dr. Charles Lane**, 35 E. 69th St., New York, N. Y. *Astronomy*, *Astrophysics*. Hackensack, N. J., Jan. 18, 66. B.S., Col. City of N. Y., 86, M.S., 90; Ph.D., Hopkins, 92. Instr. *math.*, Col. City of N. Y., 86-88; *instr.* and *later assoc.* and *assoc. prof.* astron., Hopkins, 91-00; lecturer, *Columbia*, 03-04, *prof.*, 04-10, *celestial mech.*, 10- A.A.; Astron. Soc; Math. Soc; Am. Acad; fel. N. Y. Acad. (ed., 'Annals,' 01-); fel. Royal Astron. Soc; Leipzig Astron. Gesell. Periodic comet of 1889, 1896 and 1903; perturbations due to elliptic figures of Jupiter; figure of the sun and possible variations in its size and shape; the photo-heliometer; tidal currents of the Atlantic coast; simplified methods of navigation; the line of position computer; the motions of Mercury.
- Poor, Prof. John M(errill)**, Shattuck Observatory, Hanover, N. H. *Astronomy*. West Newbury, Mass., Jan. 28, 71. A.B., Dartmouth, 97; fellow, Princeton, 00-02, Ph.D., 04. Principal, high sch., Hanover, 97-98; instr. *math.* and *astron.*, *Dartmouth*, 98-00, *astron.*, 02-05, *asst. prof.*, 05-15, *assoc. prof.*, 15-17, *prof.*, 17- A.A.; Astron. Soc; Math. Soc; Meteorol. Soc. Definite orbit of comet 1900 b; orbits of asteroids; latitude of Shattuck Observatory; orbit planes of double stars.
- Poor, Prof. Vincent C(ollins)**, 930 Packard St., Ann Arbor, Mich. *Mathematics*. Oketo, Kans., Jan. 31, 76. A.B., Kansas, 01; M.S., Chicago, 07, Ph.D., 15. Prof. *math.*, Mont. Wesleyan, 01-02; Sweetwater Mil. Col., 03-04; principal, high sch., Osage, Kans., 04-05; La Porte, Ind., 05-06; teacher *math.*, State Nor. Sch., Oskosh, Wis., 06-07; instr., *Michigan*, 07-16, *asst. prof.*, 16- Math. Soc. Theory of asymptotic series; vector analysis; hydrodynamics.
- Popenoe, C(harles) H(olcomb)**, U. S. Department of Agriculture, Washington, D. C. *Entomology*. Manhattan, Kans., June 7, 84. Washburn, 99-00; B.S., Kansas State, 05. *Asst. entomologist*, Va. Truek Exp. Sta., 08; agent and expert, *bur. entom.*, U. S. Dept. Agr., 09-13, *entom. asst.*, 13-18, *asst. entomologist*, *truck crop insect investigations*, 18- A.A.; Ass. Econ. Entom.; Kans. Acad; Wash. Entom. Soc; Wash. Biol. Soc; Wash. Anthropol. Soc. Economic and biological entomology; mammalogy.
- Popenoe, Paul**, Thermal, Calif. *Eugenics*. Topeka, Kans., Oct. 16, 88. Occidental; Stanford. Agr. explorer on expeditions to Algeria, India and Arabia, 11-13; ed., 'Jour. of Heredity,' 13-17; law enforcement sec'y, Social Hygiene Ass, 19-20, exec. sec'y, 20; *manager*, *Trop. Date Co.*, 20- Capt, Sanit. C. and director, sect. on vice and liquor control; Commission on Training Camp Activities, 17-19. A.A.; Pomol. Soc; Oriental Soc; Wash. Bot. Soc; Soc. Hort. de l'Algérie. Plant and animal genetics; subtropical horticulture; culture of the date palm; Arabic language; social hygiene.
- Popenoe, Wilson**, Bureau of Plant Industry, Washington, D. C. *Botany*. Topeka, Kans., March 9, 92. Pomona. Agr. explorer, on expeditions to India, Arabia, Algeria, Brazil, West Indies, Guatemala, Costa Rica, Columbia and Mexico, *office of for. seed and plant introd.*, U. S. Dept. Agr., 13- A.A.; Bot. Soc; Ecol. Soc; Pomol. Soc; Wash. Bot. Soc; Fla. Hort. Soc; hon. mem. Calif. Avocado Ass; Soc. Hort. de l'Algérie; Soc. nat. d'Acclimatation de la France. Economic botany; culture of tropical and subtropical fruits.
- Popp, H(enry) W(illiam)**, Pennsylvania State College, State College, Pa. *Botany*. Millvale, Pa., Nov. 19, 92. B.S., Pa. State; Carnegie Inst. Tech. *Asst. zool.* and *entom.*, Pa. State, 16-17; in charge *biol. dept.*, Cent. State Nor. Sch., Pa., 17-20; *instr. bot.*, *Pa. State*, 20- A.A.; Bot. Soc. Plant pathology and physiology.
- Porter, Prof. C(harles) A(llen)**, 116 Beacon St., Boston, Mass. *Surgery*. Cambridge, Mass., Sept. 9, 66. A.B., Harvard, 88, A.M., M.D., 92. Instr. *surg.*, *Harvard Med. Sch.*, 97-09, *asst. prof.*, 09-16, *prof. clin. surg.*, 16- Surg. Ass; Soc. Clin. Surg; Col. Surg; Am. Med. Ass; Soc. Cancer Research; hon. mem. Am. Röntgen Ray Soc; Int. Soc. Surg. X-ray carcinoma; exophthalmic

- goitre; surgery of peripheral nerves; local anesthesia.
- Porter, Prof. C(harles) W(alter)**, Berkeley, Calif. *Chemistry*. Morgan, Utah, May 16, 80. B.S., Utah Col, 05; A.M., Harvard, 09; Ph.D., California, 15. Prof. *chem.*, Utah Col, 07-17; asst. prof., *California*, 17-20, *assoc. prof.*, 20- Chem. Soc.; Utah Acad.
- Porter, Prof. Dwight**, 149 Hawthorne St, Malden, Mass. *Engineering*. Hartford, Conn, Aug. 28, 55. Ph.B., Yale, 80. Special agent on water power reports, tenth census, 80-83; instr. math, *Mass. Inst. Tech.*, 83-85, civil eng, 85-87, asst. prof., 87-90, *assoc. prof.*, 90-96, *prof. hydraul. eng.*, 96- Civil Eng; Eng. Educ; New Eng. Water Works Ass; Boston Soc. Civil Eng. Hydraulic and sanitary engineering.
- Porter, Prof. Eugene L(yman)**, 1353 E. Ninth St, Cleveland, Ohio. *Physiology*. Springfield, Mass, May 10, 81. A.B., Harvard, 04, Ph.D, 12, research fellow, 12-13; A.M., Michigan, 08. Asst. prof. nat. science, *Transylvania*, 04-06; prof., Adrian, 06-07; asst. zool., Michigan, 07-08; teaching fellow *physiol.*, Harvard, 08-12; instr., Simmons, 13-15; Pennsylvania, 15-18; *asst. prof.*, *Western Reserve*, 18- A.A.; *Physiol. Soc.* Reflex irritability of the spinal cord.
- Porter, F(red) B(aker)**, 1109 Samuels Ave, Ft. Worth, Tex. *Chemistry*. Eldora, Iowa, Sept. 24, 81. B.S., Kansas, 02, Ch.E, 06. Asst. chemist, Swift and Co, Chicago, 02-06; chemist, Sewage Purification Works, Fort Worth Tex, 06-07; Swift Fertilizer Works, 07-12; *pres.*, *Ft. Worth Laboratories*, 12- Chem. Soc. Industrial and engineering chemistry; sewage works; pebble phosphate rock; acid chamber operation; commercial fertilizer.
- Porter, Mrs. G. Q. (Dr. Ethel Chamberlain)**, 320 Migeon Ave, Torrington, Conn. *Psychology*. Chicago, Ill, Jan. 14, 85. A.B., Lombard, 06; fellow, Bryn Mawr, 08-09; Chicago, 09-11, Ph.D, 11. Instr. psychol., Lombard, 05-06. Child psychology; tests; Purkinje phenomenon.
- Porter, Harry F(rank)**, 636-640 E. State St, Trenton, N. J. *Electrical engineering*. Trenton, N. J., Feb. 28, 94. E.E., Princeton, 16. Sec'y, Pyroelectric Instrument Co, 16-20; *treas. and works manager*, *Ajax Electrothermic Corp.*, 20- Electrochem. Soc. Measurement of high temperature; thermionic control of electrical and mechanical apparatus; fusion of refractory materials; electrical precision apparatus.
- Porter, H(olbrook) F(itz) J(ohn)**, Fifth Avenue Building, New York, N. Y. *Industrial engineering*. New York, Feb. 28, 58. M.E., Lehigh, 78. Engineer, Delamater Iron Works, 78-82; N. J. Steel and Iron Co, 82-84; engineer and supt., Columbia, 84-90; asst. chief, mech. dept., Columbian Expos, 90-94; sales manager, Bethlehem Steel Co, 94-01; v. pres. and gen. manager, Westinghouse Nernst Lamp Co, 01-04; *consulting indust. engineer*, 04- Lecturer metal. of iron and steel, several technical schools, 94-98; business administration, Harvard and N. Y. Univ; investigator social hygiene, Russell Sage Foundation, 10; expert fire prevention, N. Y. State Factory Invest. Commission, 14. Sec'y, organizing committee, Int. Cong.
- Test. Mat, 12. Mech. Eng; Franklin Inst; Acad. Polit. and Social Sci; N. Y. Efficiency Soc. (founder and sec'y, 12-). Cost accounting and business administration in factories.
- Porter, Dr. Horace C(hamberlain)**, 1833 Chestnut St, Philadelphia, Pa. *Chemistry*. Urbana, Ill, July 13, 76. A.B., Illinois, 97, B.S., 99, M.S., 00; A.M., Harvard, 01, Ph.D., 03. Chemist, Solvay Process Co, Syracuse, N. Y., 03-06; *research chemist, fuel investigations*, U. S. Bur. Mines, 07-15; The Koppers Co, 15-17; capt, ordnance dept, 17-19; *consulting chemist and chem. engineer*, 19- Chem. Soc; Soc. Test. Mat; Am. Gas Inst. Organic chemistry; orthobenzquinone; chemistry of fuels; destructive distillation of coal; coking and by-products.
- Porter, Dr. J(ames) P(ertice)**, Clark College, Worcester, Mass. *Psychology*. Hillsboro, Ind, Sept. 23, 73. A. B., Indiana, 98, A.M., 01; hon. fellow, Clark, 03-04, Ph.D, 05; Sc.D, Waynesburg, 17. Teacher, high sch., Veederburg, Ind, 93-94; principal, Kentland, 95-97; teacher science, Streator, Ill, 98-00; instr. *psychol.*, Indiana, 00-03; *Clark Col.*, 03-07, asst. prof., 07-12, *prof.*, 12-, acting dean, 09-10, *dean*, 10-; *instr. psychol.*, *Clark*, 10- Instr. neur. biol. sta, Indiana, summers, 01-03, lecturer educ. psychol, 08, 14, 17; Columbia, 13; Wash. State, 15. Mem. Int. Zool. Cong. A.A.; Psychol. Ass. Instinct in spiders; psychology of the English sparrow and other birds; intelligence tests of high school and college students; effect of social experience on perception and judgment; multiple choice methods of measurement.
- Porter, Prof. James Temple**, University of Tennessee, Knoxville, Tenn. *Physics*. Bath Co, Va, Sept. 29, 73. A.B., Randolph-Macon, 95, A.M., 98; fellow, Hopkins, 04-05, Ph.D, 05. Student asst. physics, Hopkins, 03-04; instr., Williams, 05-06; adj. prof. *physics and astron.*, Randolph-Macon Woman's Col, 06-08; *assoc. prof.*, *Tennessee*, 08-10, *prof.*, 10-, asst. dean, 19. Selective reflection in the infra-red spectrum.
- Porter, Prof. J(erman) G(ildersleeve)**, Cincinnati Observatory, Cincinnati, Ohio. *Astronomy*. Buffalo, N. Y., Jan. 8, 52. A.B., Hamilton, 73, A.M., 76, hon. Ph.D, 88; Berlin, 73-74. Asst. prof. astron., Hamilton, 75-78; with U. S. Coast and Geod. Surv, 78-84; *director*, *Cincinnati Observatory*, and *prof. astron.*, *Cincinnati*, 84- 'Astron. Jour.' comet prize, 94. Astron. Soc; Wash. Acad. Proper motion of stars; motion of the solar system in space; variation of latitude; comet orbits.
- Porter, Prof. J(ohn) B(onsall)**, 130 McTavish St, Montreal, Can. *Mining engineering*. E.M., Columbia, 82, Ph.D, 84; hon. Sc.D, Cape Town, 05. Instr. mining and mech. eng, Cincinnati, 84-87; mining and railroad engineer, 88-95; *prof. mining eng*, *McGill*, 96-, chairman, faculty applied science, 18-20. Min. Eng; Civil Eng; Can. Inst. Eng. (pres); Can. Min. Inst. (v. pres); Can. Eng. Standards Ass. (mem. exec. committee); British Inst. Civil Eng; British Inst. Min. Eng; British Inst. Min. and Metal. Ore dressing and concentration; local problems in economic geology; theoretical considerations underlying the mechanical separation of minerals; engineering education; coal resources of Canada.

- Porter, Prof. M(ilton) B(rockett), University of Texas, Austin, Tex. **Mathematics*. Sherman, Tex, Nov. 22, 69. B.S. Texas, 92; A.M. Harvard, 95, Ph.D. 97. Instr. *math*, Texas, 97-99; *Yale*, 99-02, asst. prof, 02-04; *prof*, Texas, 04-*Math. Soc*; *Math. Ass.* Differential equations; function theory.
- Porter, Prof. R(oyal) A(rthur), Syracuse University, Syracuse, N. Y. *Physics*. Adair, Ill, Feb. 8, 77. B.S. Northwestern, 01, M.S. 02; Ph.D. Göttingen, 12. Instr. *physics*, Syracuse, 03-05, asst. prof, 05-06, assoc. prof, 06-12, *prof*, 12-*A.A.*; *Physical Soc*; *Illum. Eng. Soc*; *Astron. Soc*; *Radio Eng.* Effect of atmosphere on arc spectra; vacuum tube rectifiers.
- Porter, Prof. Thomas L(ansing), Washington and Jefferson College, Washington, Pa. *Physics*. Evanston, Ill, July 17, 83. B.S. Northwestern, 07; fellow, Clark, 07-11, A.M. 08, Ph.D. 10. Asst. *physics*, Northwestern, 06-07; instr, Clark, 08-09; Colo. Col, 11-12; Cincinnati, 12-18, *prof*. *Washington and Jefferson*, 18- Research asst. to Prof. Webster, Clark, 07-08, 09-11. A.A.; *Physical Soc*; *Ass. Prof.* Damping of vibrations and elastic hysteresis in metal bars.
- Porter, Prof. W(illiam) T(ownsend), Harvard Medical School, Boston, Mass. **Physiology*. Plymouth, Ohio, Sept. 24, 62. M.D. St. Louis Med. Col, 85; Kiel, Berlin and Breslau, 87-93; LL.D. Maryland, 07; Sc.D. Washington (St. Louis), 15. Acting supt, St. Louis City Hosp, 86-87; asst. prof. physiol. St. Louis Med. Col, 87-88, prof, 88-93; asst. prof, *Harvard Med. Sch*, 93-98, assoc. prof, 98-06, *prof. comp. physiol*, 06- Physiology of growth; the circulation; the spinal cord; respiration; muscle; physiological apparatus.
- Posey, Prof. C(hesley) J(ustin), University of Kansas, Lawrence, Kans. *Geography*. Troy, Ill, Jan. 26, 73. Illinois, 09; fellow, Chicago, 04-05, 11-12, M.S. 05. Principal school, Minier, Ill, 95-97; supt. schools, Leroy, Ill, 00-01; instr. high sch, LaPorte, Ind, 01-03; Univ. High Sch, Chicago, 03-04; head of dept, State Nor. Sch, Mankato, Minn, 05-11; instr. geol. Wisconsin, 12-13; asst. prof. *geog*, Minnesota, 13-20; *assoc. prof*, Kansas, 20- A.A.; fel. Am. Geog. Soc. Regional geography.
- Posey, Dr. W(illiam) Campbell, 2049 Chestnut St, Philadelphia, Pa. *Medicine*. Philadelphia, July 5, 66. A.B. Pennsylvania, 86, M.D. 89; Berlin, Göttingen, Paris and London, 90-92. Surgeon, Wills Eye Hosp, 00-18; prof. ophthal. Phila. Polyclinic, 02-18; *consulting surgeon*, 18- Ophthal. surgeon, Howard Hosp; chairman, Pa. Commission on Conservation of Vision; ed, Am. edition, 'Nettleship's Ophthalmology'; co-editor, 'A System of Diseases of the Eye'; 'The Eye and Nervous System.' Am. Med. Ass. (chairman, ophthal. sect, 09); Ophthal. Soc; Phila. Col. Physicians. Ophthalmology; hygiene of the eye.
- Posnjak, Dr. E(ugene) W(aldemar), Geophysical Laboratory, Washington, D.C. *Physical chemistry*. Moscow, Russia, June 23, 88. Ph.D. Leipzig, 12. Research assoc. physical chem, Mass. Inst. Tech, 12; *chemist*, *geophys. lab*, *Carnegie Institution*, 13- A.A.; Chem. Soc; Wash. Acad. Imbibition pressure: sulphids of copper; hydrated ferric oxides; the system $\text{Fe}_2\text{O}_3 \cdot \text{SO}_3 \cdot \text{H}_2\text{O}$.
- Post, Charles A(lfred), Bayport, L. I., N. Y. *Astronomy*. New York, N. Y., Jan. 6, 44. LL.B. Columbia, 63, hon. A.M. 00. A.A.; *Astron. Soc*; *Pacific Astron. Soc*; fel. N. Y. Acad; fel. Royal Astron. Soc. Astronomical photography; meteor radiants.
- Poteat, Dr. William Louis, Wake Forest, N. C. *Biology*. Caswell Co, N. C., Oct. 20, 56. A.B. Wake Forest, 77, A.M. 89; Berlin, 88; Woods Hole, 93; LL.D. Baylor, 05; North Carolina, 06. Tutor classics, *Wake Forest*, 78-80, asst. prof. nat. science, 80-83, *prof. biol*, 83-, *pres*, 05- Pres, N. C. Teachers' Assembly, 97; mem. State Board Examiners, 97, 98; Gay lecturer, Theol. Sem, Louisville, Ky, 00; Brooks lecturer, Hamilton Theol. Sem, Colgate, 05; Holland Foundation lecturer, Southwestern (Tex.) Theol. Sem, 15. Fel. N. C. Acad. (pres, 02).
- Potsdamer, Louis S(amter), 1818 N. Broad St, Philadelphia, Pa. *Chemistry*. Philadelphia, Oct. 16, 91. B.S. Pennsylvania, 13, Ch.E. 18. With Toch Brothers, 13-18; *Chem. Pigments Corp*, 19- With C.W.S. U.S.A., 18-19. Chem. Soc. Barium; sodium prussiate; tung oil.
- Pottenger, Dr. Francis M(arion), Monrovia, Calif. *Medicine*. Sater, Ohio, Sept. 27, 69. Ph.B. Otterbein, 92, A.M. 07, LL.D. 09; Ohio Med. Col, 92-93; M.D. Cincinnati Col. Med, 94; Europe, 94-05, 07, 09. *Pres. and med. director*, *Pottenger Sanatorium, Monrovia, Calif*, 03-; lecturer tuberculosis and climat, med. dept, Southern California, 04-05, prof. clin. med, 05-09, diseases of the chest, 14-20. A.A.; Am. Med. Ass; Therapeut. Soc. (pres, 14); Am. Aoad. Med; Ass. Tuber; Pub. Health Ass; Climat. Ass; Soc. Immunol; S. Calif. Anti-Tuber. League (pres, 03-06). Diseases of the lungs and throat; tuberculosis; reflex spasm and degeneration of the muscles and soft tissues following inflammation in the lung.
- Potter, Alden A(rchibald), Bureau of Census, Washington, D. C. *Crop statistics*. Minneapolis, Minn, Oct. 12, 84. B.Agr. Minnesota, 09. Asst. cereal pathologist, bur. plant indust, U. S. Dept. Agr. 09-20; *special agent, div. agr. bur. Census*, U. S. Dept. Commerce, 20- A.A. Pathology of cereals.
- Potter, Dr. F(rederick) C(lyde), State Hospital, Kalamazoo, Mich. *Psychiatry*. Wyoming Co, Pa, July 10, 82. M.D. Medico-Chirurg. Col. Phila, 09. Asst. physician, Norristown State Hosp, 10-13; pathologist, Cent. Ind. Hosp. Insane, 13-18; asst. dept. nervous and mental diseases, Indiana, 13-16, assoc. 16-18; with U.S.A., 18-19; *pathologist, State Hosp, Kalamazoo, Mich*, 19- A.A.; Medico-Psychol. Ass; Am. Med. Ass; Soc. Bact; Phila. Path. Soc. Spinal fluid in mental diseases.
- Potter, Prof. Geo(rge) F(rederick), Durham, N. H. *Horticulture*. Madison, Aug. 7, 91. B.S.A. Wisconsin, 13, M.S.A. 16; Cornell. Instr. hort, Wisconsin, 13-18, asst. prof, Wisconsin, 18-20; *prof*, N. H. Col, 20- A.A.; Bot. Soc; Soc. Hort. Sci. Inheritance in beans; fumigating plants with HCN gas; winter root injury to fruit trees.

- Potter, Dr. Paul D(avid)**, Sprague Warner and Co, Chicago, Ill. *Chemistry*. Webster City, Iowa, Sept. 20, 85. A.B, Wisconsin, 08, A.M, 10; Ph.D, Chicago, 12. Instr. chem, Pa. State, 06-10, asst. prof. physical chem, 11-12; *chief chemist*, Sprague Warner and Co, 12- Chem. Soc. Compounds of alkali metals with tellurium; equilibrium in the system water-arsenic pentoxid.
- Potter, Dr. Peter**, Murray Hospital, Butte, Mont. *Anatomy*. Dade Co, Mo, Nov. 24, 75. B.S, Missouri, 01, M.S, M.D, 03. Instr. biol. Acad. Columbia, Mo, 96-99; biol. and physics, high sch, 99-00; asst. anat. Missouri, 01-03; assoc. prof, St. Louis, 03-07; *practising surgeon*, 07- Ass. Anat; St. Louis Biol. Soc. Topography of the thoracic and abdominal viscera (by the cross section method); the Comfort test as a method of refraction.
- Potter, W(illiam) B(ancroft)**, General Electric Co, Schenectady, N. Y. *Electrical engineering*. Thomaston, Conn, Feb. 19, 63. High sch. With E. H. Judd (machinist), Hartford, Conn, 81-87; steam and elec. construction, Thomson-Houston Elec. Co, 87-90, asst. ry. eng. dept, 90-95; *chief engineer*, ry. dept, Gen. Elec. Co, 95- A.A.; Elec. Eng; Mech. Eng; Civil Eng; Naval Archit. and Marine Eng. Application of electrically transmitted power to transportation.
- Potts, Dr. Charles S(ower)**, 2018 Chestnut St, Philadelphia, Pa. *Neurology*. Philadelphia, Jan. 30, 64. M.D, Pennsylvania, 85. Assoc. *neur.* Pennsylvania, 00-07; prof, Medico-Chirurg. Col, Phila, 07-17; *prof*, Pennsylvania, 17- Neurologist, Phila. Gen. Hosp. Neur. Ass; Am. Med. Ass; Phila. Col. Physicians; Phila. Neur. Soc. (past pres); Phila. Psychiat. Soc. (past pres). Nervous and mental diseases; medical and surgical electricity.
- Potts, Dr. Louis M(axwell)**, 463 West St, New York, N. Y. *Physics*. Canonsburg, Pa, Oct. 30, 76. A.B, Washington and Jefferson, 96; Ph.D, Hopkins, 00. Teacher, high sch, Washington, Pa, 96-97; student asst, Hopkins, 99-00; elec. engineer, Rowland Telegraphic Co, 00-02, constructing engineer, 02-04, chief engineer, 04-10; Universal Telegraphic Co, 10-15; Universal Machine Co, 15-20; *engineer*, Western Elec. Co, 20- A.A.; Physical Soc; assoc. Elec. Eng. (sec'y, Baltimore sect, 09-20); Soc. de Physique. Measurements of alternating currents by the electro-dynamometer; printing and machine telegraphs.
- Pound, Dr. Roscoe**, Harvard University, Cambridge, Mass. **Botany*. Lincoln, Nebr, Oct. 27, 70. A.B, Nebraska, 88, A.M, 89, Ph.D, 97, LL.D, 13; Harvard Law Sch, 89-90; LL.D, Michigan, 13; Chicago and Missouri, 16; Brown, 19; Harvard, 20. Asst. bot, Nebraska, 88-89; director, Nebr. Bot. Surv, 92-03; judge, Supreme Court, Nebr, 01-03; dean, col. of law, Nebraska, 03-07; prof. law, Northwestern, 07-09; Chicago, 09-10; *Harvard*, 10-15, *dean, law sch*, 15- Ed, 'Ill. Law Review,' 07-09. A.A.; Bot. Soc; Micros. Soc; Am. Bar Ass; Ecol. Soc; Ass. Prof. Phytogeography.
- Povah, Prof. Alfred H(ubert) W(illiam)**, N. Y. State College of Forestry, Syracuse, N. Y. *Plant pathology*. Detroit, Mich, March 25, 89. A.B, Michigan, 12, fellow, 15-16, Ph.D, 16. Instr. bot, Michigan, 16-17; special lecturer forest mycol, N. Y. State Col. Forestry, Syracuse, 17-18, *asst. prof. forest bot*, 18- Cryptogamic botanist, Mich. State Biol. Surv, summer, 14. A.A.; Bot. Soc; Phytopath. Soc; Forestry Ass; Mich. Acad. Mucoraceae; forest pathology; mycology.
- Powell, Dr. A(lfred) R(ichard)**, U. S. Bureau of Mines, Pittsburgh, Pa. *Chemistry*. Athens, Ohio, Feb. 1, 91. B.S, Kansas, 14; A.M, Nebraska, 15; Ph.D, Illinois, 18. Asst. chem, Nebraska, 14-15; Illinois, 15-18; asst. gas chemist, U. S. Bur. Mines, 18, *asst. org. chemist*, 19- Second lieut, C.W.S, 18-19. Chem. Soc. Organic compounds in the soil; sulphur in coal.
- Powell, G(eorge) Harold**, Consolidated Realty Building, Los Angeles, Calif. *Pomology*. Ghent, N. Y, Feb. 8, 72. B.S.A, Cornell, 95, M.S.A, 96. Horticulturist and entomologist, Delaware, 96-98, horticulturist, 98-01; asst. pomologist, U. S. Dept. Agr, 01-04, pomologist in charge fruit transportation and storage investigations, 04-09, asst. chief, bur. plant indust, 10; sec'y and manager, Citrus Protective League, 11-12; *gen. manager*, Calif. Fruit Growers Exchange, 12- In charge, perishable food div, Food Ad, 17-19. Pomol. Soc; Soc. Hort. Sci. Fruit storage, transportation and distribution.
- Power, Prof. Carleton E(lderkin)**, New York State College for Teachers, Albany, N. Y. *Physics*. Palmyra, N. Y, Feb. 28, 85. B.S, Rochester, 08; Ph.D, Cornell, 15. Asst. instr. *physics*, Cornell, 10-12, instr, 12-15; N. Y. State Col. Teachers, 15-18, *asst. prof*, 18- Physical Soc. Phosphorescence.
- Power, Dr. Frederick B(elding)**, Bureau of Chemistry, Washington, D.C. **Chemistry*. Hudson, N. Y, March 4, 53. Phila. Col. Pharmacy, 72-74; Ph.D, Strasbourg, 80; LL.D, Wisconsin, 08. In charge, chem. lab, Phila. Col. Pharmacy, 80-83; prof. pharmaceut. chem. and mat. med, Wisconsin, 83-92; director, laboratories, Fritzsche Brothers, 92-96; Wellcome Chem. Research Laboratories, London, 96-14; *in charge, phytochem. lab, bur. chem*, U. S. Dept. Agr, 16- Ebert prize, Am. Pharmaceut. Ass, 77, 02, 06; gold medal, St. Louis Expos, 04; silver medal, Liège, 05; gold medal and diploma of honor, Milan Exhib, 06; gold medal, Franco-British Exhib, 08; grand prize, Brussels Exhib, 10; gold medal and diploma of honor, Turin Exhib, 11; Hanbury gold medal, London, 13. U. S. delegate, Int. Cong. for Unification of Formulae of Potent Medicaments, Brussels, 02. A.A.; Chem. Soc; Soc. Chem. Indust. (v. pres, 04-06); Pharmaceut. Ass; hon. mem. Wis. Pharmaceut. Ass; Wash. Acad. (v. pres, 18); hon. mem. Phila. Col. Pharm; London Chem. Soc; hon. mem. British Pharmaceut. Conf; Chem. Gesell; hon. mem. Soc. Royale Pharm. de Bruxelles. Phytochemistry; essential and fatty oils.
- Powers, Dr. Charles A(ndrew)**, University Club, Denver, Colo. *Surgery*. Lawrence, Mass, Feb. 2, 58. M.D, Columbia, 83; hon. A.M, Denver, 01. Surgeon to out-patients, N. Y. and Chambers St. Hospitals, N. Y. City, 85; *attending surgeon*, St. Luke's and Gen. Mem. Hospitals, 92; *St. Luke's and City Hospitals*, Denver, 96-; *prof.*

- surg, Denver, 98-* Consulting surgeon, Mercy Hosp, Denver; major, M.C. and surgeon, Am. Ambulance Hosp, Paris; lieut. col, 19- Surg. Ass. (v. pres, 03, treas, 06, pres, 12); Am. Med. Ass. (chairman, sect. surg. 04); Soc. Cancer Control (pres). Denver Clin. and Path. Soc; Soc. Int. de Chirurg.
- Powers, Prof. J(oseph) H(orace)**, 2751 Garfield St, Lincoln, Nebr. *Zoology*. Hebron, Wis, Jan. 22, 66. B.S, Wisconsin, 89, fellow, 89-90; Ph.D, Göttingen, 92; Geneva, 92-93; Columbia, 93-94. Prof. zool. Doane, 94-05; asst. prof. and later adj. prof, *Nebraska*, 05-09, prof, 09-16, *microscopist*, 16- Micros. Soc; Nebr. Acad. Experimental evolution; variation; mutation in *Asplanchna* and *Hydra*; heredity of sex in *Hydra dioecia*; variation in *Amblystoma*.
- Poynter, Dr. Charles W(illiam) M(cCorkle)**, 4216 Douglas St, Omaha, Nebr. *Anatomy*. Eureka, Ill, 75. B.S, Nebraska, 98, M.D, 02. *Head, dept. anat, Nebraska, 12-* A.A; Ass. Anat; Am. Med. Ass; Anthropol. Ass. Embryology; anthropology.
- Praeger, Prof. W(illiam) E(milius)**, 421 Douglas Ave, Kalamazoo, Mich. *Botany*. Belfast, Ireland, Sept. 10, 63. B.S, Illinois, 00; M.S, Chicago, 03. Instr, high schools, Ill, 03-05; *prof. biol, Kalamazoo, 05-* Lecturer, univ. exten, Chicago, 02-03; teacher, Deseret Summer Inst, Logan, Utah, 04; teacher, Western State Nor, Kalamazoo, summers, 06-07. A.A; Bot. Soc; Ecol. Soc; Micros. Soc; Wilson Ornith. Club; assoc. mem. Ornith. Union; Mich. Acad. (v. pres, pres, 11). Ecology.
- Prager, Dr. William L(ouis)**, College of the City of New York, New York, N. Y. *Chemistry*. New York, Jan. 8, 82. B.S, Col. City of N. Y, 00; M.S, N. Y. Univ, 04; fellow, Clark, 07-08, Ph.D, 08. Tutor *chem, Col. City of N. Y*, 02-07, instr, 08-15, *asst. prof*, 15- A.A; Chem. Soc. Esterification and steric hindrance; organic synthesis; tautomerism.
- Prather, Prof. John M(cClellan)**, 4152 Washington Ave, St. Louis, Mo. *Zoology*. Felicity, Ohio, Sept. 8, 64. A.B, Antioch, 91; Harvard, 94, A.M, 95; Ph.D, Chicago, 01. Asst. bot. and zool, Harvard, 95-97; embryol, Chicago, 00-01; *prof. biol. and physics, Antioch, 97-99; instr. biol, Cincinnati, 01-02; high sch, St. Louis, 02-* A.A. Anatomy; hypophysis in *Amia calva*; skeleton of *Salanx microdon*.
- Pratt, Dr. Frederick H(aven)**, 4 Newbury St, Boston, Mass. *Physiology*. Worcester, Mass, July 19, 73. A.B, Harvard, 96, A.M, 98, M.D, 06; Göttingen, 99; Worcester, 00-01. Asst. physiol, Harvard, 01; instr. physiol. and hygiene, Wellesley, 09-12; *prof. physiol, Buffalo, 12-19*; hon. fellow biol, Clark, 19-20; *teaching fellow physiol, Harvard, 20-* A.A; Physiol. Soc. Cardiac nutrition; capillary pore electrode; all-or-none contraction of muscle fiber; recording apparatus; tetanus; fatigue; lecture method; mercury tube key.
- Pratt, Prof. Henry S(herring)**, Haverford College, Haverford, Pa. *Zoology*. Toledo, Ohio, Aug. 18, 59. A.B, Michigan, 82; admitted to Ohio Bar, 85; Leipzig, Freiburg and Geneva, 88-92; zool. sta, Villefranche-sur-mer; Ph.D, Leipzig, 92; Harvard, 92-93; Innsbruck, 02-03; Graz, 09-10. Instr. *biol, Haverford, 93-98*, assoc. prof, 98-01, *prof*, 01- Instr. comp. anat, Cold Spring Harbor, 96-; Tortugas lab, Carnegie Institution, 08-09; Commission for relief in Belgium, 16-17; investigator forest zool, N. Y. State Col. Forestry, Syracuse, 17. A.A; Soc. Nat; Soc. Zool. (sec'y-treas, east. branch, 05, 06); Ecol. Soc; cor. mem. Wash. Helminth. Soc; Cambridge Entom. Soc. (pres, 97). Embryology and metamorphoses of insects; flatworms; structure and classification of trematodes and cestodes.
- Pratt, Prof. James B(issett)**, Williamstown, Mass. *Psychology*. Elmira, N. Y, June 22, 75. A.B, Williams, 98; A.M, Harvard, 99, Ph.D, 05; Berlin, 01-03. Instr. *philos, Williams, 05-06*, asst. prof, 06-13, *prof*, 13- Philos. Ass. (v. pres, 19); Psychol. Ass. Psychology of religion.
- Pratt, J(ohn) F(rancis)**, U. S. Coast and Geodetic Survey, Washington, D. C. *Geodesy, Topography, Hydrography*. Pomfret, Vt, June 18, 48. B.S, Dartmouth, 71. Aid, *U. S. Coast and Geod. Surv*, 71-79, sub-asst, 79-84, *asst*, 84- Asst. astronomer, transit of Mercury exped, 78; Venus, 82; chief, Alaska boundary expeditions, 92-94; exploration and survey of delta of Yukon River, 98; coast surveys of Bering Sea, southeastern Alaska and Hawaii, 99-05; Philippine Islands, 08-11; inspector, U. S. Geol. Surv, 11-20. In command, magnetic exped. to N. Pacific Ocean, Carnegie Institution, 05. A.A; Wash. Acad; Thayer Soc. Eng. Practical geodesy; commercial development of Alaska, Hawaiian Islands, and Philippine Islands; earthquake movement in California.
- Pratt, Dr. Joseph H(ersey)**, 317 Marlboro St, Boston, Mass. *Pathology, Medicine*. Middleboro, Mass, Dec. 5, 72. Ph.B, Yale, 94; M.D, Hopkins, 98; A.M, Harvard, 01. Asst. path, Boston City Hosp, 98-00, asst. visiting pathologist, 01-02; instr. path, Harvard, 00-02, asst. theory and practise of physics, 02-09, instr. 09-18. A.A; Ass. Path. and Bact; Soc. Exp. Biol; Am. Physicians; Physiol. Soc; Soc. Pharmacol; Soc. Clin. Invest. Histology of pneumonia; the blood platelets; filaria sanguinis hominis; benign tumors of the thyroid gland; typhoid bacillus in intestinal contents; differentiating typhoid and colon bacilli in feces; blood platelets; metabolism in pancreatic disease; experimental anemia; class method of treating tuberculosis among the poor; thrombus formation; pancreatic diabetes; metabolism in gout; digitalis.
- Pratt, Dr. Joseph Hyde**, Chapel Hill, N. C. *Geology, Mineralogy*. Hartford, Conn, Feb. 3, 70. Ph.B, Yale, 93, Ph.D, 96. Instr. miner, Yale, 95-97; state mineralogist, N. C. *Geol. Surv*, 97-05, *state geologist, 05-*; lecturer, *North Carolina, 98-04, prof. econ. geol, 04-* Instr, summer sch, Harvard, 95; field asst. geologist, U. S. Geol. Surv, 99; coal-briquetting investigations, 05-06; col, corps engineers, 17-19. A.A; Geol. Soc; Min. Eng; Min. and Metal. Soc. (councilor); Am. Peat Soc. (pres, 07-09); Am. Geog. Soc; Forestry Ass; hon. mem. Appalachian Eng. Ass; N. C. Acad; N. Y. Acad. The occurrence and origin of ore deposits; chemical and physical properties of minerals.

- Pratt, Dr. L(ester) A(ibert)**, 303 Washington St, Winchester, Mass. *Chemistry*. Manchester, N. H., Aug. 2, 85. B.S., N. H. Col., 09, M.S., 11; Ph.D., Pittsburgh, 13. Asst. chem., N. H. Col., 09-10, instr., 10-11; research chemist, Mellon Inst., 13-16; *director research lab, Merrimac Chem. Co, Woburn, Mass, 16-* Chem. Soc; Electrochem. Soc.
- Pratt, Prof. L(yde) S(tuart)**, 22 Ziegler Tract, Penns Grove, N. J. *Chemistry*. Strong, Maine, Jan. 5, 90. A.B., Bowdoin, 12; Ph.D., Hopkins, 15. Asst. chem., Hopkins, 13-15; instr. org. chem., Virginia, 15-16, adj. prof. chem., 16-17; *research chemist, E. I. duPont de Nemours and Co, 17-* Asst. state chemist, Maine, summer, 14. A.A.; Chem. Soc. Benzoic acid; thiocarbonilid.
- Pratt, Merritt B(erry)**, 821 Forum Building, Sacramento, Calif. *Forestry*. Paw Paw, Ill., Oct. 3, 78. B.S., Chicago, 03; M.F., Yale, 05. Forest asst, U. S. Forest Service, 05-09, deputy forest supervisor, Tahoe Nat. Forest, Calif., 09-14; asst. prof. forestry, California, 14-18; *deputy state forester, Calif, 18-* Soc. Foresters. Forest utilization; wood technology; fire protection.
- Preble, Edward A(lexander)**, U. S. Department of Agriculture, Washington, D. C. *Ornithology, Mammalogy*. Somerville, Mass., June 11, 71. High sch. *Field naturalist and asst. biologist, biol. surv, U. S. Dept. Agr, 92-* Mem. Ornith. Union; Am. Geog. Soc; Soc. Mammal; Wash. Biol. Soc. Biological investigation of the Hudson Bay, the Athabaska and Mackenzie regions, Canada.
- Preble, Dr. Robert B**, 30 Michigan Ave, N, Chicago, Ill. *Medicine*. Chicago, March 14, 66. A.B., Michigan, 89, hon. A.M.; M.D., Northwestern, 91. *Prof. med, Northwestern, 00-* Chevalier Legion d'honneur. Am. Physicians; Am. Med. Ass.
- Prentice, C(harles) F(rederick)**, Singer Building, New York, N. Y. *Optics*. Brooklyn, N. Y., June 24, 54. M.E., Royal Polytech, Karlsruhe, Germany, 74. *Special lecturer optom, Columbia, 10-* Pres. N. Y. State Board of Examiners in Optom, Univ. State of N. Y., 08-; collaborator, 'Am. Ency. of Ophthal,' 13- Optical Soc; N. Y. Optical Soc. (pres, 95, 96). Physical and physiological optics.
- Prescott, Prof. Samuel C(ate)**, Massachusetts Institute of Technology, Cambridge, Mass. *Biological chemistry*. South Hampton, N. H., April 5, 72. B.S., Mass. Inst. Tech, 94; Woods Hole, 96; Berlin and Copenhagen, 00. Asst. *biol, Mass. Inst. Tech, 95-96, instr, 96-03, asst. prof, 03-09, assoc. prof, 09-14, prof, 14-*; acting head of dept, 10. Instr. bacter, Framingham Nor. Sch., 98-03; Simmons, 03-11; director, Boston Bio-Chem. Lab; major, Sanit. C., 17-19, lieut. col, 20; in charge, div. dehydration, U. S. Dept. Agr., 19-20; collaborator, 'Centralblatt für Bakter.' A.A.; Soc. Nat; Soc. Bact. (v. pres, sec'y, 06, 07, pres, 19, representative, Nat. Research Council, 20); Chem. Soc; Soc. Chem. Indust; Am. Acad. Bacteriology, especially industrial; water and food bacteriology; enzymes; microbiology.
- Prescott, Dr. W(illiam) H(erbert)**, 330 Hyde Park Ave, Boston, Mass. *Medicine*. Concord, Mass., Aug. 30, 60. M.D., Harvard, 88. Asst. supt, Boston City Hosp, 88-90; med. director, Boston Pub. Inst, 96-97. Ass. Path. and Bact.
- Pressey, Dr. Henry A(ibert)**, 111 Broadway, New York, N. Y. *Hydraulic engineering*. Lewiston, Maine, Sept. 24, 73. B.S., George Washington, 93, Ph.D., 05; C.E., Mass. Inst. Tech, 96. Instr. civil eng, George Washington, 98-01, prof, 99-01; hydrographer, U. S. Geol. Surv, 98-00; *consulting engineer, 00-* Consulting engineer, N. Y. State Water Supply Commission, 08. Civil Eng; Elec. Eng; Forestry Ass. (director); New Eng. Water Works Ass; Wash. Eng. Soc. Hydrography; water powers in United States.
- Pressey, Dr. Sidney L(eavitt)**, 317 E. University St, Bloomington, Ind. *Psychology*. Brooklyn, N. Y., Dec. 28, 88. A.B., Williams, 12; A.M., Harvard, 15, Ph.D., 17. Asst. psychologist and intern, Psychopathic Hosp, Boston, 16-17; *instr. psychol, Indiana, 17-* Psychol. Ass. Educational, physiological and abnormal psychology; mental tests.
- Preston, Dr. Carleton E(steve)**, 11 Danville St, West Roxbury, Mass. *Botany*. Boston, Mass., Nov. 21, 78. A.B., Harvard, 99, A.M., 00, traveling fellow, 00-01, Ph.D., 02. Asst. dept. bot, Harvard, 00, temporary asst, Gray Herbarium, 01; asst, Yale Forest Sch, 01-02; with Manning Bros, landscape architects, Boston, 02-03; teacher nat. sciences, high sch, Lawrence, Mass, 03-07; submaster, Bennett Sch, Boston, 07-08; *junior master biol. and chem, Charlestown High Sch, Boston, 08-11; biol, English High Sch, Boston, 11-* Temporary asst. micros. food anal, Conn. Exp. Sta., 02. Structure of flowering plants, especially desert vegetation.
- Pretz, Harold W(illiam)**, 368 Union St, Allentown, Pa. *Botany*. Allentown, Nov. 18, 77. Pub. sch; hon. M.S., Muhlenberg, 14. A.A.; Bot. Soc; Ecol. Soc; Fern. Soc; Torrey Bot. Club; Phila. Bot. Club. Pteridophytes; spermatophytes; flora of Lehigh Co, Pennsylvania; *Antennaria canadensis*.
- Price, Prof. H(arvey) L(ee)**, Blacksburg, Va. *Horticulture*. Prices' Fork, Va., March 18, 74. B.S., Va. Polytech, 98, M.S., 00. Instr. *hort, Va. Polytech, 00-03, prof. and horticulturist, Va. Exp. Sta, 03-, dean, agr. dept, 08-* A.A.; Soc. Hort. Sci; Pomol. Soc; Va. Hort. Soc. Phenology; inheritance in vegetable hybrids.
- Price, Prof. H(omer) C(harles)**, Newark, Ohio. *Agriculture*. Newark, Feb. 13, 75. B.S.(Agr), Ohio State, 97; M.S.A., Cornell, 99. Asst. hort, Ohio State, 99-01, prof. hort. and forestry, 01-03, prof. rural econ. and dean, col. agr, 03-15; *commercial apple orchardist, 15-* Mem. board agr, Ohio, 17-; chairman fed. milk commission, Ohio, 18. Rural credit and cooperation in agriculture.
- Price, Dr. T(homas) M(alcolm)**, District Building, Washington, D. C. *Physiological chemistry*. Darlington, Md., April 11, 79. B.S., Md. Col., 99; M.S., George Washington, 00, Ph.D., 03. Chemist, Md. Exp. Sta., 99-02; instr. chem, *George Washington, and biochem, med. sch, 02-05, asst. prof, 05-09, prof. physiol. chem, 09-*; scientific asst. biochem, U. S. Dept. Agr, 02-08, senior biochemist, 08-10, chemist in charge meat

inspection laboratories, 10-20; *chemist*, D. C. Dept. of Health, 20- A.A.; Chem. Soc. Digestibility of plain, cooked and pasteurized milk; digestibility of milk treated with preservatives; effects of baking powders and preservatives on digestion; the isolation of animal and bacterial enzymes; vegetable enzymes and their toxic effects; anilin dyes; determination of starch in meats.

Price, Dr. William Armstrong, Jr., Johns Hopkins University, Baltimore, Md. *Geology*. Richmond, Va, March 27, 89. A.B, Davidson, 09; Ph.D, Hopkins, 13. Instr. geol, West Virginia, 13-14, asst. prof, 14-19; *paleontologist*, W. Va. Geol. Surv, 13-; *geologist*, Hager-Robitaille Co, 19- Rodman, U. S. Geol. Surv, summers, 10, 11; field asst, Md. Geol. Surv, summers, 10-13; pyrite investigator, Bur. Mines, 18; lieut, O.R.C, 18- A.A; Paleont. Soc; fel. Geol. Soc; W. Va. Sci. Soc. Invertebrate paleontology of the Pennsylvanian system of West Virginia and Maryland; stratigraphy of Paleozoic strata of West Virginia.

Price, William B., Box 388, Waterbury, Conn. *Metallurgy*. New Haven, Conn, Sept. 22, 77. Ph.B, Yale, 02. *Chief chemist and metallurgist*, Scovill Mfg. Co, 02- Chem. Soc; Inst. Metals (senior v. chairman); Min. Eng. (director, 18); Soc. Test. Mat; Electrochem. Soc; British Inst. Min. and Metal. Brass metallurgy.

Prichard, Henry Sewall, 1516 Frick Building, Pittsburgh, Pa. *Engineering*. Philadelphia, Pa, June 26, 59. Pub. sch. Broker's clerk and asst. bookkeeper, 73-81; topographer, Pa. R. R. Co, 81-84; chief draughtsman, N. J. Steel and Iron Co, 84-91, chief engineer, 91-00; designing engineer, Am. Bridge Co, 00-01, statistician, 01-14; expert, railway econ, U. S. Steel Corp, 14-16; *analytical engineer*, Am. Bridge Co, 16- Gold medal, West. Pa. Eng. Soc; Croes medal, Civil Eng. A.A; Civil Eng. Steel railway bridge members; ideal and eccentrically loaded columns; flexure; elasticity, fatigue, and effects of straining iron and steel.

Priest, Irwin G (illespie), Bureau of Standards, Washington, D. C. **Physics*. Holmes Co, Ohio, Jan. 27, 86. A.B, Ohio State, 07. Lab. asst, Bur. Standards, 07-08, asst. physicist, 08-15, assoc. physicist, 15-19, *physicist*, 19- A.A; Physical Soc; Optical Soc; Wash. Acad; Wash. Philos. Soc. Interferometry; wave lengths; colorimetry; color standardization; spectrophotometry; photometry; absorption spectra.

Priest, Prof. Ward C (urtiss), 41 Judson St, Canton, N. Y. *Physics*. Canton, June 16, 86. A.B, St. Lawrence, 07; A.M, Harvard, 10. Teacher science, Plattsburgh High Sch, 07-08; instr. physics St. Lawrence, 08-09; Tufts, 10-11; St. Lawrence, 11-12, *prof*, 12- A.A. Acoustics.

Prime, Dr. Frederick, 131 E. 66th St, New York, N. Y. *Pathology*. Baltimore, Md, March 3, 81. B.S, Pennsylvania, 02, M.D, 05. Instr. surg, Pennsylvania, 07-11; assoc. cancer research, Columbia, 13-20, asst. *prof*, 20- Ass. Cancer Research; Ass. Path. and Bact; Harvey Soc. Cancer.

Primrose, Prof. A (lexander), 100 College St, Toronto, Can. *Surgery*. Pictou, N. S, 61. M.B, C.M, Edinburgh, 86; Middlesex Hosp, Lon-

don, 87; M.R.C.S, 88. Prof. anat, Toronto, 92-06, assoc. prof. *clin. surg*, 97-13, *prof*, 18- Surgeon to Toronto Gen. Hosp; col, M.C, C.E.F, England, France and Salonika, 15-18. Surg. Ass; Royal Med. and Chirurg. Soc. Myology of the anthropoid ape; anatomy; tuberculous disease of the bones and joints.

Prince, Prof. Alexander L (ouis), Yale Medical School, New Haven, Conn. *Physiology*. Paris, France, May 25, 84. M.D, Yale, 10. Instr. anat, Yale, 11-12, instr. med. and asst. physiol. and pharmacol, 12-13, instr. *physiol*, 13-16, *asst. prof*, 16- Lieut. and capt, M.C, 17-19. A.A; Physiol. Soc; Soc. Exp. Biol. Cardio-respiratory physiology; the otic labyrinth.

Prince, Prof. A (rthur) W (arren), 606 Main St, Jackson, Tenn. *Chemistry, Physics*. Ironton, Mo, Nov. 4, 79. A.B, William Jewell, 04, A.M, 05; Chicago, 07, 14, 20. Principal pub. schools, Annapolis, Mo, 01-02; instr. physics, William Jewell, 04-05; head, *sci. dept*, West. Mil. Acad, Upper Alton, Ill, 05-08; *Union (Tenn)*, 08- A.A; Chem. Soc; Tenn. Acad. (mem. exec. board, 12-14).

Prince, Prof. E (dward) E (rnest), Fisheries Department, Ottawa, Can. *Zoology, Ichthyology*. Leeds, England, May 23, 58. St. Andrews, 80-84, LL.D, D.Sc; Edinburgh, 84-85; Cambridge, 86-98. Senior demonstrator zool, Edinburgh, 85; naturalist, marine lab, St. Andrews, 85-89; prof. zool. and comp. anat, Royal Infirmary Med. Col, Glasgow, 90-93; *commissioner of fisheries*, Can, 93- Univ. exten. lecturer, St. Andrews, 86-90; sec'y, Scottish Bait Commission, 87; examiner biol, Royal Col. Physicians, Edinburgh, 92-93; chairman, Board Biol. Directors, Can, 02-10; naturalist, Irish Deep Sea Investigations, 92; representative for Can. Int. Fisheries Commission, 08-; sec'y, Can. Biol. Board; biol. committee Stefansson exped, 13-18; mem. Ottawa Wild Life Protection Board. Int. Fisheries Cong, Paris, 00; Can. delegate, Int. Fisheries Cong, Washington, 08. Fisheries Soc. (pres, 20-); Royal Soc. Can. (pres, biol. and geol. sect, 07); Ottawa Field Nat. Club (pres, 00-09); Ottawa Lit. and Sci. Soc. (pres, 96-98); British Ass. (sec'y, biol. sect, 97, v. pres, zool. sect, 09); Glasgow Nat. Hist. Soc. (v. pres, 93); Andersonian Nat. Hist. Soc. Glasgow (pres, 92). Embryology of fishes; animal morphology; fishing industries; embryology of teleosts; Canadian zoology; comparative psychology and esthetics.

Prince, Prof. Morton, 54 Devonshire St, Boston, Mass. **Medicine*. Boston, Dec. 21, 54. A.B. Harvard, 75, M.D, 79; LL.D, Tufts, 10. Physician nose and throat, Boston City Hosp, 82-85, neurologist, 85-17; *consulting physician*, 17-; instr. *neur*, Harvard Med. Sch, 95-98; prof, *med. sch*, Tufts, 02-10, *emer. prof*, 10- District physician, Boston Dispensary, 81-82, neurologist, 81-86; ed, 'Jour. Abnormal Psychol'; lecturer abnormal psychol, California, 10- A.A; Am. Physicians; Neur. Ass. (pres, 09); Psychol. Ass; Psychopath. Ass; Boston Soc. Neur. and Psychiat. (pres, 05); Boston Soc. Med. Improv. General medicine; neurology; psychology; disintegrated personality, hysteria, the subconscious and allied problems in abnormal psychology.

- Prindle, Louis M(arcus)**, U. S. Geological Survey, Washington, D. C. *Geology*. Great Barrington, Mass, Aug. 28, 65. A.B., Williams, 87; Munich, 90-91; Hopkins, 93; Harvard, 00-01. Geol. aid, *U. S. Geol. Surv.* 02-03, asst. geologist, 04-07, *geologist*, 08- A.A.; Geol. Soc.; Wash. Geol. Soc.
- Prinz, Dr. Hermann**, University of Pennsylvania, Philadelphia, Pa. *Pharmacology*. Schwittersdorf, Germany, June 13, 68. D.D.S., Michigan, 96, M.D., 01, hon. A.M., 12; Berlin, 13-14. Prof. mat. med. and therapeut., Washington (St. Louis), 00-13, director research lab, 10-13; *prof. mat. med. and therapeut.*, Pennsylvania, 14- Fifth Int. Cong. Dentistry, Berlin, 09. A.A.; cor. mem. Cent. Verein Zahnärzte. Dental materia medica and therapeutics; dental formula.
- Pritchard, F(rederick) J.**, Bureau of Plant Industry, Washington, D. C. *Botany*. Camanche, Iowa, Dec. 24, 74. B.S., 04. Instr. bot., N. Dak. Col., 04-05, asst. prof., 05-07; asst. plant breeding, Cornell, 07-09; bot., Wisconsin, 09-10; *plant physiologist, bur. plant indust, U. S. Dept. Agr.*, 10- A.A.; Bot. Soc.; Wash. Bot. Soc. Plant pathology and plant breeding.
- Pritchett, Pres. Henry S(mith)**, The Carnegie Foundation, 576 Fifth Ave, New York, N. Y. *Astronomy, Geodesy*. Fayette, Mo, April 16, 57. A.B., Pritchett, 75; Ph.D., Munich, 94; LL.D., Hamilton, 00; Pennsylvania, Harvard and Yale, 01; Hopkins, 02; Michigan and Williams, 05; Toronto, 06; Brown, 08; Miami, 10; Vermont, 11; Washington (St. Louis), 15; McGill, 17; Western Reserve, 18; hon. Sc.D., Tufts, 05; Stevens, 08; D.Litt., Whitman, 19. Asst. astronomer, U. S. Naval Observatory, 78-80; astronomer, Morrison Observatory, 80-81; prof. astron. and director, observatory, Washington (St. Louis), 81-97; supt., U. S. Coast and Geod. Surv., 97-00; *pres.*, Mass. Inst. Tech., 00-06; *Carnegie Foundation for Adv. of Teaching*, 06- Mem. board of trustees, Carnegie Institution, 06-; Metropolitan Museum of Fine Arts, 16- A.A.; Astron. Soc.; assoc. fel. Am. Acad.; Philos. Soc.; Wash. Acad.; Astron. Gesell. Positions of fixed stars; double star systems; comet orbits; orbits of satellites; stellar parallax.
- Probert, Prof. Frank H(olman)**, University of California, Berkeley, Calif. *Mining*. London, England, June 13, 76. Assoc. Royal Sch. Mines, London, 97. Mine manager and mining engineer, 97-16; *prof. mining and dean, col. mining, California*, 16- Consulting engineer, U. S. Bur. Mines. Min. and Metal. Soc.; Min. and Metal. Eng.; Inst. Min. and Metal. Gt. Britain. Metallurgy; copper deposits.
- Proctor, Prof. Cha(rle)s A(lbert)**, Hanover, N. H. *Physics*. Hanover, N. H., Sept. 15, 78. A.B., Dartmouth, 00; Ph.D., Chicago, 09. Asst. *physics*, Chicago, 03; instr., Missouri, 04-07; asst. prof., Dartmouth, 07-18, *prof.*, 18- A.A.; Physical Soc.; Optical Soc.; Math. Soc. Measurement of refractive indices with interferometer; variation of mass of an electron with change in velocity; physiological optics.
- Proctor, Miss Mary**, 79 Gloucester St, London, S. W., England. *Astronomy*. Dublin, Ireland. Grad. Col. of Preceptors, London, England. Lecturer popular astron., United States, Canada, Australia, New Zealand, France and England. A.A.; British Astron. Ass; hon. mem. Toronto Astron. Soc.; fel. Royal Astron. Soc.; Royal Meteorol. Soc. The popularization of astronomy.
- Prouty, Prof. W(illia)m F(rederick)**, University of North Carolina, Chapel Hill, N. C. *Geology*. Putney, Vt, Aug. 15, 79. B.S., Syracuse, 03, M.S., 04; fellow, Hopkins, 05-06, Ph.D., 06. Instr. geol., Syracuse, 03-04; asst., Md. Geol. Surv., summers, 04, 05; assoc. prof. geol. and miner., Alabama, 06-12, prof. geol., 12-19; chief asst. state geologist, Ala., 06-19; *prof. stratigraph. geol.*, North Carolina, 19-; *geologist*, N. C. *Geol. Surv.*, 19- Asst. U. S. Geol. Surv., summer, 06. A.A.; fel. Geol. Soc.; Min. Eng.; Seismol. Soc.; N. C. Acad. Manlius formation of Onondaga Co, New York; Meso-Silurian of Maryland; oil, marble and flake graphite of Alabama.
- Prucha, Prof. Martin J(ohn)**, University of Illinois, Urbana, Ill. *Bacteriology*. Bohemia, 74. Ph.B., Wesleyan, 03, M.S., 08; fellow, Cornell, 10-11, Ph.D., 13. Asst. bacteriologist, N. Y. Exp. Sta., Geneva, 03-08, assoc. bacteriologist, 08-12; instr. plant physiol., Cornell, 12-13, asst. prof., 13; *dairy bacter.*, Illinois, 13-16, assoc. prof., 16-20, *prof.*, 20-, asst. chief, *Exp. Sta.*, 13-16, *assoc. chief*, 16- Soc. Bact. Bacterial control in dairy products.
- Prudden, Dr. T(heophil) Mitchell**, 160 W. 59th St, New York, N. Y. *Pathology*. Middlebury, Conn, July 7, 49. A.B., Yale, 72, M.D., 75, LL.D., 97. Asst. and director, Lab. of Alumni Ass, 78; *prof. path.*, Columbia, 91-09, *emer. prof.*, 09- Mem. board of directors, Rockefeller Inst. Med. Research. Nat. Acad.; Ass. Path. and Bact.; Am. Physicians; Anthropol. Ass; Am. Acad.; N. Y. Acad. Med.; N. Y. Path. Soc.; fel. N. Y. Acad. Pathology and bacteriology; American archeology.
- Pryor, Prof. Joseph W(illiam)**, State University of Kentucky, Lexington, Ky. *Anatomy*. Palmyra, Mo, April 3, 56. M.D., Missouri, 76. *Prof. anat. and physiol.*, Kentucky, 90- A.A.; Am. Med. Ass; Ass. Anat. Differences in the time of ossification of the male and female skeleton.
- Puckner, W(illiam) A(ugust)**, 535 N. Dearborn St, Chicago, Ill. *Pharmaceutical chemistry*. New Holstein, Wis, Feb. 24, 64. Ph.G., Illinois, 85; Heidelberg, 93; hon. Phar.D., Pittsburgh, 10; hon. Phar.M., Phila. Col. Pharmacy, 18. Asst. bot. sch. of pharmacy, Illinois, 88-90, prof. chem., 94-09; *sec'y, council on pharmacy and chem.*, and *director, chem. lab.*, Am. Med. Ass, 09- Mem. committee on revision, U. S. Pharmacopœia, 09- A.A.; Chem. Soc.; Pharmaceut. Ass; Am. Med. Ass; Chem. Gesell. Alkaloidal estimations; decomposition of mydriatic alkaloids.
- Puffer, Prof. W(illia)m L(ewis)**, 198 Mt. Vernon St, West Newton, Mass. *Electrical engineering*. Sudbury, Mass, July 15, 60. B.S., Mass. Inst. Tech., 84. Asst. elec. eng., Mass. Inst. Tech., 84-86, instr., 86-93, asst. prof., 93-01, assoc. prof., 01-07; *consulting elec. expert*, 07- Mem. jury of awards, Pan-Am. Expos, 01. Elec. Eng. Patent preparation and presentation.

- Pulling, Prof. Howard E(dward)**, 201 Weston Road, Wellesley, Mass. *Botany*. Wausau, Wis., Feb. 3, 86. A.B., Beloit, 10; fellow, Wisconsin, 12-13, Ph.D., 15. Instr. bot, Wisconsin, 13-15; Hopkins, 15-19; asst. prof., *Wellesley*, 19-20, *assoc. prof.*, 20- Research asst. bot, desert lab, Carnegie Institution, summer, 13. A.A.; Bot. Soc. Plant physiology; capillary water in soils; sunlight; growth in plants.
- Pumpelly, Prof. Raphael**, Newport, R. I. **Geology*. Owego, N. Y., Sept. 8, 37. Private schools; Royal Sch. Mines, Freiberg, 56-60; LL.D., Princeton, 20. Geologist, Japanese Govt, 60-63; special commissioner, Chinese Govt, 64; prof. mining geol, Harvard, 66-75; chief div., U. S. Geol. Surv., 79-81; director, North Transcontinental Surv., 81-84; chief div., U. S. Geol. Surv., 84-90; conductor, archeol. and physiographic explor. to Cent. Asia, Carnegie Institution, 03-04. State geologist, Mich., 70-71; director, Mo. Geol. Surv., 71-73. Int. Geol. Cong. (v. pres, 91). Nat. Acad; A.A.; Geol. Soc. (pres, 05); Ass. Geog; Am. Acad; Philos. Soc; N. Y. Acad; cor. fel. Edinburgh Geol. Soc; cor. mem. Berlin Gesell. für Erdkunde; etc. Physical geography; archeology; archeology and physiography of Central Asia.
- Punnett, Dr. P(ercy) W(ithers)**, 170 Spring St, Rochester, N. Y. *Chemistry*. Rochester, N. Y., Oct. 25, 89. B.S., Rochester, 11; A.M., Columbia, 12, fellow, 14-15, Ph.D., 15. Prof. chem, West. Maryland, 15-16; chem. pathologist, Bellevue Hosp, 16-17; *research chemist*, Butterworth-Judson Corp, 17-20; *Rochester Button Co*, 20- Chem. Soc; Columbia Biochem. Ass. Biological and food chemistry; dyes and intermediates.
- Pupin, Prof. M(ichael) I(dvorsky)**, Columbia University, New York, N. Y. **Physics*. Idvor, Hungary, Oct. 4, 58. A.B., Columbia, 83, hon. Sc.D., 04; Ph.D., Berlin, 89; LL.D., Hopkins, 17. Instr. math. physics, *Columbia*, 90-91, adj. prof. meech, 91-01, *prof. electromech*, 01- Director Phoenix Research Lab, 11. Hébert prize, Paris Acad, 16. Nat. Acad; A.A.; Physical Soc. (assoc. ed, 'Bul'); Math. Soc; assoc. mem. Elec. Eng. (v. pres, 97-00); Philos. Soc; Am. Acad; fel. N. Y. Acad. Electrical discharges through rarefied gases; electrical resonance; wave propagation over non-uniform conductors; energy loss in weak and variable magnetic fields; rotation of conductors in alternating magnetic field.
- Purdy, Prof. Ross C**, Dover Manufacturing Co, Dover, Ohio. *Ceramic engineering*. Jasper, N. Y., March 3, 75. Cer.E., Ohio State, 08. Chemist and asst. supt, Mosaic Tile Co, 99-01; chemist and foreman, glazing and burning departments, Roseville Pottery Co, 01-02; asst. ceramics, Ohio State, 02-05; instr., Illinois, 05-07; asst. prof. clayworking and ceramics, Ohio State, 07-08, assoc. prof. ceramic eng, 08-09, prof, 09-11; director research laboratories, Norton Co, 11-19; *consulting ceramic engineer*, 19-; v. pres. and asst. gen. manager, *Dover Mfg. Co*, 19- Ceramist, Ill. Geol. Surv., 05-07. Ceramic Soc. (v. pres, 07, pres, 09). Glazes and bodies used in white ware manufacture.
- Puryear, Prof. Charles**, College Station, Tex. *Mathematics*. Boydton, Va., Oct. 21, 60. A.M., Richmond, 81; B.S., C.E., Virginia, 85; LL.D., Daniel Baker. Teacher, high sch, Bellevue, Va., 82-83; McGuire's Sch., Richmond, Va., 85-86; high sch, Markham, Va., 86-88; instr. math, Michigan, 88-89; assoc. prof. civil eng. and physics, *Tex. Col.*, 89-90, *prof. math*, 90-, *dean*, 07- A.A.; Eng. Educ; Tex. Acad. Trigonometry.
- Pusey, Dr. William Allen**, University of Illinois Medical School, Chicago, Ill. *Dermatology*. Elizabethtown, Ky., Dec. 1, 65. A.B., Vanderbilt, 85, A.M., 86; M.D., N. Y. Univ., 88. Prof. dermat., med. dept., *Illinois*, 94-15, *emer. prof.*, 15- Am. Med. Ass. (treas); Dermat. Ass. (pres). Dermatology; the therapeutic applications of X-rays.
- Putnam, Edward K(irby)**, Academy of Sciences, Davenport, Iowa. *Archeology*. Scott Co, Iowa, Nov. 17, 68. A.B., Ill. Col., 91; Chicago; A.M., Harvard, 99. Instr., Stanford, 01-06; *acting director*, *Davenport Acad.*, 06- A.A.; Archeol. Inst; Ass. Mus; Anthropol. Ass; Folk-lore Soc. American archeology.
- Putnam, George R(ockwell)**, U. S. Lighthouse Service, Washington, D. C. *Engineering*. Davenport, Iowa, May 24, 65. B.S., Rose, 90, M.S., 95. Connected with *U. S. Coast and Geod. Surv.*, 90-10, *commissioner of lighthouses*, 10- Director, coast surveys, Philippine Islands, 00-06. Civil Eng; Wash. Acad; Wash. Eng. Soc.
- Putnam, H(enry) S(t. Clair)**, 100 Broadway, New York, N. Y. *Electrical engineering*. Davenport, Iowa, July 8, 61. LL.B., Iowa, 82; B.S., Rose, 86, M.S., 04, E.E., 06. Treas., Thomson-Houston Carbon Co, 87-92; manager, Am. Carbon Co, 92-95; *consulting engineer*, 95- A.A.; Elec. Eng; Davenport Acad. Electrification of railways; electric operation of canals; conservation of power resources; water power resources.
- Putnam, Prof. John J(acob)**, University of Oregon Medical School, Portland, Oregon. *Bacteriology*. Gibbon, Nebr., Feb. 20, 73. B.S., Denver, 04, A.M., 05; fellow, Chicago, 06-08; Ph.D., Nebraska, 14. Asst. bacter., Nebraska, 10-11, instr., 11-12, adj. prof., 13-14; assoc. prof., Idaho, 14-15, *prof. and head of dept.*, 15-19; *med. sch.*, *Oregon*, 21- Bacteriologist, Idaho Exp. Sta., 14-19. A.A. Bacteria of Nebraska soil; soils of Idaho.
- Putnam, Prof. T(homas) M(ilton)**, University of California, Berkeley, Calif. *Mathematics*. Petaluma, Calif., May 22, 75. B.S., California, 97, fellow, 97-98, M.S., 99; fellow, Chicago, 00-01, Ph.D., 01. Asst. math, California, 98-99; instr., Texas, 90-00; *California*, 01-07, asst. prof., 07-14, assoc. prof., 14-19, *prof.*, 19- Math. Soc; Math. Ass. Theory of groups; theory of numbers.
- Putnam, Dr. W(illis) S(umner)**, University of Illinois, Urbana, Ill. *Physical chemistry*. Grafton, Mass., Feb. 21, 68. B.S., Worcester, 89; Ph.D., Hopkins, 15. Prof. chem, Woman's Col. of Del., 15-16; instr. physical chem, applied chem. and metallog, Cooper Union, 16-20; *asst. prof. applied chem*, *Illinois*, 20- Instr. metallog, Brooklyn Polytech, 19-20. Chem. Soc. Conductivity and ionization of solutions.
- Pyle, Prof. L(indley)**, Washington University, St. Louis, Mo. *Physics*. Kennett Square, Pa., April 20, 79. A.B., Michigan, 01, A.M., 02.

Instr. asst. prof., assoc. prof. and later *prof. physics*, Washington (St. Louis). A.A.; Physical Soc.; St. Louis Acad. Electromagnetic damping; dielectric absorption; magneto-optics.

Pyle, Dr. W(illiam) H(enry), Columbia, Mo. *Psychology*. Carmi, Ill, Feb. 27, 75. A.B., Indiana, 98; Ph.D., Cornell, 09. Principal; high sch., Carlyle, Ill, 98-01; Vandalia, Ill, 01-03, supt. city schools, 03-06; asst. psychol., Cornell, 07-09; instr., Missouri, 09-14, *asst. prof. educ. psychol.*, 14- A.A.; Psychol. Ass. The effect of imperceptible shadows on the judgment of distance; after-images of subliminally colored stimuli; expectation; memory; mental development; learning.

Q

Quaintance, Prof. A(ltus) L(acy), Bureau of Entomology, Washington, D. C. *Entomology*. New Sharon, Iowa, Dec. 19, 70. B.S., Florida, 93; M.S., Ala. Polytech, 94, Sc.D., 15. Instr. biol., Florida, 94-97, prof. entom., 98; biol. and hort., Ga. Exp. Sta., 99-01; zool. and entom., Md. Col. and state entomologist, Md, 01-02; *expert in charge deciduous fruit insect investigations*, bur. entom., U. S. Dept. Agr., 03- A.A.; Ass. Econ. Entom. (pres, 04); Wash. Entom. Soc.; Wash. Biol. Soc. (pres, 12); Wash. Acad. Economic entomology; Aleyrodidae; insects destructive to deciduous fruit plants in the United States.

Qualls, Dr. Guy L(ogan), Care Adjutant General, U.S.A., Washington, D. C. *Surgery*. Murphysboro, Ill, Feb. 18, 83. B.S., M.D., St. Louis, 09, M.S., 12; grad. Army Med. Sch., 12. Asst. anat. and physiol., St. Louis, 08-09; asst. physician, St. Louis City Hosp., 09-10; res. pathologist, 10-11; lieut., M.R.C., 11-12, capt., M.C., 15-17, major, 17, *lieut. col.*, 18- A.A.; Am. Med. Ass. Cactina and cactin; convalescent typhoid; rope in bread; syphilis.

Quayle, Prof. H(enry) J(osef), Citrus Experiment Station, Riverside, Calif. *Entomology*. Isle of Man, April 29, 76. A.B., Illinois, 03. *Asst. prof. entom.*, California, 06- A.A.; Entom. Soc.; Ass. Econ. Entom.

Quereau, Dr. Edmund C(hase), Bay City, Tex. *Geology*. Aurora, Ill, March 18, 68. Ph.B., Northwestern, 88; Ph.D., Freiburg, 93. Instr. nat. science, Troy Acad., 88-90; paleont., Chicago, 93-95; prof. geol., Syracuse, 95-99; eng. and railroad work, 99-09; *supt. schools*, Bay City, Tex., 10- Assoc. ed., 'Jour. Geol.', 93-94. Geol. Soc. Physiography; stratigraphy.

Quimby, Rev. Alden W(alker), Berwyn, Pa. *Astronomy*. Womelsdorf, Pa, May 6, 54. Private and pub. schools. *Minister, Methodist Epis. Church*, 96- Lecturer popular astron.; astron. ed., 'Phila. Pub. Ledger,' 94-02; contributor various magazines and journals. Astron. Soc.; hon. mem. Camden Astron. Soc. Sun-spot periodicity.

Quinby, Dr. William C(arter), Peter Bent Brigham Hospital, Boston, Mass. *Surgery*. Worcester, Mass., May 26, 77. A.B., Harvard, 99, M.D., 02. Asst. genito-urinary surgeon, Boston Dispensary, 05-09; asst. surgeon, New England Baptist Hosp., 08-14; exp. surgeon, Brady Clinic, Hopkins Hosp., 14-16; assoc. surg., Hop-

kins, 15-16; *instr. and director, lab. surg. research*, Harvard Med. Sch., 17-; urologist, Peter Bent Brigham Hosp., 17- Physiol. Soc.; Col. Surg.; Soc. Clin. Invest.; Ass. Genito-Urinary Surg.; Surg. Research Soc.; Am. Med. Ass. Physiology; physiology of the kidney.

Quinn, R(obert) J(ohn), 1509 Jonquil Terrace, Chicago, Ill. *Chemistry*. Chicago, Feb. 5, 90. B.S., Illinois, 12. Asst. chemist, Morris and Co, 12-16, chief chemist, 16; manager, packing house dept., Wahl-Henius Inst., 16-17; chief chemist, Midland Chem. Co, 17-18; asst. sales manager, A. Daigger and Co, 18-20; *sales manager*, Chicago district, Mathieson Alkali Wks., Inc., 20- West. ed., 'Chem. Age'; mem. board editors, 'Chem. Bul.' Chem. Soc. (sec'y, Chicago sect, 16-20); Soc. Cotton Products Analysts. Anhydrous ammonia; fats and oils.

Quirke, Prof. Terence T(homas), 301 Washington Boulevard, Urbana, Ill. *Geology*. Brighton, England, July 23, 86. M.E., North Dakota, 12, M.S., 13; Ph.D., Chicago, 15. Instr. *geol.*, Minnesota, 15-17, asst. prof., 17-19; *assoc. prof. and chairman of dept.*, Illinois, 19- A.A. Pre-Cambrian geology; economic geology; meteorites.

R

Rachford, Dr. B(enjamin) K(nox), 1961 Madison Road, Cincinnati, Ohio. *Medicine*. Alexandria, Ky, Nov. 28, 57. M.D., Cincinnati, 82; Germany, 90. Res. physician, Cincinnati Gen. Hosp., 82-83; demonstrator bacter., Ohio Med. Col., 94-95, *prof. physiol.*, 95-98; mat. med. and therapist, 98-01; *pediat.*, Cincinnati, 01- Director *pediat. service*, Cincinnati Gen. Hosp., 01-, pres. of staff, 08- Am. Med. Ass.; *Pediat. Soc.*; Am. Physicians. Influence of bile on fat splitting properties of pancreatic juice; comparative anatomy of bile and pancreatic ducts; neuroses of childhood; diseases of children.

Rackemann, Dr. Francis M(inot), 263 Beacon St., Boston, Mass. *Medicine*. Milton, Mass., June 4, 87. A.B., Harvard, 09, M.D., 12. *Asst. med.*, Harvard Med. Sch., 16-; *Mass. Gen. Hosp.*, 16- Soc. Clin. Invest.; Am. Med. Ass.; Harvey Soc. Anaphylaxis; asthma; hay fever.

Radasch, Dr. H(enry) E(rdmann), Daniel Baugh Institute of Anatomy, 11th and Clinton Sts., Philadelphia, Pa. *Anatomy, Histology, Embryology*. Keokuk, Iowa, May 7, 74. B.S., Iowa, 95, fellow, 95-96, M.S., 97; M.D., Jefferson Med. Col., 01. Asst. chem., Iowa, 95-96; lecturer inorg. chem. and director, chem lab., Keokuk Med. Col., 97-98; *demonstrator histol. and embryol.*, Jefferson Med. Col., 01-03, assoc., 03-18, *assoc. prof.*, 18-; asst. demonstrator anat., 05-09, demonstrator visceral anat., 09-14, biol., 13-17; instr. anat., Pa. Acad. Fine Arts, 14-19. Instr. *histol.*, Pa. Col. Dental Surg., 06-09, adj. prof. *physiol.*, 09- Ass. Anat. Red blood cell; muscle anomalies; histologic technique; ultramicroscopy.

Radcliffe, Lewis, U. S. Bureau of Fisheries, Washington, D. C. *Ichthyology*. Savannah, N. Y., Jan. 2, 80. A.B., Cornell, 05; M.S., George Washington, 15. Teacher science, high sch., Port Jervis, N. Y., 05-07; scientific asst., 'Albatross,' 07-08; U. S. Bur. Fisheries, 09-12, director, Beaufort Lab., 12-14, scientific asst., 14-16, *asst. in*

- charge fishery industries, 16-* A.A.; Fisheries Soc.; Soc. Ichthyol. and Herp.; Wash. Biol. Soc. Commercial fisheries; fishes of east Pacific, Peru, Philippines and the United States.
- Raddin, Charles S**, 2032 Orrington Ave, Evanston, Ill. *Botany, Mineralogy*. Lynn, Mass, Jan. 29, 63. B.S., Northwestern, 84, M.S., 88. Chicago Acad. (v. pres, trustee, 08-); Chicago Nat. Hist. Surv. (sec'y); Evanston Hist. Soc. Flora of Chicago and vicinity.
- Radin, Prof. Paul**, 1732 Highland Place, Berkeley, Calif. *Ethnology*. Russia, 83. Ph.D., Columbia, 11. Ethnologist, Bur. Am. Ethnol., 10-11; field ethnologist, Can. Dept. Mines, 12-17; *asst. prof. ethnol. California, 18-* Harvard and Columbia fellow, Int. Sch. Am. Archeol. and Ethnol. Ethnol. Soc. Linguistics; ancient Mexico; superstitions; customs.
- Radosavljevich, Prof. P(aul)**, New York University, New York, N. Y. *Psychology*. Slavonia, Hungary, Jan. 11, 79. Vienna; Jena; Ph.D., Zürich, 05, Pd.D., N. Y. Univ, 08; Stanford. Instr. nor. sch, Zombor, Hungary, 05; *asst. pedag.* N. Y. Univ, 08-09; psychol. lab, Stanford, 09-10; *instr. exp. pedag.* N. Y. Univ, 10-13, *asst. prof. and later prof, 13-* A.A.; Psychol. Ass. Economy of learning; school anthropometry; experimental didactics.
- Rafferty, Rev. Patrick, S.J.**, College of the Holy Cross, Worcester, Mass. *Physics*. Leadgate, England, March 17, 77. A.M., Woodstock, 12. *Prof. physics*, St. Joseph's (Phila), 03-07; Fordham, 07-08; Boston Col, 12-13; *Col. Holy Cross, 14-* A.A.; *assoc.* Physical Soc; Math. Ass. Magneto-optics.
- Rahe, Alfred H(enry)**, 414 E. 26th St, New York, N. Y. *Hygiene*. New York, Jan. 12, 82. Private study. Engaged in indust. and clin. chem, 04-07; *asst. exp. path. med. col.* Cornell, 07-15, hygiene, 15-17, *instr.* 17-19; *immunol. bacteriologist*, N. Y. Hosp, 20- *Instr. chem.* Y.M.C.A., 12; bacteriologist, quarantine lab, Port of N. Y., 12-13; Cont. Field Trial Club Distemper Investigation, Cornell, 12-16. A.A.; Chem. Soc. (abstractor); Soc. Bact. Flocculation of colloids; canine distemper; aciduric bacteria; *Bacillus bulgaricus*; relation of Gram stain to viability of bacteria; cancer.
- Rahn, Dr. Carl (Leo Stahr)**, University of Illinois, Urbana, Ill. *Psychology*. Prussia, Germany, July 3, 81. Ph.B., Chicago, 07, fellow, 10-11, Ph.D., 12; Bonn, 09-10. *Instr. psychol.* Colorado, 08-09; Pittsburgh, 11; Minnesota, 11-13; Chicago, 13-14; *asst. prof.* Wyoming, 14-15; *assoc. prof. Illinois, 15-* Psychol. Ass. Relation of sensation to other categories in contemporary psychology.
- Rahtjen, Dr. Phil(lip)**, Pasadena, Calif. *Bacteriology*. Bremerhaven, Germany, July 22, 72. Munich, Göttingen, Berlin; Ph.D., Rostock, 04. *Instr. bacter.* California, 08- Virulence of Streptococci; thyroxin.
- Raiford, Prof. L(emuel) Charles**, State University of Iowa, Iowa City, Iowa. *Chemistry*. Southampton Co. Va, Aug. 2, 72. Ph.G., Maryland, 95; Ph.B., Brown, 00, A.M., 04; Ph.D., Chicago, 09. *Instr. chem.* Brown, 00-01; Clemson, 01-02; *assoc. prof. textile chem. and dyeing*, Miss. Agr. Col, 02-07; *assoc. chem.* Chicago, 07-09; research chemist, Wyoming, 09-11; *instr. chem.* Chicago, 11-15; *prof.* Okla. Col, 15-18; *assoc. prof.* Iowa, 18- A.A.; Chem. Soc; Okla. Acad. (v. pres, 16, pres, 17). Chloroimidoquinones; replacement of halogen by the nitro group; steric effects in acylation; halogenation of nitro cresols.
- Raiziss, Dr. George W**, 450 S. 57th St, Philadelphia, Pa. *Physiological chemistry*. Odessa, Russia, 84. Ph.D., Freiburg, 09. Physiol. chemist, research dept, Montefiore Home and Hosp, N. Y. City, 10; chemist, Matheson Lead Co, 11; Rockefeller Inst, 11; research chemist, Gen. Elec. Co, 12; *assoc. prof. physiol. chem.* Phila. Polyclinic, 13; *head, dept. chem.* Dermat. Research Laboratories, 14-; *prof. chemotherap, grad. sch. med.* Pennsylvania, 18- Soc. Biol. Chem; Chem. Soc. Dermatological research; chemotherapy.
- Ralston, Oliver C(aldwell)**, U. S. Bureau of Mines, Seattle, Wash. *Metallurgy*. Colorado Springs, Colo, Sept. 6, 87. B.S., Colo. Col, 10. *Instr. chem.* high sch, Leadville, Colo, 10-11; research chemist, U. S. Bur. Mines, 12-14, metallurgist, 14-17; Hooker Electrochem. Co, 17-20; *supt. northwest. exp. sta.* U. S. Bur. Mines, 20- Chem. Soc; Electrochem. Soc; Min. and Metal. Eng; Buffalo Soc. Eng. Oxidation and deterioration of coal; metallurgy of lead and zinc; flotation of ores; electrometallurgy.
- Ramaley, Prof. Francis**, Boulder, Colo. **Botany*. St. Paul, Minn, Nov. 16, 70. B.S., Minnesota, 95, M.S., 96, Ph.D., 99. *Instr. bot.* Minnesota, 95-98; *asst. prof. biol.* Colorado, 98-99; *prof.* 99-, *director, mountain lab.* 09- Acting pres, Colorado, June to Nov, 02, acting dean, col. pharmacy, 17-19. A.A.; Soc. Nat; Bot. Soc; Ecol. Soc; Ass. Prof; Am. Med. Ass. Plant breeding; anatomy of seedlings; plant ecology and vegetation of Colorado and California.
- Rambo, Prof. Susan Miller**, 11 Barrett Place, Northampton, Mass. *Mathematics*. Easton, Pa, April 3, 83. A.B., Smith, 05, A.M., 13; Ph.D., Michigan, 20. *Asst. instr. and later asst. prof. math.* Smith, 08- Math. Soc; Math. Ass; Statist. Ass. Pure mathematics.
- Ramsden, Dr. Charles T(heodore)**, P. O. Box 146, Guantánamo, Cuba. *Zoology*. Santiago de Cuba, Feb. 11, 76. Ph.B., Yale, 96; Nat. Sci. Dr, Univ. de Cuba, 18. Private scientific expeditions within Cuba. Fel. Ornith. Union; Soc. Mammal; Entom. Soc; Soc. Ichthyol. and Herp; Wilson Ornith. Club; Phila. Acad; Soc. Cubana de Hist. Nat. (sec'y, zool. sect, 18); London Malacol. Soc. Ornithology; entomology; conchology; herpetology; mammalogy; taxonomy, distribution and ecology of Cuban forms.
- Ramsey, Prof. G(len) B(laine)**, 5559 University Avenue, Chicago, Ill. *Botany*. Hamilton Co, Ind, May 21, 89. A.B., Indiana, 13, A.M., 14. *Asst. bot.* Indiana, 13-14; *instr.* Maine, 14-16, *asst. plant pathologist*, Exp. Sta, 16-18, *exten. pathologist*, 18-19; *asst. pathologist*, U. S. Dept. Agr, 20- A.A.; Phytopath. Soc; Ind. Acad. Potato diseases.
- Ramsey, Prof. Rolla R(oy)**, Indiana University, Bloomington, Ind. *Physics*. Morning Sun, Ohio, April 11, 72. Miami, 91-92; A.B., In-

- diana, 95, A.M, 98; Clark, 98-99; Ph.D, Cornell, 01; European study, 12-13. Teacher science, high sch, Decatur, Ind, 95-96; lab. asst. *physics*, Indiana, 96-97; prof, Westminster (Pa), 97-98; asst, Cornell, 99; instr, Indiana, 99-00; Missouri, 01-03; asst. prof, Indiana, 03-05, assoc. prof, 05-19, *prof*, 19- A.A; Physical Soc; Ind. Acad. Electrolytic cells; radioactivity; N-rays; atomic model.
- Rand, Frederick V(ernon)**, Bureau of Plant Industry, Washington, D. C. *Botany*. Barnet, Vt, March 16, 83. B.S, Vermont, 08, M.S, 11; Hopkins, 12-13; Columbia, 13-14, Ph.D, 20. Scientific asst, *bur. plant indust*, U. S. Dept. Agr, 08-13; collaborator, 13-14, asst. pathologist, 14-20, *pathologist*, 20- Asst. bot, Columbia, 13-14. A.A; Phytopath. Soc; Bot. Soc; Torrey Bot. Club; Vt. Bot. Club; Wash. Bot. Soc. Plant pathology; cytology.
- Rand, Prof. Herbert W(ilbur)**, Museum of Comparative Zoology, Cambridge, Mass. **Zoology*. Oil City, Pa, July 2, 72. A.B, Allegheny, 92; A.B, Harvard, 97, A.M, 98, Ph.D, 00. Asst. principal, high sch, Oil City, 94-96; instr. *zool*, Harvard, 00-09, asst. prof, 09-19, *assoc. prof*, 19- Lecturer *zool*, Wellesley, 08-09, 18-19. A.A; Soc. Nat; Soc. Zool. (sec'y-treas, east. branch, 10); Am. Acad. Experimental morphology; regeneration; histogenesis of regeneration in annelids.
- Randall, Prof. B(urton) Alex(ander)**, 1717 Locust St, Philadelphia, Pa. *Ophthalmology*. Annapolis, Md, Sept. 21, 58. A.B, St. John's, 77, A.M, 80; M.D, Ph.D, Pennsylvania, 80. Asst. demonstrator nor. histol, Pennsylvania, 80-82; eye and ear surgeon, Episcopal Hosp, 82-91; prof. diseases of the ear, Phila. Polyclinic, 88-01; clin. prof, Pennsylvania, 91-14, *prof. otol*, 14- Med. Alumni thesis prize, Pennsylvania, 80; eye and ear surgeon, Methodist Hosp, 96-01; Children's Hosp, 85-05, ear surgeon, 05-; Int. Otol. Cong. (organization committee, 88, v. pres, 12). A.A; Ophthal. Soc; Otol. Soc. (v. pres, 98-01, pres, 02-04); Laryngol. Ass; Phila. Col. Physicians. Refraction of the eyes; otology.
- Randall, Dr. H(arrison) M(cAllister)**, University of Michigan. Ann Arbor, Mich. **Physics*. Burr Oak, Mich, Dec. 17, 70. Ph.B, Michigan, 93, Ph.M, 94, Ph.D, 02. Teacher physics and chem, high sch, West Bay City, Mich, 94-95; Saginaw, 95-99; instr. *physics*, Mich. State Nor. Sch, Ypsilanti, 99-00; asst, Michigan, 00-01; instr, 01-06, asst. prof, 06-09, junior prof, 09-15, *prof*, 15-, *director, physical lab*, 17- A.A; Physical Soc; Astron. Soc; Optical Soc; Eng. Educ. Coefficient of expansion of quartz and nickel to 500° C. by Abbé-Fizeau dilatometer and of fused quartz to 1000° C; coefficients of expansion of other substances by the same method; measurements of wave-length in the infra-red spectra of the elements; fine structures of near-infra-red absorption bands of gases; molecular structure.
- Randall, Prof. Merle**, University of California, Berkeley, Calif. *Physical chemistry*. Poplar Bluff, Mo, Jan. 29, 88. A.B, Missouri, 07, A.M, 09; fellow, Mass. Inst. Tech, Ph.D, 12. Asst. chem, Missouri, 07-09; research assoc, California, 12-17, *asst. prof*, 17- Chemist, U. S. Kelp Potash Plant; sec'y, Am. Commission for Annual Tables of Numerical Data and Constants. Chem. Soc; Electrochem. Soc. Chemical technology; free energy of chemical substances; calorimetry; conductance of solutions; utilization of sea water bitterns and of kelp; decolorizing carbons; petroleum.
- Randall, Prof. O(tis) E(verett)**, Brown University, Providence, R. I. *Applied mathematics*. North Stonington, Conn, Feb. 28, 60. A.B, Brown, 84, A.M, 87, Ph.D, 96; Charlottenburg, 99-00. Instr. math, high sch, Providence, 84-85; math. and eng, Brown, 85-90, asst. prof, 90-94, prof. mech. and mech. drawing, 94-12, *univ. dean*, 12- A.A; Eng. Educ. Strength of long columns; shades and shadows and perspective; descriptive geometry; construction of plates in mechanical drawing.
- Randall, Dr. Wyatt W(illiam)**, Maryland State Department of Health, Baltimore, Md. *Chemistry*. Annapolis, Md, Jan. 10, 67. A.B, St. John's, Md, 84; Ph.D, Hopkins, 90. Asst. chem, Hopkins, 90-92, assoc, 92-98; science master, Lawrenceville Sch, N. J, 98-00; prof. chem, Tome Inst, 00-01; head master, Mackenzie Sch, 01-10; asst. chief, *bur. chem*, Dept. of Health, Md, 10-16, *chief*, 16-; *assoc. chem*, Hopkins, 19- Chem. Soc. Food, water and drug analysis; methyl-saccharin; lead double-salts; argon; helium; oils; foods.
- Randall-MacIver, Dr. David**, 131 E. 66th St, New York, N. Y. *Archeology*. London, England, 73. B.A, Oxford, 96, M.A, 00, Laycock student, 00-06, D.Sc, 05. Curator, Egyptian dept, Univ. Museum, Phila, 06-11; librarian, Am. Geog. Soc, 11-14; in mil. service, British Army, 14-19. Antiq. Soc; Am. Geog. Soc; Egypt Explorer. Soc; Royal Geog. Soc; Royal Anthropol. Inst; Royal Asiatic Soc. Anthropology; archeology of the Mediterranean.
- Randolph, C(harles) P(hilip)**, 205 S. Seoville Ave, Oak Park, Ill. *Physics*. Austin, Tex, Dec. 30, 86. A.B, Texas, 08, A.M, 09; Chem. E, Mass. Inst. Tech, 11. Research assoc, Mass. Inst. Tech, 10-11; engineer, Gen. Elec. Co, 11-18; *chief engineer*, Edison Elec. Appliance Co, Inc, 18- Chem. Soc; Elec. Eng; Electrochem. Soc. Heat transmission.
- Randolph, L(ingan) S(trother)**, 5840 Bellona Ave, Baltimore, Md. *Mechanical engineering*. Martinsburg, W. Va, May 13, 59. M.E, Stevens, 83. Engineer of tests, Erie Ry, 83-85; supt. motive power, Fla. Ry. and Navigation Co, 85-87; Cumberland and Pa. Ry, 87-90; engineer of tests, Baltimore and Ohio R. R, 90-92; elec. engineer, Baltimore Elec. Refinery, 92-93; prof. mech. eng, Va. Polytech, 93-12, dean, eng. dept, 12-18; *consulting engineer*, 18- Mech. Eng; Civil Eng; Elec. Eng; Eng. Educ; Ry. Master Mechanics Ass; Int. Ass. Test. Mat. Design of locomotives; engineering education; economics; technical education; hydraulic development of power.
- Rands, Dr. R(obert) D(elafeld)**, Institute for Plant Diseases, Buitenzorg, Java. *Botany*, *Plant pathology*. Falmouth, Ky, Nov. 19, 90. B.S, Nebraska, 13; M.S, Wisconsin, 15, Ph.D, 17. Instr. bot, Louisiana, 13-14; scientific asst,

- U. S. Dept. Agr, 17-18; *botanist to Netherlands Govt, Buitenzorg*, 18- Asst. prof. plant path, Cornell, 17. A.A.; Phytopath. Soc; Indisch. Natur. Cong. Diseases of Irish potato; diseases of Para rubber.
- Rane, F(rank) W(illiam)**, 6 Beacon St. Boston, Mass. *Agriculture, Horticulture, Forestry*. Whitmore Lake, Mich, Dec. 11, 68. B.Agr, Ohio State, 91; M.S, Cornell, 92. Horticulturist and mycologist, W. Va. Exp. Sta, 92-93; prof. agr. and hort. and horticulturist to Exp. Sta, West Virginia, 93-95; N. H. Col. and Exp. Sta, 95-98, prof. hort, 98-01, hort. and forestry, 01-06; state forester, Mass, 06-20; *agr. expert and treas, East Coast Finance Corp*, 20- Mass. State Conservation Commission (chairman). A.A.; Soc. Prom. Agr. Sci; Soc. Hort. Sci; Forestry Ass; Ass. Econ. Entom; Pomol. Soc. Economic plant growth; plant depredations and plant culture; utilizing waste lands by forest growth; economic plant growth in agriculture, horticulture and forestry.
- Rankin, George A(twater)**, Edgewood Arsenal, Edgewood, Md. *Physical chemistry*. Ithaca, N. Y, Oct. 7, 84. A.B, Cornell, 07. Asst. physical chemist, Cornell, 06-07; *chemist*, geophys. lab, Carnegie Institution, 07-16; Pittsburgh Plate Glass Co, 16-17; *C.W.S.*, 17- Chem. Soc. Application of physical chemistry to rock magmas.
- Rankin, Prof. Walter M(ead)**, Princeton, N. J. **Biology*. Newark, N. J, Dec. 1, 57. A.B, Williams, 79; M.S, Princeton, 84; Ph.D, Munich, 89. Instr. biol, *Princeton*, 89-95, asst. prof, 95-01, *prof. invert. zool*, 01-04, *biol*, 04- Instr, Woods Hole, 90-95. A.A.; Soc. Nat. Morphology of mollusks; Crustacea; Echinodermata; plant morphology.
- Rankin, Dr. W(illiam) H(oward)**, St. Catharines, Ontario, Can. *Plant pathology*. Richmond, Ind, April 3, 88. A.B, Wabash, 10; fellow, Cornell, 10-12, Ph.D, 14. Asst. bot, Ohio Exp. Sta, 08; Wabash Col, 09-10; state forest pathologist, N. Y. State Conservation Commission, 12-13; instr. plant path, Cornell, 13-14, asst. prof, 14-19; *officer in charge, Dominion Lab. Plant Path*, 19- A.A.; Phytopath. Soc. Diseases of ginseng; Endothia canker of chestnut; internal therapy of trees; susceptibility and immunity of plants to diseases; diseases of orchard crops.
- Ransom, Dr. B(rayton) H(oward)**, Bureau of Animal Industry, Washington, D. C. *Zoology*. Missouri Valley, Iowa, March 24, 79. B.S, Nebraska, 99, A.M, 00, fellow, 01-02, Ph.D, 08; fellow, Missouri, 00-01; med. sch, George Washington, 02-04. Asst. div. zool. hygienic lab, Pub. Health and Marine Hosp. Service, 02-03; asst. in charge, *zool. div, bur. animal indust*, U. S. Dept. Agr, 03-06, *chief*, 06- Asst. custodian, U. S. Nat. Museum; U. S. Delegate, Seventh Int. Zool. Cong; Fourth Int. Fishery Cong. A.A.; Soc. Zool; Soc. Trop. Med; Micros. Soc; hon. mem. Vet. Med. Ass; Wash. Acad; Wash. Biol. Soc; Wash. Entom. Soc; cor. mem. Soc. de Path. exot. Parasitology, particularly nematodes and cestodes.
- Ransom, Dr. Ja(me)s H(arvey)**, 43 Byron Ave, Detroit, Mich. *Chemistry*. Chazy, N. Y, Sept. 21, 61. B.S, Wabash, 90, A.M, 93; Ph.D, Chicago, 99. Asst. chem, Wabash, 90-93; prof, Chicago Manual Training Sch, 93-97; lecture asst, Chicago, 97-00; instr, Purdue, 00-02, as- soc. prof, 02-03, prof. gen. chem, 03-18; prof. chem. and director, chem. lab, Vanderbilt, 18-19; *director chem. research, Michigan Smelting and Ref. Co*, 19- Prof. chem, Chautauqua, 01, 02. A.A.; Chem. Soc; Ind. Acad. (sec'y, 07-09); Ind. Sci. Ass. Molecular rearrangement of o-aminophenyl carbonate; isomeric hydrazones of benzoin; chemical action by electric waves; catalytic actions.
- Ransome, Dr. F(rederick) L(eslie)**, U. S. Geological Survey, Washington, D. C. **Geology*. Greenwich, England, Dec. 2, 68. B.S, California, 93, fellow, 93-95, Ph.D, 96. Asst. miner. and petrolog, Harvard, 96-97; asst. geologist, U. S. Geol. Surv, 97-00, *geologist*, 00- Special lecturer ore deposits, Chicago, 05; Silliman lecturer, Yale, 13; assoc. ed, 'Econ. Geol'; treas, Nat. Research Council. Nat. Acad. (treas); A.A; Geol. Soc; Min. and Metal. Eng; Wash. Acad. (v. pres, 10, pres, 19); Wash. Geol. Soc. Mineralogy; petrography; economic geology in connection with gold, silver, lead and copper deposits in western United States.
- Ranson, Prof. S(tephen) Walter**, 2421 S. Dearborn St, Chicago, Ill. **Anatomy*. Dodge Center, Minn, Aug. 28, 80. B.S, Chicago, 02, fellow, 03-05, Ph.D, 06, M.D, Rush Med. Col, 07. Assoc. anat, *Northwestern*, 08-09, asst. prof, 09-10, assoc. prof, 10-11; *prof. and head of dept*, 12- A.A; Ass. Anat; Physiol. Soc. Spinal nerves and ganglia; sympathetic nervous system; pyridine-silver stain; vasomotor reflex arcs; regeneration of peripheral nerves.
- Ranum, Prof. Arthur**, 3 Central Ave, Ithaca, N. Y. **Mathematics*. La Crosse, Wis, Dec. 13, 70. A.B, Minnesota, 92; Cornell, 93-95, fellow, 95-96; fellow, Chicago, 96-97, Ph.D, 06. Prof. math. and astron, Washington (Seattle), 97-04; instr. *math*, Wisconsin, 04-05; asst, Stanford, 05-06; instr, *Cornell*, 06-10, *asst. prof*, 10- Prof. math, Chicago, summer, 16. A.A; Math. Soc. (assoc. ed, 'Bul', 09-13, 'Trans', 13-19); Circolo Mat. di Palermo. N-dimensional geometry; linear groups; non-Euclidean geometry; differential geometry.
- Rapp, Dr. I(saiah) M(arch)**, Missoula, Mont. *Physics*. Warren Tavern, Pa, Nov. 22, 77. A.B, Ursinus, 03; Ph.D, Chicago, 15. Instr. physics, Ursinus, 04-09, asst. prof, 09-10, prof. and head of dept, 10-15; asst. prof, Oklahoma, 15-19, acting head of dept, 16-17, 18-19; assoc. physicist, Bur. Standards, 19-20; *asst. prof. physics and acting head of dept, Montana*, 20- Acting head, Okla. State Bur. Standards, 16-17. A.A; Physical Soc. Viscosity of air.
- Rasmussen, Dr. A(ndrew) T(heodore)**, 977 14th Ave, S. E, Minneapolis, Minn. *Neurology*. Spring City, Utah, Aug. 10, 83. A.B, Brigham Young, 09; Chicago, summers, 08, 11, 13; Ph.D, Cornell, 16. Instr. biol, Brigham Young, 09-11, head of dept, 11-13; asst. physiol, Cornell, 13-14, instr, 14-16; *neur, Minnesota*, 16-18, asst. prof, 18-19, *assoc. prof*, 19- A.A; Physiol. Soc; Ass. Anat; Ass. Int. Secretions; Ass. Prof. Changes in blood, nerve cells, mitochondria, hy-

pophysis and interstitial cells of testis and ovary during hibernation; thyroparathyroidectomy and blood coagulation.

Rasmussen, Fred(erik), 1705 N. Front St, Harrisburg, Pa. *Agriculture*. Hals, Denmark, July 18, 76. B.S. Iowa State, 05. Asst. dairying, Purdue, 05-06; asst. prof. Iowa State, 06-07; prof. N. H. Col, 07-16; prof. dairy husbandry, Pa. State, 16-19; *sec'y agr, Pa*, 19- Delegate, Sixth Int. Dairy Cong, Bern. A.A.; Dairy Sci. Ass. (pres, 16). Cost of milk production; economics in agriculture.

Rasor, Prof. S(amuel) E(ugene), 1594 Neil Ave, Columbus, Ohio. *Mathematics*. Clayton, Ohio, Feb. 21, 73. B.S. Ohio State, 98, fellow, 98-99, M.S., 02; Chicago, 06; Berlin, 10-11. Instr. math, Ohio State, 00-06, asst. prof, 06-08, assoc. prof, 08-13, *prof*, 13- A.A.; Math. Soc. Differential geometry; theory of functions of a complex variable; calculus of variations and integral equations.

Rathbun, Dr. Mary J(ane), U. S. National Museum, Washington, D. C. **Carcinology*. Buffalo, N. Y., June 11, 60. Buffalo High Sch, 74-78; hon. A.M. Pittsburgh, 16; Ph.D. George Washington, 17. Clerk, U. S. Fish Commission, 84-87; copyist, later aid and asst. curator, div. marine invert, U. S. Nat. Museum, 87-14; *hon. assoc. zool*, 15- A.A.; Soc. Nat; Wash. Acad; Wash. Biol. Soc. Classification of Crustacea; fresh-water crabs; decapods of Harriman Alaska expedition; Crustacea of New England; crabs of Gulf of Siam; crabs of 'Sealark' expedition; decapods of 'Albatross' East Pacific expedition; fossil decapods of America; North American crabs; crabs of the Philippine Islands, Congo and Australia.

Rather, J(ames) B(urness), 412 Greenpoint Ave, Brooklyn, N. Y. *Chemistry*. Bullard, Tex, Oct. 16, 88. B.S. Tex. Col, 07, M.S., 11; Chicago, summers, 08, 10; A.M. Hopkins, 15. Asst. state chemist, Tex, 07-09; asst. chemist, Tex. Exp. Sta., 09-12, first asst, 12-14; prof. agr. chem, Arkansas, and chemist, Exp. Sta., 15-18; asst. chief chemist, *Standard Oil Co. of N. Y.*, 18-19, *chief chemist*, 19- A.A.; Chem. Soc; Soc. Prom. Agr. Sci; Agr. Chem; Soc. Test. Mat. Humus; ether soluble constituents of plants; inositesphosphoric acids; cottonseed; ethylene petroleum.

Ratliff, Prof. R(yland) F(letcher), Central Normal College, Danville, Ind. *Physics*. Marion, Ind, Jan. 6, 58. A.B. Indiana, 00, A.M., 03. Teacher science, Fairmont Acad, 90-99; *prof. physical science, Cent. Nor. Col, Danville, Ind*, 01- Instr. physics, Indiana, 05-06. A.A.; Physical Soc; Ind. Acad. Effect of radium on electrolytic conductivity; electrochemistry.

Rau, Prof. A(lbert) G(eorge), 63 Broad St, Bethlehem, Pa. *Physics*. Bethlehem, Aug. 7, 68. B.S. Lehigh, 88, M.S., 20, Ph.D., 10. Asst. science, Moravian Parochial Sch, 88-90, head master, 90-92, supt, 92-09; *prof. math. and physics, and dean, Moravian Col*, 09- Reader physics for Col. Entrance Board, 01. A.A. Limits of audible sound; elasticity of gases; ultra-red light measurement.

Rau, Phil(ip), 2819 S. Kingshighway Boulevard, St. Louis, Mo. *Entomology*. St. Louis, April

12, 85. A.A.; Entom. Soc; Ecol. Soc; St. Louis Acad. (curator, 10-, chairman, entom. sect, 11-). Ecology; animal behavior; wasp psychology.

Rautenstrauch, Prof. Walter, Columbia University, New York, N. Y. *Mechanical engineering*. Sedalia, Mo, Sept. 7, 80. B.S. Missouri, 02; M.S. Maine, 03. Instr. mech. eng, Maine, 02-03; asst. prof, Cornell, 03-06; adj. prof, Columbia, 06-07, *prof*, 07- V. pres, J. G. White Management Corp. Mem. Nat. Research Council, Mech. Eng; Am. Acad; Franklin Inst; Indust. Cost. Ass. (director); fel. N. Y. Acad. Industrial engineering and research; machine design; stresses in and designs of complicated forms of machine members; strength of hooks and curved machine frames.

Ravenel, Prof. Mazýĉk P(orcher), University of Missouri, Columbia, Mo. **Bacteriology, Public health*. Pendleton, S. C. Grad. Univ. of South, 81; M.D. Med. Col. of S.C., 84; Scott fellow, Pennsylvania, 93; Pasteur Inst, Paris, and Inst. Hygiene, Halle, 96; Inst. Maragliano, Genoa, 04. Asst. demonstrator anat, Med. Col. of S. C; lecturer diseases of children, Charleston Med. Sch; asst. bacter, Pennsylvania, 95; director, lab. hygiene, Princeton, 96; bacteriologist, State Live Stock Sanit. Board, Pa, 97-07; lecturer bacter, vet. dept, Pennsylvania, 98-03; asst. med. director and chief of lab, Henry Phipps Inst, 03-07; prof. bacter, Wisconsin, 07-14; director, State Hygienic Lab, 08-14; *prof. prev. med. and bacter, Missouri*, 14- Prof. hygiene, California, summers, 13-15; mem. advisory board, hygienic lab, U. S. Pub. Health Service, 14; asst. surg. gen, O.R.C., Pub. Health Service; Int. Commission Bovine Tuber; Nat. Commission Milk Standards. U. S. delegate, Int. Cong. Hygiene, Berlin, 08; Int. Cong. Alimentary Hygiene, Brussels, 10; official rapporteur, Int. Am. Cong. Buenos Aires, 10. A.A.; Ass. Path. and Baet; Soc. Exp. Biol; Pub. Health Ass. (director, 15-19, pres, 20); Ass. Tuber. (pres, 11); Am. Med. Ass. (chairman, pub. health sect, 13); U. S. Live Stock Sanit. Ass. (pres, 13); Philos. Soc; Wis. Anti-Tuber. Ass. (pres, 09-14); Phila. Col. Physicians; hon. mem. Cleveland Acad. Med. Tuberculosis; rabies.

Ravenel, W(illiam) de C(hastignier), 1611 Riggs Place, N. W., Washington, D. C. *Fish culture*. Pineville, S. C, Aug. 25, 59. Union, 78. Supt. of Sta, U. S. Fish Commission, 84-94, asst. in charge, div. fish culture, 94-02; *administrative asst, U. S. Nat. Museum*, 02- Representative, U. S. Fish Commission, various expositions. Fisheries Soc. Fish culture; construction of aquarium; preparation of exhibits.

Rawdon, Henry, 5103 13th St, Washington, D. C. *Metallurgy*. Derby, England, 82. B.Ch.E., Michigan, 12. Asst. physicist, assoc. physicist and later physicist in charge *metalog, Bur. Standards*, 12- Chem. Soc; Soc. Test. Mat; Min. and Met. Eng; Wash. Acad; Wash. Philos. Soc. Microscopy of metals; structure of metals and alloys.

Rawl, B(ernard) H(azelius), U. S. Department of Agriculture, Washington, D. C. *Agriculture*. Lexington, S. C, May 2, 76. B.S. Clemson, 00; Pa. State, 02; Wisconsin, 04. Asst. animal husbandry and dairying, Clemson, 02-05; dairy

- husbandman, *U. S. Dept. Agr.*, 05-19, chief, dairy div, 09-18, *asst. chief, bur. animal indust.*, 18- Trustee, Clemson. A.A.; Dairy Sci. Ass.
- Rawlins, Dr. C(harles) H(enry), Jr.**, 86 Market St, Annapolis, Md. *Mathematics.* Seaford, Del, Feb. 16, 89. Ph.B, Dickinson, 10, A.M., 13; Ph.D, Hopkins, 16. Instr. *math.*, Dickinson Sem, Williamsport, Pa, 10-13; instr. and later *asst. prof.*, Del. Col, 16-19; *instr.*, *U. S. Naval Acad.*, 19- *Math. Ass.* Concomitants of the three-point and the four-point in geometry.
- Ray, Prof. David H(eydorn)**, California Institute of Technology, Pasadena, Calif. *Engineering.* New York, July 14, 78. A.B, Col. City of N. Y., 97, B.S., 01; A.M, C.E, Columbia, 02; Sc.D, N. Y. Univ, 08. Instr. *physics and eng.*, Col. City of N. Y., 05-10; engineer of buildings, N. Y. City, 10-13; *asst. prof. mech.*, *Calif. Inst. Tech.* Science examiner, N. Y. City Civil Service Board, 02-04; mem. Board of Educ, N. Y. City; appraisal and valuation officer, N. Y. City. Civil Eng; Mech. Eng. Mechanics; materials of engineering; industrial and economic engineering and valuation.
- Ray, Prof. Franklin Arnold**, Citizens Bank Building, Columbus, Ohio. *Mining engineering.* Rome, Ohio, April 13, 62. E.M, Ohio State, 87. Chief engineer, coal and iron mining companies, 89-92; *asst. mining and metal*, *Ohio State*, 92-93, *asst. prof. mining*, 93-94, *prof.*, 94-, dean, col. eng, 04-06; *consulting mining engineer.* Mem. Ohio State Board Fuel Conservation, 16-17; investigator coal reserves of Russia, 17-18. Delegate, Am. Min. Cong, San Francisco, 15. Min. Eng. Ohio coal reserves; use of power in mines; ventilation control of mines; coal reserves of Pacific Coast and possibility of manufacturing iron and steel.
- Raymond, H(arry)**, 318 New Scotland Ave, Albany, N. Y. *Astronomy.* LaGrange, Ohio, Feb. 17, 76. A.B, Harvard, 05. *Asst. Dudley Observatory*, 05-; *dept. meridian astron.*, *Carnegie Institution*, 07- *Astron. Soc.* Meridian astronomy; sidereal motions.
- Raymond, Dean Howard Monroe**, Armour Institute of Technology, Chicago, Ill. *Physics.* Grass Lake, Mich, Oct. 25, 72. B.S.(E.E), Michigan, 93. Instr. *physics*, *Armour*, 95-98, *assoc. prof.*, 98-03, principal, *Armour Sci. Acad.*, 99-03, *prof. exp. physics and dean*, 03- A.A; Elec. Eng; Eng. Educ; West. Soc. Eng. Electrical engineering.
- Raymond, Dr. Percy E(dward)**, Museum of Comparative Zoology, Cambridge, Mass. *Invertebrate paleontology.* New Canaan, Conn, May 30, 79. A.B, Cornell, 02; Ph.D, Yale, 05. *Asst. curator in charge invert. paleont.*, *Carnegie Museum*, 04-10; *prof. invert. paleont.*, *Pittsburgh*, 09-10; *paleontologist*, *Can. Geol. Surv.*, 10-12; *asst. prof. paleont.*, *Harvard*, 12-17, *assoc. prof.*, 17-, *curator invert. paleont.*, *museum comp. zool.*, 12- A.A; Geol. Soc; Paleont. Soc; Mus. Ass; Am. Acad; Boston Soc. Nat. Hist; Boston Malacol. Club (past pres); Lunds Geol. Faltklub. Faunas and stratigraphy of the Ordovician formations; anatomy and classification of the Trilobita.
- Raymond, Miss Susan**, Smith College Observatory, Northampton, Mass. *Astronomy.* Darien, Conn, June 27, 92. A.B, Smith, 13, A.M, 19. Demonstrator astron, Smith, 13-15; fellow, Nantucket Maria Mitchell Ass, 15-17; *instr. astron.*, *Smith*, 17- *Astron. Soc.* Variable stars; asteroids.
- Raymond, Prof. William G(alt)**, Iowa City, Iowa. *Civil engineering.* Princeton, Iowa, March 2, 59. Kansas, 77-80; C.E, Washington (St. Louis), 84, L.L.D, 05; D.Eng, Michigan, 19. Instr. *civil eng.*, California, 84-90; *prof. geod.*, road eng. and topog. drawing, Rensselaer, 92-04; *civil eng. and dean, col. of applied science*, *Iowa*, 04- Locating engineer on various railroads; consulting engineer for pub. works and water works, Troy, N. Y. Civil Eng; Eng. Educ. (v. pres, 07, pres, 11); R. R. Eng; Iowa Eng. Soc. Railroad engineering, particularly the cost of operation; effect of gradients, curves, etc; adaptation of motive power; valuation.
- Raymond, Prof. William J(ames)**, 2622 Piedmont Ave, Berkeley, Calif. *Physics.* Utica, N. Y., July 27, 65. B.S, California, 87; Hopkins, 92-93. *Asst. mech.*, *California*, 87-89, *physics*, 87-91, *instr.*, 91-92, 93-96, *asst. prof.*, 96-08, *assoc. prof.*, 08- *Physical Soc.* Electrical measurements; differential ballistic galvanometer; harmonic synthesizers.
- Rea, Prof. Paul M(arshall)**, Cleveland Museum of Natural History, Cleveland, Ohio. *Zoology.* Cotuit, Mass, Feb. 13, 78. Woods Hole, 98, 99; A.B, Williams, 99, A.M, 01; Columbia, 99-00, 02-03. *Asst. biol.*, Williams, 00-02; *prof. biol.* and *geol.*, Col. of Charleston, 03-14; *director*, *Charleston Museum*, 03-20; *prof. embryol.* and *physiol.*, med. col, South Carolina, 11-19, *embryol.*, 19-20; *director*, *Cleveland Museum Nat. Hist.*, 20- Field *asst.*, *bur. forestry*, *U. S. Dept. Agr.*, 02, 03; *instr.*, Woods Hole, 06-11. A.A; Mus. Ass. (sec'y and ed, 'Proc,' 07-17, pres, 19-). Anatomy and physiology of Oligochaeta; Annelida; fauna of coastal region of South Carolina; museum administration.
- Read, Prof. Thomas T(hornton)**, Bureau of Mines, Washington, D. C. *Metallurgy.* Monmouth Co, N. J, Feb. 10, 80. E.M, Columbia, 02, fellow, 04-05, Ph.D, 06. *Assoc. prof. mining*, Wyoming, 02-04; *asst. miner*, Columbia, 05-06; *prof. mining and metal*, Colorado Col, 06-07; *metal*, Pei Yang Univ, Tientsin, China, 07-10; *assoc. ed.*, 'Mining and Scientific Press,' 01-15; *chief, service div.*, N. J. Zinc Co, 15-19; *educ. information*, *U. S. Bur. Mines*, 19- A.A; Min. and Metal. Eng. Amalgamation of gold ores; platinum in ores; copper ores; the phase rule applied to igneous magmas; mineral resources and production of the Chinese Empire.
- Reade, Prof. J(ohn) M(oores)**, Athens, Ga. *Botany.* Markham, Ont, Dec. 17, 77. B.S.A, Toronto, 06; Munich, 05; Goldwin Smith fellow, Cornell, 06-07, Ph.D, 08. Teacher, Philippine service, 02-04; *instr. bot.*, Georgia, 07-08, *prof.*, 08-, *director, biol. lab.*, 19- A.A; Bot. Soc; Phytopath. Soc.
- Reagan, Prof. Albert B.**, Kayenta, Ariz. *Geology, Ethnology.* Maxwell, Iowa, Jan. 22, 71. A.B, Indiana, 03, A.M, 04; Stanford, 08. *Principal, Marsh Pass Indian Sch.* Curio collector and ethnol. contributor, Bur. Am. Ethnol, 00-09; dept. anthrop, Victoria Mem. Museum, Can,

- 09- A.A.; Ind. Acad.; Kans. Acad.; Calif. Acad. Paleontology; anthropology.
- Reagan, Dr. F(ranklin) P(earce)**, University of California, Berkeley, Calif. *Anatomy*. Sheridan, Ind, June 20, 90. A.B., Indiana, 13; Ph.D., Princeton, 16, Jacobus fellow, 17-18. Instr. gross anat., med. dept., Illinois, 19; *asst. prof. zool., California*, 19- Instr. mil. aeronautics, U.S.A., 18-19. Ass. Anat. Origin of blood and endothelium; chondrification; embryonic castration; venous drainage.
- Reames, Dr. Eleanor Elmlire**, 558 Lowerline St., New Orleans, La. *Physics, Biology*. New Orleans, La, Feb. 18, 83. A.B., Tulane, 05; A.M., 07, Ph.D., 13; Chicago, summers, 14, 15. *Instr. physics, Tulane*, 09- A.A.; New Orleans Acad.
- Reaves, Prof. S(amuel) W(atson)**, Norman, Okla. *Mathematics*. Marion, S. C, July 27, 75. B.S., North Carolina, 99; A.B., Cornell, 00, 00-01; A.M., Chicago, 12, Ph.D., 15. *Inst. math*, Mich. Mil. Acad., 01; *asst. prof.*, Clemson, 01-05; *prof.*, *Oklahoma*, 05- Math. Soc.; Math. Ass. Metrical properties of fecundates on ruled surfaces.
- Recknagel, Prof. A(rthur) B(ernard)**, 706 Stewart Ave, Ithaca, N. Y. *Forestry*. Brooklyn, N. Y., Dec. 15, 83. A.B., Yale, 04, M.F., 06; Forstakademie, Eberswalde, Germany, 11. With U. S. Forest Service, 06-13; *prof. forestry, Cornell*, 13- Forester and sec'y, Empire State Forest Products Ass., 17-; board of editors, 'Journ. of Forestry,' 13- Soc. Foresters. Forest management.
- Record, Dr. Edward**, University of Nevada, Reno, Nev. *Veterinary science*. Los Angeles, Calif., March 15, 86. D.V.M., Pennsylvania, 09. Lab. asst., Pa. Stock Sanit. Ass., 10-11; bacteriologist, H. K. Mulford Co., 11-14; *veterinarian*, Nev. *Exp. Sta.*, and *director, state vet. control service*, 14- Soc. Bact.; Vet. Med. Ass.; U. S. Live Stock Sanit. Ass. Infectious diseases of animals; poisonous range-plants.
- Record, Prof. Samuel J(ames)**, 360 Prospect St., New Haven, Conn. *Forestry*. Crawfordsville, Ind, March 10, 81. A.B., Wabash, 03, A.M., 06; M.F., Yale, 05. Forest asst., U. S. Forest Service, 04-07; forest supervisor, 07-10; *instr. forestry, Yale*, 10-11, *asst. prof. forest products*, 11-17, *prof.*, 17- Managing ed., 'Yale Forest Sch. News.' A.A.; Soc. Foresters. Structure and identification of woods; timber physics; timber preservation.
- Reddick, Prof. Donald**, Ithaca, N. Y. **Plant pathology*. Sheridan, Mo, March 1, 83. A.B., Wabash, 05; Ph.D., Cornell, 09. Student asst. bot., Wabash, 03-05; *asst. mycol.*, *Cornell*, 05-07, *instr. plant path.*, *N. Y. State Col. Agr.*, 07-09, *asst. prof.*, 09-11, *prof.*, 11-, *botanist*, *N. Y. Exp. Sta. Geneva*. Ed., 'Phytopathology,' 15-18; *path. sect.*, 'Bot. Abstracts,' 18-20. A.A.; Soc. Nat.; Bot. Soc.; Phytopath. Soc. (councilor, 19-). Grape diseases; mosaic diseases; conditions of parasitism.
- Reddick, Prof. H(arry) W(ilfred)**, Cooper Union, New York, N. Y. *Mathematics*. Raysville, Ind, Feb. 6, 83. A.B., Indiana, 04; fellow, Illinois, 05-06, A.M., 06; Ph.D., Columbia, 10. Instr. high sch., Alexandria, Ind, 04; acad., Illinois, 04-05; Shortridge High Sch., Indianapolis, Ind, 06; *asst. math*, Columbia, 07-09, tutor, 09-10, *instr.*, 10-15; *prof. and head of dept.*, *Cooper Union*, 15- Math. Soc.; Math. Ass. Differential geometry.
- Redfield, Prof. Alfred C(larence)**, Concord, Mass. *Physiology*. Philadelphia, Pa, Nov. 15, 90. B.S., Harvard, 14, Ph.D., 17. Instr. *physiol.*, Harvard Med. Sch., 18-19; *asst. prof.*, Toronto, 19-20. A.A.; *Physiol. Soc.* Chromatophores; physiological action of radiations from radium and of ultra-violet light.
- Redfield, Dr. Harry W(estfall)**, 641 Washington St., New York, N. Y. *Chemistry, Bacteriology*. Brooklyn, N. Y., Feb. 21, 78. B.S., Cornell, 00, Ph.D., 12. Chemist and supt., Davis and Quick, 00-06; *asst. chem.*, Cornell, 06-07, *instr. sanit. chem.*, 07-15; bacteriologist, Ill. State Food Dept., 15-16; in charge inspection microbiol., *bur. chem.*, *U. S. Dept. Agr.*, 16-19, *chief*, *N. Y. Sta.*, 19- Chem. Soc.; Soc. Bact.; Pub. Health Ass.; Int. Ass. Milk and Dairy Inspectors (third v. pres). Culture media for examination of water; production of hydrogen sulphid by bacteria in water and application in water examination; detection of decomposition in frozen and liquid eggs; phenol sulphonic acid method for determining nitrates in water; quality of churning cream and butter; detection of remade milk and cream.
- Redman, Lawrence V**, 636 W. 22d St., Chicago, Ill. *Chemistry*. Oil Springs, Ont, Sept. 1, 80. B.A., Toronto, 08, fellow, 08-10. Indust. fellow and *asst. prof.*, Kansas, 10-14; *pres.*, *Redmanol Chem. Products Co.*, 14- Chem. Soc. (chairman, Chicago sect., 18, 19). Phenol condensation products.
- Reed, Prof. C(arlos) I(saac)**, 1609 Vermont St., Lawrence, Kans. *Physiology*. Batesville, Ohio, Oct. 7, 87. A.B., Ohio State, 15. Instr. *physiol.*, Ohio State, 18; pharmacologist, C.W.S., U.S.A., 18; scientific asst., U. S. Pub. Health Service, 19; *asst. prof. physiol. and hygiene*, *Kansas*, 19- Asst. *physiol.*, Chicago, summer, 15. A.A.; Kans. Acad.; Ohio Acad. Placodal ganglia of *Squalus acanthias*; thyroid gland of dogs; hygiene and sanitation in rural schools.
- Reed, C(harles) J(ohn)**, Middle Ave, San Mateo, Calif. *Electrochemistry*. Jasper Co, Iowa, June 29, 58. A.B., Michigan, 81. Prof. physics and chem, high sch., Princeton, Ill, 81-83; Burlington, Iowa, 83-86; *consulting engineer*, 86- A.A.; Chem. Soc.; Electrochem. Soc. (sec'y, 02); Elec. Eng.
- Reed, Dr. F(rank) H(ynes)**, 340 Park Ave, Newark, N. J. *Chemistry*. Logansport, Ind, Jan. 12, 90. A.B., Wabash, 11; fellow, Chicago, 15-17, Ph.D., 17. Instr. chem., Wabash, 13-14; Mich. Agr. Col., 14-15; *research chemist*, *Sherwin-Williams Co.*, 17-19; *Butterworth-Judson Corp.*, 19- Chem. Soc. Physical chemistry; organic dyes.
- Reed, Dr. F(rank) W(alker)**, Ithaca, N. Y. *Mathematics*. Wytheville, Va, June 17, 81. A.B., Nashville, 02; Vanderbilt fellow, Virginia, 04-07, A.M., Ph.D., 07. Instr. astron., Illinois, 07-17, sch. mil. aeronautics, 17-18; *math.*, *Cornell*, 19- A.A.; Astron. Soc.; Math. Soc.; Math. Ass. Celestial mechanics; development of the perturbative function; integral invariants.

- Reed, Dr. George M(atthew)**, Brooklyn Botanic Garden, Brooklyn, N. Y. *Botany*. Ingleside, Pa., May 2, 78. A.B., Geneva, 00; A.M., Wisconsin, 04, Ph.D., 07. Prof. nat. science, Amity, 00-03; asst. bot., Wisconsin, 04-07, instr., 07; asst. prof., Missouri, 07-12, prof., 12-18; pathologist, bur. plant indust., U. S. Dept. Agr., 19-20; *curator*, *Brooklyn Bot. Garden*, 21- Instr. bot., N. Y. Univ., summer, 12; res. investigator, Brooklyn Bot. Garden, summers, 16, 17. A.A.; Bot. Soc.; Phytopath. Soc.; Soc. Prom. Agr. Sci.; Wis. Acad.; St. Louis Acad.; Wash. Bot. Soc. Plant pathology; powdery mildews; cereal smuts and rusts; physiological specialization of parasites.
- Reed, Prof. Guilford Bevil**, 218 Albert St., Kingston, Ont., Can. *Plant physiology*. Port George, N. S., Nov. 27, 87. B.S., Harvard, 12, A.M., 14, Ph.D., 15. Asst. bot., Harvard, 10-15; asst. prof., *Queen's (Can)*, 15-19, *prof. bacter*, 19- Instr. bot., N. S. Summer Sch. of Science, 12-14; botanist, Shaler Mem. exped., 11; capt., M.C. Can., 16-19. Walker prize, 12; Bowdoin prize, 15. Soc. Nat.; Bot. Soc.; Soc. Bact.; Ecol. Soc.; Chem. Soc. Oxidase ferments and respiration; starch digestion; plant hormones; peat formation; salt marshes; variation in bacteria.
- Reed, Prof. H(omer) B(losser)**, Moscow, Idaho. *Psychology*. Youngstown, Ohio, Aug. 16, 86. A.B., A.M., Indiana, 09; Ph.D., Chicago, 12; Columbia, 13-14. Instr. psychol., Illinois, 14-15; *asst. prof. philos. and psychol*, Idaho, 15- Psychol. Ass.; Philos. Ass. Educational and theoretical psychology; ethics of business.
- Reed, Prof. Howard S(prague)**, Citrus Experiment Station, Riverside, Calif. *Plant physiology*. North East, Pa., Aug. 6, 76. Grove City, 98; Woods Hole, 02; A.B., Michigan, 03; Ph.D., Missouri, 07; Strasbourg, 13. Asst. plant physiol., Michigan, 99-03; instr. bot., Missouri, 03-06; expert in soil fertility, bur. soils, U. S. Dept. Agr., 06-08; *prof. mycol. and bacter*, Va. Polytech., and plant pathologist, Va. Exp. Sta., 08-15; *prof. plant physiol*, *Citrus-Exp. Sta., California*, 15- Smithsonian table, Naples Zool. Sta., 13. Delegate, Tenth Int. Cong. Agr., Ghent, 13. A.A.; Bot. Soc.; Phytopath. Soc.; Soc. Biol. Chem.; West. Soc. Nat. Plant pathology; biochemistry; bacteriology.
- Reed, Prof. H(ugh) D(aniel)**, Cornell University, Ithaca, N. Y. *Zoology, Comparative anatomy*. Hartsville, N. Y., March 4, 75. B.S., Cornell, 99, fellow, 99-00, Ph.D., 03. Asst. *vert. zool*, Cornell, 00-02, instr., 02-06, asst. prof., 06-19, *prof*, 19- Int. Zool. Cong., Graz, 10. A.A.; Soc. Zool.; Ass. Anat.; Fisheries Soc. Animal morphology.
- Reed, John Byron**, U. S. Department of Agriculture, Washington, D. C. *Chemistry*. Lincoln Center, Maine, Aug. 15, 80. A.B., Michigan, 03. Instr. chem., Maine, 03-05; anal. and org. chem., Lowell Textile Sch., 05-09; *asst. chemist*, *bur. chem*, U. S. Dept. Agr., 09- A.A.; Chem. Soc. By-products of rice milling; peanut oil.
- Reed, Dr. Lowell J(acob)**, Johns Hopkins University, Baltimore, Md. *Mathematics*. Berlin, N. H., Jan. 8, 86. B.S., Maine, 07, M.S., 12; fellow, Pennsylvania, 13-14, Ph.D., 15. Instr. *math*, Maine, 07-13; Pennsylvania, 14-15; asst. prof., Maine, 15-17; *assoc. prof.*, Hopkins, 19-
- Director, bur. tabulation and statist., W.T.B., 17-18. Math. Soc.; Math. Ass.; Statist. Ass. Vital statistics; biometry.
- Reed, O(llie) E(zekiel)**, Lafayette, Ind. *Dairy husbandry*. Fayette, Mo., Aug. 19, 85. B.S., Missouri, 08, M.S., 10. Asst. dairy husbandry, Missouri, 08-09; asst. and instr., Purdue, 09-10; *chief, dairy dept*, Kansas State, 10-18; *Purdue*, 18- Dairy Sci. Ass.; Soc. Animal Production. Dairy cattle.
- Reed, Dr. Ralph (Wallace)**, 180 E. McMillan St., Cincinnati, Ohio. *Psychiatry*. Middletown, Ohio, Dec. 30, 79. M.D., Pulte Med. Col., 02. Asst., Middletown State Hosp., N. Y., 02-03; Dr. Givens' Sanitarium for Mental and Nervous Diseases, 03-05; *practising physician*, 06- Visiting neurologist, various hospitals. Psychopath. Ass.; Psychoanal. Ass.; Ass. Psychiat. Psychopathology; psychoanalysis; psychotherapy.
- Reed, W(endell) M(onroe)**, 2722 Ontario Road, Washington, D. C. *Civil engineering*. Moriah, N. Y., Dec. 28, 64. C.E., Vermont, 86. Railroad worker, 87-89; engineer, Pecos Valley Irrig. Co., 89-00; U. S. Reclamation Service, 02-12; *chief engineer*, U. S. Indian Irrig. Service, 12- Mem. second Pan-Am. Sci. Cong. Civil Eng.; Ass. Eng. Reclamation of arid lands.
- Reed, William G(ardner)**, 120 Chestnut St., Philadelphia, Pa. *Meteorology, Statistics*. Boston, Mass., Sept. 5, 84. A.B., Harvard, 06, A.M., 11. Asst. physiog., Harvard, 08-11, meteorol., 09-11; instr., climat., California, 11-15; Chicago, 15; asst. agr. geol., U. S. Dept. Agr., 15-17; meteorologist, U. S. Weather Bur., 17-19; capt. and later major, Sig. C., A.E.F., 18-19; *statistician*, *Geo. H. McFadden and Bro*, 19- A.A.; Am. Geog. Soc.; Ass. Geog.; Seismol. Soc.; Meteorol. Soc.; Statist. Ass.; Pacific Astron. Soc.; Royal Meteor. Soc. Climatology; rainfall distribution; cyclonic influence in climate; climate of California.
- Reeds, Dr. Chester A(lbert)**, American Museum of Natural History, New York, N. Y. *Geology*. Laecygne, Kans., July 20, 82. B.S., Oklahoma, 05; M.S., Yale, 07, Ph.D., 10. Instr. miner. and petrol., Oklahoma, 08; lecturer geol., Bryn Mawr, 08-10, assoc., 10-12; asst. curator, geol. and invert. paleont., *Am. Museum Nat. Hist*, 12-17, *assoc. curator invert. paleont*, 17- Field asst., U. S. Geol. Surv., summers, 03, 06, 08; collector, museum, Yale, summers, 05, 07; leader, Am. Museum Nat. Hist. field party, Okla., 14; Porto Rico, 15; exten. instr. geol., Columbia, 14-17. A.A.; Paleont. Soc.; fel. Geol. Soc.; Seismol. Soc.; Mus. Ass.; N. Y. Acad.; N. Y. Zool. Soc. Water resources of East St. Louis District; stratigraphy, paleontology and the economic products of the Arbuckle Mountains, Oklahoma; paleontology and stratigraphy in Porto Rico; museum exhibits.
- Reedy, Prof. J(ohn) H(enry)**, University of Illinois, Urbana, Ill. *Chemistry*. Plano, Tex., May 1, 78. A.B., A.M., Southwestern (Tex.), 00; M.S., Chicago, 14, Ph.D., Yale, 15. *Prof. chem*, Southwestern (Tex.), 05-13; South. Methodist, 15-18; *asst. prof*, Illinois, 18- Chem. Soc.; Electrochem. Soc. Inorganic and physical chemistry.
- Rees, Prof. Maurice H(olmes)**, 303 N. Dakota St., Vermilion, S. Dak. *Physiology*. Newton, Iowa,

- April 27, 82. A.B. Monmouth, 04; A.M. Illinois, 05; Ph.D. Chicago, 17. Prof. biol. Tarkio, 07-14; asst. prof. *physiol.* Kansas, 14-16; assoc. Chicago, 16-17, *prof.* South Dakota, 17- Effect of pituitary extracts on urinary secretion and intestinal absorption; endocrine organs.
- Rees, Prof. R(alph) W(aldo)**, Cornell University, Ithaca, N. Y. *Horticulture.* Newberg, Oregon, May 29, 86. A.B. Pacific (Oregon), 07; B.S. Oregon Col, 10. Asst. Oregon Col, 10-12; exten. instr. *pomol.* Mass. Col, 12-16; *exten. prof.* Cornell, 16- A.A.; Bot. Soc.; Soc. Hort. Sci. Pomology; internal structure of apple varieties.
- Reese, Prof. Albert M(oores)**, West Virginia University, Morgantown, W. Va. **Zoology.* Lake Roland, Md, April 1, 72. A.B. Hopkins, 92, Ph.D. 00. Teacher science, high schools; lecturer, Homeop. Med. Col, Baltimore, 93-98; prof. biol. Allegheny, 01-02; instr. Syracuse, 02-03, assoc. prof. histol, 03-07; *prof. zool.* West Virginia, 07- Lecturer histol. and embryol. Pennsylvania Col, 97; collaborator zool. Smithsonian Inst, 13; Smithsonian exped. to the Orient, 13; Carnegie Institution exped. to S. Am, 19. A.A.; Soc. Nat; Soc. Zool; Micros. Soc; Soc. Ichthyol. and Herp. Embryology, anatomy and habit of the American alligator; anatomy and habits of certain Amphibia.
- Reese, Dr. Cha(rles) L(ee)**, 1600 Brinkle St, Wilmington, Del. **Chemistry.* Baltimore, Md, Nov. 4, 62. Hopkins, 80-81; Virginia, 81-84; Ph.D. Heidelberg, 86; Göttingen, 86; hon. Sc.D. Pennsylvania, 19; Colgate, 19. Instr. chem. Hopkins, 86-88; prof. Wake Forest, 88; chem. and physics, S. C. Mil. Acad, 88-96; instr. chem. Hopkins, 96-00; chief chemist, N. J. Zinc Co, 01-02; Eastern Dynamite Co. and director, Eastern Lab, 02-04; *chem. director.* E. I. duPont de Nemours Powder Co, 04-15; *E. I. duPont de Nemours and Co.* 15- A.A.; Chem. Soc. (chairman, Phila. sect, 18, Del. sect, 19); Soc. Chem. Indust; Chem. Eng; Franklin Inst; Chem. Gesell; Chem. Verein. Origin of South Carolina phosphate rock; catalytic process of manufacture of sulphuric acid and other chemical problems; manufacture of explosives; dyes and intermediates.
- Reese, Dr. Herbert M(eredith)**, Columbia, Mo. *Physics.* Baltimore, Md, Dec. 1, 73. A.B. Hopkins, 97, Ph.D. 00, fellow, Lick Observatory, 00-01. Asst. spectros. Lick Observatory, 01-03; Yerkes Observatory, 03-04; instr. *physics.* Missouri, 04-07, asst. prof. 07-12, *assoc. prof.* 12- A.A.; Astron. Soc; Physical Soc. The Zeeman effect; astronomical spectroscopy; investigations of stellar spectra; orbit of spectroscopic binary; optical rotation.
- Reese, Dr. Stanley C(hester)**, 628 College Ave, E.E. Pittsburgh, Pa. *Engineering.* Pittsburgh, May 4, 74. A.B. Princeton, 96, fellow, 96-98, A.M. 97, Ph.D. 99. Prof. math. acad. Princeton, 98-99; research asst. Yerkes Observatory, 99-01; asst. eng. dept. Carnegie Steel Co, 01-02; mech. engineer, Riter Conley Mfg. Co, 02-07; Jones and Laughlin Steel Co. and other firms, 07-15; H. Koppers Co, 15-18; research engineer, Am. Steel and Wire Co, 18-19; *asst. engineer, bur. building inspection,* Pittsburgh, Pa, 19- A.A.; Astron. Soc. Orbits of minor planets; optics; rolling of steel.
- Reeside, Dr. John B(ernard), Jr**, Hyattsville, Md. *Geology.* Baltimore, Md, June 24, 89. A.B. Hopkins, 11, Ph.D. 15. Asst. geologist, U. S. Geol. Surv, 15-19; *paleontologist*, 19- A.A.; Paleont. Soc; Wash. Geol. Soc. Stratigraphy; paleontology; Helderberg limestone; Jurassic ammonites; geology of San Juan County, N. Mex.
- Reeve, C(harles) S(nyder)**, Grantwood, N. J. *Chemistry.* Philadelphia, Pa, 75. B.S. Pennsylvania, 97. Asst. chemist, Gen. Elec. Co, 97-00; chem. engineer, Indust. Water Co, 00-03; chemist, Phila. Bur. Surveys, 03-06; asst. inspector asphalt and cement, D. C, 06-09; asst. chemist and chemist, office pub. roads, U. S. Dept. Agr, 09-18; *research chemist, Barrett Co.* 18- Chem. Soc; Soc. Test. Mat. Testing and use of bituminous materials.
- Reeve, Prof. Sidney A(rmor)**, St. Marks Apartments, New Brighton, N. Y. *Mechanical engineering.* Dayton, Ohio, March 27, 66. Ph.B. Yale, 85, M.E. 87. Instr. Sheffield Sci. Sch, Yale, 85; with Westinghouse, Church, Kerr and Co, 87-94; asst. ed. 'Progressive Age,' 95; adj. prof. steam and hydraul. eng. Worcester, 96-98, prof. 98-06; lecturer eng. Harvard, 06-07; *consulting engineer,* N. Y. City, 08- Lecturer hydrodynamics and thermodynamics, Grad. Naval Officers' College, 11-12. Hydraulic interaction of passing ships; vacuum-cleaning; heat-engine cycles; power from continuous combustion under constant pressure; the physical nature of entropy; graphical thermodynamics; energetics; economic history; social energetics.
- Reeves, Dr. Frank**, U. S. Geological Survey, Washington, D. C. *Geology.* Triune, W. Va. Oct. 11, 86. A.B. West Virginia, 11; Ph.D. Hopkins, 16. *Geologist, U. S. Geol. Surv.* 18- Geology of oil fields.
- Reeves, Geo(rge) I**, 1466 Edison St, Salt Lake City, Utah. *Entomology.* Morris, Ill, March 4, 79. A.B. Illinois, 02, fellow, 02-03. Asst. entom. Missouri and Mo. Exp. Sta, 03-04; *entom. asst, bur. entom.* U. S. Dept. Agr, 04- Instr. zool. Illinois, summer, 03. A.A.; Ecol. Soc; Ass. Econ. Entom. Insects affecting cereal and forage plants; alfalfa weevil.
- Reeves, Prentice**, Eastman Kodak Co, Rochester, N. Y. *Psychology.* Joplin, Mo, Sept. 20, 88. A.B. Missouri; A.M. Princeton. Instr. psychol. Princeton, 12-16; *research psychologist, Eastman Kodak Co.* 16-18, 19- Lieut. Sig. C, 18-19. Psychol. Ass; Optical Soc. Physiological optics; pupillary reflex.
- Reger, David B(right)**, Morgantown, W. Va. *Geology.* Rural Dale, April 11, 82. A.B. West Virginia, 09, B.S.(C.E.), 11. Field asst. U. S. Geol. Surv, 03-06; hydrographic surveyor, U. S. Naval Station, Cuba, 06-07; field asst. *W. Va. Geol. Surv.* 09-13, *asst. geologist*, 13-; *consulting geologist*, 19- A.A.; Geol. Soc; Min. Eng. Economic geology; topography; geology of numerous counties of West Virginia.
- Rehder, Alfred**, Arnold Arboretum, Jamaica Plain, Mass. *Botany, Dendrology.* Waldenburg, Saxony, Sept. 4, 63. Gymnasium, Zwickau, 76-81;

- Berlin, 84-85; Göttingen, 89-91; hon. A.M., Harvard. Asst. *Arnold Arboretum*, 98-19, *curator*, *Herbarium*, 19- A.A.; Bot. Soc.; Am. Acad.; Soc. Hort. Sci.; New Eng. Bot. Club; Boston Nat. Hist. Soc.; Bot. Gesell.; Dendrol. Gesell. Taxonomy of woody plants; bibliography of woody plants; Chinese ligneous plants.
- Rehfuß, Dr. Martin E(mil)**, Northeast Cor. 16th and Spruce Sts, Philadelphia, Pa. *Medicine*. Philadelphia, Aug. 8, 87. M.D., Pennsylvania, 09. *Assoc. med.*, *Jefferson Med. Col.* Assoc. Am. Physicians; Gastro-Enterol. Ass.; Am. Med. Ass. Gastric physiology and pathology; functions of stomach, pancreas, gall bladder and intestines.
- Rehn, James A(bram) G(arfield)**, Philadelphia Academy of Natural Sciences, Philadelphia, Pa. *Mammalogy*, *Orthopterology*. Philadelphia, Oct. 26, 81. Pa. Acad. Fine Arts. *Asst. curator*, *Acad. Nat. Sciences*, *Phila.*, 03- Assoc. Ornith. Union; Entom. Soc. (v. pres. and ed); Soc. Mammal; Phila. Acad. Faunistic and systematic studies in the Orthoptera at large; geographic distribution of North American Orthoptera.
- Reichert, Prof. Edward (Tyson)**, Medical School, University of Pennsylvania, Philadelphia, Pa. **Physiology*. Philadelphia, Feb. 5, 55. M.D., Pennsylvania, 79, Sc.D, 13; Leipzig and Geneva, 82-85. Prof. physiol., Pennsylvania, 86-20, retired, 20. A.A.; Soc. Nat.; Physiol. Soc.; Soc. Exp. Biol.; Phila. Col. Physicians, etc. Physiology of the heart, respiratory and circulatory mechanisms; the toxic principles and physiological actions of serpent venoms; the differentiation and specificity of homologous proteins and other organic substances in relation to genera, species and organic evolution; the crystallography of hemoglobins; physiological apparatus; biochemical basis of problems of taxonomy and heredity.
- Reid, Dr. E. Emmet**, Johns Hopkins University, Baltimore, Md. **Chemistry*. Pinecastle, Va., June 27, 72. A.M., Richmond, 92, LL.D, 17; fellow, Hopkins, 97-98, Ph.D, 98. Prof. chem., Charleston, 98-01; Baylor, 01-08; Carnegie asst., Hopkins, 08-09, Johnston scholar, 09-11; research chemist, Colgate and Co, 11-14; assoc. prof. chem., Hopkins, 14-16, *prof. org. chem.*, 16- Demonstrator chem., Maryland, 96-97. A.A.; Chem. Soc. (chairman, div. org. chem, 20); Chem. Gesell. Organic chemistry; hydrolysis and alcoholysis of acid amides; perchromates; thio acids and alcohols and their esterification; the formation of nitriles; organic sulphur compounds; relative solubilities; organic catalysis; identification of acids, alcohols and phenols.
- Reid, Prof. Harry Fielding**, 608 Cathedral St, Baltimore, Md. **Geophysics*. Baltimore, May 18, 59. C.E., Pa. Mil. Acad, 76; A.B., Hopkins, 80, Ph.D, 85. Prof. math, Case, 86-89, physics, 89-94; lecturer, Hopkins, 94-96, assoc. prof. geol. physics, 96-01, *prof.*, 01-11, *dynamic geol. and geog.*, 11- Assoc. prof. physical geol., Chicago, 95-96; chief, highway div., Md. Geol. Surv., 98-05; special expert in charge of earthquake records, U. S. Geol. Surv., 02-; Hitchcock lecturer, California, 11. Mem. Commission Int. des Glaciers, 94-; delegate, Int. Seismol. Ass., 06- Nat. Acad.; A.A.; Physical Soc.; Geol. Soc.; Ass. Geog.; Seismol. Soc.; Philos. Soc.; Wash. Acad.; Phila. Acad.; hon. mem. Soc. Helvétique des Sci. nat. Dynamic geology, seismology and glaciology; origin of mountain ranges; variations of glaciers.
- Reid, Dr. L(egh) W(ilber)**, Haverford College, Haverford, Pa. *Mathematics*. Alexandria, Va., 67. B.S., Va. Mil. Inst., 87; A.B., Hopkins, 89; M.S., Princeton, 96; Ph.D, Göttingen, 99. *Instr. math.*, Princeton, 93-97, 99-00; *Haverford*, 00-01, assoc. prof., 01-07, *prof.*, 07- Math. Soc.; Math. Ass. Class numbers of cubic algebraic number reals; the theory of algebraic numbers.
- Reiff, (Florenz Emil) William**, 366 Arborway, Jamaica Plain, Mass. *Entomology*. Barmen, Germany, March 12, 82. Königsberg; Berlin. With Naturhistor. Museum, Berlin, 06-07; Bussey Inst., Harvard, 08-10; Mass. Gipsy Moth Commission, 10-12; *director*, *New Eng. Entom. Co.*, 12- Entom. Soc.; Mass. Hort. Soc. (life mem); Cambridge Entom. Club (v. pres, 11); Int. Entom. Verein. Experimental lepidopterology; gipsy moth; Catocala; hybridization.
- Reighard, Prof. Jacob (Ellsworth)**, 1502 Cambridge Road, Ann Arbor, Mich. **Zoology*. La Porte, Ind., July 2, 61. Ph.B., Michigan, 82, 85-86; private student with Dr. E. L. Mark, Cambridge, 83-85. Teacher science, high sch., La Porte, Ind., 82-83; *instr. zool.*, *Michigan*, 86-87, 88-89, acting asst. prof., 87-88, asst. prof., 89-91, *prof. animal morph.*, 91-95, *zool.*, 95-, *director*, *zool. lab.*, formerly director, *zool. museum* and *biol. sta.* In charge sci. work, Mich. Fish Commission, 90-95; *biol. surv. of Great Lakes*, U. S. Fish Commission, 98-01; trustee, Woods Hole. Prize, Int. Fisheries Cong., Washington, 08. A.A. (v. pres, F, 10); Soc. Nat.; Soc. Zool. (v. pres, eastern branch, pres, central branch, 93); Ecol. Soc.; Fisheries Soc. (pres, 15); Mich. Acad. (pres, 00). Fresh water plankton; embryology of teleosts; breeding habits of fishes; warning coloration; sub-aquatic photography; breeding habits of Petromyzon, Catostomidae, Cyprinidae, Centrarchidae; evolution factors in relation to animal coloration.
- Reighley, H(enry) H(erbert)**, 2132 Indianola Ave., Columbus, Ohio. *Physics*. Cherry Fork, Ohio, Nov. 18, 81. B.S., Ohio Northern, 02; A.B., Miami, 09; A.M., Ohio State, 13. Supt. schools, Adams Co., Ohio, 03-05; principal, high sch., 05-07; *instr.*, Miami Acad., 07-09; *physics*, *East High Sch.*, Columbus, 09- Physical Soc.; Ohio Acad.; Ass. Math. and Sci. Teachers. The Weidemann effect in monel and nichrome wires.
- Reimann, Dr. Stanley P(hilip)**, University of Pennsylvania, Philadelphia, Pa. *Pathology*. Philadelphia, Oct. 13, 91. M.D., Pennsylvania, 13. Hanna research fellow path, Western Reserve, 16-17; *instr. path.*, *Pennsylvania*, 17-; *chief of laboratories*, *Lankenau Hosp.*, *Phila.*, 17- Ass. Path. and Bact.; Phila. Col. Physicians. Physiology; biochemistry.
- Reimer, Dr. Marie**, Barnard College, New York, N. Y. *Chemistry*. Sunbury, Pa. A.B., Vassar, 97; Ph.D, Bryn Mawr, 04; Berlin, 02-03. Instr., asst. prof. and *assoc. prof. chem.*, *Barnard*, 03- A.A.; Chem. Soc.; Chem. Gesell. Addition reactions; action of light on unsaturated organic compounds.

- Reinking, Prof. Otto A(ugust)**, University of the Philippines, College of Agriculture, Los Baños, P. I. *Plant pathology*. Madison, Wis, Feb. 11, 90. B.S.A, Wisconsin, 12, M.S, 15. In charge, dept. agr. Mid-Pacific Inst, Mills Sch, Honolulu, Hawaii, 12-13; instr. and asst. botanist, Colo. Agr. Col. and Exp. Sta, 15-16; asst. prof. and later *prof. plant path*, Univ. Philippines, 16- Collaborator, U. S. Dept. Agr, China, Siam and the East. A.A.; Bot. Soc.; Phytopath. Soc. Plant diseases in Colorado and the Philippines; bud rot of coconuts; diseases of citrus.
- Reisinger, Dr. E(mory) W(illiam)**, 1228 16th St, N. W, Washington, D. C. *Anatomy, Medicine*. Washington, Sept. 16, 71. M.D, Georgetown, 93. *Demonstrator anat*, Georgetown, 94-, *lecturer osteol*, 98- Ass. Anat.; Am. Med. Ass; Wash. Acad. Dermatitis due to quinin; aneurism of abdominal aorta; exfoliative dermatitis of neurotic origin; typhoid vaccination; cubeb poisoning.
- Reist, H(enry) G(erber)**, 110 Avon Road, Schenectady, N. Y. *Electrical engineering*. Mt. Joy, Pa, May 27, 62. M.E, Lehigh, 86. Asst. supt, Harrisburg Foundry and Machine Co, 88-89; *Gen. Elec. Co*, 89-99, *chief designer*, 99- Lecturer, Union and Cornell. A.A.; Mech. Eng; Elec. Eng; East. N. Y. Soc. Eng. (past pres). Botany; electrical machinery.
- Rejall, Prof. Alfred E(rnst)**, 54 Thompkins Place, Brooklyn, N. Y. *Psychology*. Brooklyn, July 22, 85. Fellow, A.B, Columbia, 06; A.M, 07. Prof. psychol. and educ, State Nor. Col, Albany, N. Y, 09-12; asst. psychol, Columbia, 12-14; instr, dept. educ, Boston, 16-18; psychologist, Sanit. C, 18-19; *supervisor immigrant educ*, N. Y. State Dept. Educ, 19- A.A.; Am. Acad. Practise in typewriting; individual differences in delinquent and normal children.
- Remington, Dr. Lewis D**, Monrovia, Calif. *Medicine*. Pontiac, Mich, Aug. 31, 69. M.D, California, 09. Principal, high sch, Fenton, Mich, 90-02; instr. *diseases of chest*, Southern California, 12-15, lecturer, 15-16, *asst. prof*, 16-18; *Col. Med. Evangelists*, 18- A.A.; Am. Med. Ass. Tuberculosis.
- Remington, Roe E(ugene)**, Moorhead, Minn. *Chemistry*. Northville, Mich, Sept. 3, 81. A.B, Colorado, 05; Iowa, 05-07. Asst. instr. chem, Colorado, 03-05; teacher science, high sch, Montrose, Colo, 05; instr. chem, Iowa, 05-07; chemist, Armour and Co, Chicago, 07-08; asst. food chem; N. Dak. Col, 08-18; *pres. and gen. manager*, Remington Packing Co, 18- A.A.; Chem. Soc. Food chemistry.
- Remsen, Dr. Ira**, Johns Hopkins University, Baltimore, Md. **Chemistry, Education*. New York, N. Y, Feb. 10, 46. A.B, Col. City of N. Y, 65; M.D, Columbia, 67, LL.D, 93; Ph.D, Göttingen, 70; LL.D, Princeton, 96; Yale, 01; Toronto, 02; D.C.L, Univ. of the South, 07; LL.D, Harvard, 09; Pa. Col, 10; Pittsburgh, 15. Asst. chem, Tübingen, 70-72; prof, Williams, 72-76; Hopkins, 76-13, pres, 01-13, *emer. prof. and emer. pres*, 13- Willard Gibbs medal, Chem. Soc, 13. Nat. Acad. (v. pres, 03-07, pres, 07-13); A.A. (v. pres, 79, pres, 03); Chem. Soc. (pres); Soc. Chem. Indust. (pres, 09); Am. Acad; Philos. Soc; cor. mem. British Ass; for. mem. London Chem. Soc; hon. mem. Pharmaceut. Soc. Gt. Britain; for. hon. mem. Soc. chim. de France. Oxidation of aromatic substitution products; double halids; decomposition of diazo-compounds; a new type of isomerism as exhibited in the chlorids of orthosulphobenzoic acid.
- Renouf, Prof. Edward**, Monkton, Md. **Chemistry*. Lowville, N. Y, Sept. 4, 48. Heidelberg, 64; Jena, 65-66; Munich, 67-68, 77-80; Ph.D, Freiburg, 80. Asst. chem, Munich, 80-85; Hopkins, 85-86, assoc, 86-88, assoc. prof, 88-90, collegiate prof, 90-11.
- Renshaw, Prof. R(aemer) R(ex)**, Harvard Medical School, Boston, Mass. *Chemistry*. Sierraville, Calif, Aug. 31, 80. B.S, Oregon, 02, M.S, 03; fellow, Columbia, 04-05, Ph.D, 07. Instr. chem, Oregon, 02-04; Wesleyan, 07-12, assoc. prof, 12-13; org. chem, Iowa State, 13-19; *asst. prof. chem. research*, Harvard Med. Sch, 19- Capt, C.W.S, 18-19. Chem. Soc. Aminophthalic acids; cholin and its derivatives; bactericidal properties of lecithins and cholin; diglycerids; the action of heat on milk; hydrolytic decomposition of nitrobenzene; phosphates of 2,3-disterin; trimethylarsine selenid; preparation of zinc methyl; carbohydrates of the corn cob; dyes containing furane cycle.
- Rentschler, Dr. H(arvey) C(layton)**, Westinghouse Research Laboratory, E. Pittsburgh, Pa. *Physics*. Hamburg, Pa, March 26, 81. A.B, Princeton, 03, fellow, 03-04, A.M, 04; Ph.D, Hopkins, 08. Instr. physics, Princeton, 04-05; Pennsylvania Col, 07; Missouri, 08-17; *in charge lamp research*, Westinghouse Lamp Co, 17- A.A.; assoc. mem. Physical Soc. Relative motion of ether and matter; dispersion of gases in ultra-violet; resonance and ionization of monatomic gases; are phenomena in various gases.
- Resser, Dr. Cha(rls) E(imer)**, U. S. National Museum, Washington, D. C. *Paleontology*. East Berlin, Pa, April 28, 89. Ph.D, George Washington, 17. Asst. curator paleont, U. S. Nat. Museum, 15- Instr. geol. and geog, George Washington, 15- A.A.; Paleont. Soc. Cambrian stratigraphy and paleontology.
- Retinger, Dr. Julius M**, Rush Medical College, Chicago, Ill. *Physiological chemistry*. Krakow, Poland, 85. Ph.D, Leipzig, 13. Asst. prof. *physiol. chem*, Rush Med. Col, 20- Relation of chemistry to immunology and serology; blood enzymatic reactions.
- Rettger, Prof. E(mest) W(illiam)**, Cornell University, Ithaca, N. Y. *Applied mechanics*. Huntingburg, Ind, April 6, 71. Grad, Ind. State Nor, 91; A.B, Indiana, 93; Ph.D, Clark, 98. Asst. prof. *applied mech*, Cornell, 08- A.A. Lie's theory of groups; applications of the theories of least work and of virtual work; the economic diameter of penstocks.
- Rettger, Prof. L(eo) F(rederick)**, 198 Edwards St, New Haven, Conn. *Bacteriology, Hygiene*. Huntingburg, Ind, March 17, 74. A.B, Indiana, 96, A.M, 97; Ph.D, Yale, 02; Strasbourg, 03. Instr. *bacter*, Sheffield Sci. Sch, Yale, 02-06, asst. prof, 06-19, *prof*, 19-; *non-res. bacteriologist in charge investigations of animal diseases*, Conn. Exp. Sta, 09- Research scholar, Rocke-

- feller Inst, 01-03, fellow, 03-06; mem. Hygiene Referee Board; lecturer bacter, Wesleyan, 17-18. A.A.; Soc. Bact. (councilor, 13, pres, 17); Soc. Exp. Biol; Pub. Health Ass; Am. Med. Ass. Decomposition of milk on heating; pancreatic digestion and the spleen; pathogenic yeast; chemical products of bacteria; milk and carbohydrate feeding; disinfection of water; bacterial variation, nutrition and autolysis; anaerobes; infectious abortion of cattle; black-head of turkeys; white diarrhea of chicks; bacteriology of eggs; putrefaction; bacterial classification; transformation of intestinal flora.
- Rettger, Prof. L(ouis) J(ohn)**, 31 Gilbert Ave, Terre Haute, Ind. *Physiology*. Huntingburg, Ind, Oct. 19, 67. A.B, Hopkins, 88; Ph.D, 09; A.M, Indiana, 90. *Prof. physiol, Ind. State Nor. Sch*, 91- Fel. Ind. Acad. Coagulation of the blood; action of fluorid plasma.
- Retzer, Dr. Robert**, Creighton University, Omaha, Nebr. *Anatomy*. Freinsheim, Germany, Jan. 22, 81. Giessen; Berlin; M.D, Leipzig, 04; fellow, Hopkins, 05. Asst, later instr. and assoc. anat, Hopkins, 05-09; asst. prof. Minnesota, 09-11; Chicago, 11-15; assoc. prof, Pittsburgh, 16-18; *prof. and dean, med. sch, Creighton*, 18- A.A.; Soc. Nat; Ass. Anat. Atrioventricular bundle of the mammalian heart; anatomy and development of the mammalian heart.
- Revell, Prof. Daniel G(raisberry)**, Edmonton, Alta, Can. *Anatomy, Criminology*. Ingersoll, Ont, Aug. 15, 69. B.A, Toronto, 94, M.B, 00; fellow, Chicago, 00-02. Master science, high sch, Tilsonburg, Ont, 89-91; Paris, Ont, 94-97; instr. anat, Chicago, 02-07; provincial bacteriologist, Alberta, 07-14; *prof. anat, Alberta*, 14- A.A.; Ass. Anat; Can. Med. Ass; Can. Nat. Commission Mental Hygiene; Alberta Med. Ass. (pres). Pancreatic ducts in dog; human gastric mucosa; questioned documents; identification; handwriting.
- Reynolds, Dr. Clarence N(ewton), Jr**, 16 Sargent St, Hanover, N. H. *Mathematics*. Nashua, N. H, Feb. 6, 90. Ph.B, Brown, 13, A.M, 14; Ph.D, Harvard, 19. *Instr. math, Wesleyan*, 16-20; *Dartmouth*, 20- Math. Soc; Math. Ass. Mathematical analysis; linear differential equations.
- Reynolds, Prof. Ernest S(haw)**, Agricultural College, N. Dak. *Plant pathology*. Glendale, Mont, Dec. 7, 84. Ph.B, A.M, Brown, 07; fellow, Illinois, 07-09, Ph.D, 09. Instr. and asst. prof. bot, Tennessee, 09-12; assoc. prof. and later *prof. N. Dak. Col*, 12- Special agent, office forest path, U. S. Dept. Agr, summers, 11, 17, 19; Minn. Dept. Forestry, 16. A.A; Bot. Soc; Phytopath. Soc; New Eng. Bot. Club. Systematic botany; pathological morphology; physiology of fungi.
- Reynolds, Floyd W(ilson)**, 3546 Warder St, N. W, Washington, D. C. *Chemistry*. Guyandotte, W. Va, June 18, 91. B.S, Cent. Wesleyan, 11; M.S. Central Col. (Mo), 14-15. Instr. chem, Morris Harvey, 14-18; junior chemist, Bur. Standards, 18-19; instr. chem, Hopkins, 19-20; *junior chemist, bur. chem, U. S. Dept. Agr*, 20- Chem. Soc.
- Reynolds, Dr. Frederick G.** College City of New York, New York, N. Y. *Mathematics*. New York, Feb. 2, 72. B.S, Col. City of N. Y, 91; LL.B, N. Y. Univ, 96, M.S, 99, Sc.D, 04. *Prof. math, Col. City of N. Y.* 91- A.A; Math. Soc. Viscosity coefficient of air.
- Reynolds, Dr. M(yron) H(erbert)**, University Farm, St. Paul, Minn. *Veterinary science*. Wheaton, Ill, Nov. 5, 65. B.S, Iowa State, 86, D.V.M, 89; Ph.G, Iowa Col. Pharmacy, 91; M.D, Iowa Col. Physicians and Surg, 91. *Veterinarian, Minn. State Farmers Inst*, 91-93; *prof. vet. med. and surg, Minnesota*, 93-, chief, vet. div, Exp. Sta. 93-17. Mem. Minn. Vet. Examining Board, 98-10; Minn. State Live Stock Sanit. Board, 03-; sec'y, Int. Commission Control Bovine Tuberculosis. Am. Med. Ass; Vet. Med. Ass. Live stock sanitation; stable ventilation; tuberculosis; tuberculin; hemorrhagic septicemia; hog cholera; hypodermic cathartics.
- Reynolds, Walter F(ord)**, 848 W. 37th St, Baltimore, Md. *Geodesy*. Baltimore, May 25, 80. A.B, Hopkins, 02. Instr. math, Baltimore City Col, 05-06; geod. computer, U. S. Coast and Geod. Surv, 07-08; Int. Can. Boundary Commission, 08-11; *U. S. Coast and Geod. Surv*, 11-16, *chief computer, div. geod*, 17- Wash. Philos. Soc. Triangulation.
- Rhea, Prof. Lawrence J(oseph)**, University Club, Montreal, Can. *Pathology*. Rhea Mills, Tex, Dec. 9, 77. B.S, Texas, 01; M.D, Hopkins, 05; Germany, 11-12. Intern and later asst. path, Boston City Hosp, 06-09; asst, Harvard Med. Sch, 09-10, instr, 10; lecturer, McGill, 10-11; asst. prof, 11-12; *Harvard Med. Sch*, 12-13; *assoc. prof, McGill*, 13- Pathologist, various hospitals, Boston and Montreal; major, M.C, A.E.F. Ass. Path. and Bact; Montreal Medico-Chirurg. Soc. Blood cultures; influenza meningitis; digestive enzymes in pathological tissues; comparative pathology of canine distemper. whooping cough; comparative pathology of poliomyelitis and blind staggers in the horse; war lesions of bones.
- Rhein, Dr. John H(enry) W(allace)**, 1732 Pine St, Philadelphia, Pa. *Neurology*. Philadelphia, May 21, 69. M.D, Pennsylvania, 90. *Prof. diseases of nervous system, Pennsylvania*, 05- Neurologist, various institutions. Neur. Ass; Medico-Psychol. Ass; Am. Med. Ass; Phila. Col. Physicians. Nervous and mental diseases; anatomical connections between basal ganglia and cerebellum.
- Rhinehart, Prof. D(armon) A(rtelle)**, 920 W. 21st St, Little Rock, Ark. *Anatomy*. Pulaski, Ind, June 5, 87. A.B, Indiana, 10, fellow, 10-11, A.M, 12, M.D, 13. Asst. anat, Indiana, 08-10, assoc, 11-12, instr, 13-14; assoc. prof, *Arkansas*, 14-17, *prof*, 17-19, *applied anat*, 20- Ass. Anat. Nerve supply of the thyroid and parathyroids.
- Rhoads, Samuel N(icholson)**, 920 Walnut St, Philadelphia, Pa. *Zoology, Bibliophily*. Philadelphia, Pa, April 30, 62. Harvard, 92. Asst. zool, Acad. Nat. Sciences, Phila, 95-96; field collector, Carnegie Museum, Pittsburgh, 98; asst. archeol, Free Museum Science and Arts, Pennsylvania, 00; *antiquarian book seller*, 02- Scientific collecting expeditions to S. Am, Cent. Am, Mex. and N. Am. Mem. Ornith. Union; Del. Valley Ornith. Club; life mem. Phila. Acad.

- Mammals and birds; zoological nomenclature; bird language; nature bibliophily.
- Rhoads, Col. Thomas L(eidy)**, Surgeon General's Office, Washington, D. C. *Medicine*. Boyertown, Pa., April 10, 70. A.B., 91, M.D., Jefferson Med. Col., 93. Asst. demonstrator surg. path. Jefferson Med. Col., 94-98; asst. surgeon, U.S.N., 98; *med. officer, U.S.A.*, 00- Chief surgeon, first army, A.E.F., 18-19. Col. Surg; Ass. Mil. Surg. The dysenteries; liver abscesses; lues; tracheotomy; appendicitis and adnexal disease; fractures.
- Rhodes, Dr. Fred H(ofmann)**, Morse Hall, Ithaca, N. Y. *Chemistry*. Rochester, Ind., June 30, 89. A.B., Wabash, 10; Ph.D., Cornell, 14. Asst. English, Wabash, 09-10, math, 10; qual. anal, Cornell, 10-12, research asst., 12-14; instr. chem., Montana, 14-15; Cornell, 15-17; director research, chem. dept., Barrett Co., 17-20; *prof. indust. chem., Cornell*, 20- Chem. Soc; Chem. Eng; N. Y. Chemists Club. Industrial chemistry of coal-tar crudes and intermediates.
- Rhodes, Prof. Robert C(linton)**, Emory University, Ga. *Biology*. Magnolia, Ark., Oct. 12, 87. A.B., Henderson, 06; Vanderbilt, 07, A.M., 08; Ph.D., California, 17. Instr., Mississippi, 08-10, asst. prof., 10-12; prof. science, Henderson-Brown, 12-15, v. pres. and dean, 12-14; asst. zool., California, 15-17; *prof. biol., Emory*, 18-A.A.; West. Soc. Nat. Protozoology; algology. binary fission in *Colloidietyon trielliatum*.
- Ricard, Prof. J(erome) (Sixtus)**, University of Santa Clara, Santa Clara, Calif. *Astronomy*. Plaisians, France, Jan. 21, 50. France; Turin; Woodstock (Md); Santa Clara. *Prof. math., Santa Clara*, 78-11, *moral philos.*, 79-; *director, observatory*, 00- Trustee, Santa Clara; ed. 'Sunspot.' A.A.; Seismol. Soc. (board of directors); Pacific Astron. Soc; Soc. astron. de France; Soc. Belge d'Astron; Soc. Astron. de Mex. Origin of sun-spots and faculae.
- Rice, Arthur L(ouis)**, 537 S. Dearborn St., Chicago, Ill. *Electrical and steam engineering*. Barre, Mass., May 14, 70. B.S.(M.E). Worcester, 91, B.S.(E.E), 93; fellow, Cornell, 95-96, M.M.E., 96. Instr. mech. eng., Worcester, 92-95; head, dept. applied elec., Pratt Inst., 97-01; assoc. ed., 'Engineer,' 02-03, ed., 03-08; 'Practical Engineer,' 08-17; 'Power Plant Eng,' 17-A.A.; Mech. Eng. (asst. sec'y, 01-03); West. Soc. Eng. Cylinder condensation in steam-engines; liquid air phenomena; the economic limits of super-heating of steam; steam pumps.
- Rice, Calvin W(insor)**, 29 W. 39th St., New York, N. Y. *Electrical engineering*. Winchester, Mass., Nov. 4, 68. B.S., Mass. Inst. Tech. 90. Asst. engineer, Thomson-Houston Elec. Co., 90-93; Gen. Elec. Co., 93-95, dist. engineer, Cincinnati, 95; engineer, Anaconda Copper Mining Co., 98-99; N. Y. Edison Co., 00-02; second v. pres., Nernst Lamp Co., 03; engineer, Gen. Elec. Co., N. Y., 03-06; *sec'y, Am. Soc. Mech. Eng.*, 06- Elec. Eng. (v. pres., 03-05); Mech. Eng. High voltage phenomena; long distance electrical transmission of power.
- Rice, Dr. C(hauncy) B(rewster)**, 61 Huntington St., New Haven, Conn. *Experimental physics*. New Haven, March 14, 72. Ph.B., Yale, 94, Ph.D., 01. Elec. engineer, White, Crosby Co., N. Y., 94-96; asst. physics, Sheffield Sci. Sch., Yale, 96-01, instr., 02-04, applied elec., 05. High frequency alternating currents; alternating current motors.
- Rice, Dr. David Edgar, E. and R.** Special School, Camp Grant, Ill. *Psychology*. Chambersburg, Pa., Oct. 13, 75. A.B., Pennsylvania Col., 96, A.M., 99; Ph.D., Columbia, 12. Exec. sec'y, Pratt Inst., 10-18; *head development specialist in testing, war plans div, War Dept.*, 19- Education; measurement and rating of educational and vocational proficiency.
- Rice, Prof. Edward L(oranus)**, 265 N. Main St., Delaware, Ohio. *Zoology*. Middletown, Conn., March 18, 71. A.B., Wesleyan, 92; Ph.D., Munich, 95. Asst. zool., Wesleyan, 96; *prof., Allegheny*, 96-98; *Ohio Wesleyan*, 98- Instr., lake lab, Ohio State, 05, 06, 08, 09, 12. A.A.; Soc. Nat; Soc. Zool; Ass. Anat; Ohio Acad. (pres., 06, sec'y, 12-). Gill structure of lamellibranchs; comparative embryology of vertebrate skull.
- Rice, E(dwin) W(ilbur), Jr.**, Schenectady, N. Y. *Electrical engineering*. La Crosse, Wis., May 6, 62. A.M., Cent. High Sch., Phila., 85; hon. A.M., Harvard, 03; hon. Sc.D., Union. Supt. and later tech. director, Thomson-Houston Elec. Co., 83-94; v. pres., *Gen. Elec. Co.*, 94-13, *pres.*, 13- Mem. Nat. Research Council; Eng. Foundation; Eng. Council. Chevalier Légion d'honneur; Order of the Rising Sun with Cordons, Japan, third class. A.A.; Elec. Eng. (pres., 17); Civil Eng; Illum. Eng. Soc; British Inst. Elec. Eng; British Inst. Civil Eng; British Iron and Steel Inst.
- Rice, Prof. Frank E(lmore)**, Cornell University, Ithaca, N. Y. *Chemistry*. Cuba, Ind., July 31, 87. A.B., Indiana, 09; Ph.D., Cornell, 14. Asst. chem., Indiana, 08-09; asst. instr. and later asst. prof., Cornell, 09- Asst. chemist, Am. Steel and Wire Co., summer, 08; N. Y. Exp. Sta., Geneva, summers, 10, 11; consulting chemist, Nestle's Food Co., 17- Chem. Soc. Physiological chemistry; agricultural and food chemistry; physical chemistry of soils.
- Rice, George S(amuel)**, U. S. Bureau of Mines, Washington, D. C. *Mining engineering*. Claremont, N. H., Sept. 8, 66. E.M., Columbia, 87. Mining engineer, 87-97; consulting mining engineer, Chicago, 97-08; mining engineer, U. S. Geol. Surv., 08-11; *chief mining engineer, U. S. Bur. Mines*, 11- In charge of party of engineers to investigate European mines, 11; Can. Commission on Turtle Mountain Rock Slide, 11; mem. Commission to investigate post-war mining and industrial conditions, France and Belgium. A.A.; Min. Eng; Min. and Metal. Inst; Int. Conf. Mine Exp. Stations (organizer and sec'y, 12-); British Inst. Min. Eng. Prevention of coal mine explosions.
- Rice, Commander H(erbert) L(ouis)**, U. S. Naval Academy, Annapolis, Md. *Mathematics*. Chicago, Ill., Dec. 18, 69. Michigan, 88-91; B.S., George Washington, 93, M.S., 94. Asst., 'Nautical Almanac' Office, 92-02; asst. astronomer, U. S. Naval Observatory, 02-07; *prof. math., U. S. Navy*, 07- Instr. astron., George Washington, 94-97, prof., 97-04.

- Rice, Prof. James E(dward)**, Forest Home, Ithaca, N. Y. *Poultry husbandry*. Aurora, Ill, March 12, 65. B.S. Agr. Cornell, 90. Asst. prof. *poultry husbandry*, Cornell, 03-06, *prof*, 06-Am. Ass. Instructors and Investigators in Poultry Husbandry; Int. Ass. Instructors and Investigators Poultry Husbandry. The feeding and breeding of poultry.
- Rice, Prof. M(artin) E(verett)**, University of Kansas, Lawrence, Kans. *Physics, Electrical engineering, Mathematics*. Westfield, N. Y., Nov. 19, 70. B.S., Kansas, 91, M.S., 93; Chicago, summers, 94, 96, Yerkes Observatory, summer, 98. Instr. dept. physics and math, *Kansas*, 92-96; asst. prof. physics and math, 96-98, *physics and elec. eng*, 98-06, *assoc. prof*, 06-, acting head, dept, 07-09. A.A.; Astron. Soc; Elec. Eng. The inverse of conics and conicoids from the center; effect of magnetism on spectral lines; alternating currents in Wheatstone's bridge; the ballistic electro-dynamometer as an instrument for testing iron.
- Rice, Richard H(enry)**, 124 Ocean St, Lynn, Mass. *Mechanical engineering*. Rockland, Maine, Jan. 9, 63. M.E., Stevens, 85. With various industrial companies, 86-03; consulting steam engineer, *Gen. Elec. Co*, 03-08, *manager, Lynn Works*, 18- Mech. Eng. (manager). High speed turbine and air compressing apparatus.
- Rice, Prof. W(illiam) M North**, Middletown, Conn. **Geology*. Marblehead, Mass, Nov. 21, 45. A.B., Wesleyan, 65; Ph.D., Yale, 67; Berlin, 67-68; LL.D., Syracuse, 86; Wesleyan, 15. Prof. geol. and nat. hist, *Wesleyan*, 68-84, *geol*, 84-18, *emer. prof*, 18- Acting pres, 07, 08-09, 18. Asst. geologist, U. S. Geol. Surv, 91-92; lecturer science and religion, Colgate, 97-00; supt, Conn. Geol. and Nat. Hist. Surv, 03-16. A.A. (v. pres, 05); Soc. Nat. (pres, 91); Geol. Soc. (v. pres, 11); Ass. Geog; Am. Acad; Conn. Acad. Geology of Bermuda; geology of the Connecticut Valley; relations of science and religion.
- Rich, Edward D(unbar)**, Office of State Sanitary Engineer, Lansing, Mich. *Sanitation*. Marcellus, N. Y., Nov. 21, 68. C.E., Rensselaer, 95. Leveler, N. Y. State Canals, 96-98; asst. city engineer, Utica, 98-03; city engineer, Summit, N. J., 03-07; locating engineer, Rome and Northern R. R, 07; deputy city engineer, Utica, 08; asst. prof. civil eng, Michigan, 08-13; *state sanit. engineer, Mich*, 13- Civil Eng; Pub. Health Ass. Leakage into sanitary sewers; sewage disposal; tannery waste disposal.
- Rich, Prof. Gilbert J(oseph)**, 331 N. Neville St, Pittsburgh, Pa. *Psychology*. New York, N. Y., Oct. 16, 93. A.B., A.M., Cornell, 15, Ph.D., 17. Instr. *psychol*, Hobart, 17-18; asst. prof, Drake, 19-20; *instr, Pittsburgh*, 20- Psychol. examiner, U.S.A., 18-19. A.A.; Psychol. Ass. Experimental psychology; audition; psycho-physics; employment psychology.
- Rich, Dr. John L(yon)**, Hobart, N. Y. *Geology*. Hobart, Dec. 1, 84. A.B., Cornell, 06, fellow, 07-08, A.M., 07, Ph.D., 11. Asst. geol, Cornell, 06-07; geol. aid, U. S. Geol. Surv, 07-08, junior geologist, 09-18; instr. geol, Cornell, 09-11; Illinois, 11-18; *oil geologist*, 19- With U. S. Geol. Surv, Ill. Geol. Surv. and N. Y. State Geol. Surv, summers; asst, Tarr exped. to Alaska, 06. Capt, U.S.A., 18-19. A.A.; Geol. Soc; Am. Geog. Soc; Ass. Geog; Min. Eng; Ass. Petrol. Geol. Physiography; oil geology; physiography of arid lands; the correlation of culture with stage in the geographic cycle; glacial geology.
- Rich, Willis H(orton)**, Stanford University, Calif. *Ichthyology*. Galesburg, Ill, March 15, 85. B.S., Lombard, 05; A.B., Stanford, 09, A.M., 18. Instr. zool. and physiol, Stanford, 08-18; *field asst, Bur. Fisheries*, 18- Fish culture worker, Calif. Fish and Game Commission, 10-13. A.A.; Calif. Acad; Pacific Fisheries Soc. Life histories of Salmonidae.
- Richards, Dr. Alfred N(ewton)**, University of Pennsylvania, Philadelphia, Pa. **Pharmacology*. Stamford, N. Y., March 22, 76. A.B., Yale, 97, A.M., 99; Ph.D., Columbia, 01; research scholar, Rockefeller Inst, 01-04. Asst. physiol. chem, Columbia, 98-02, tutor, 02-04, *instr. pharmacol*, 04-08; *prof*, Northwestern, 08-10; *Pennsylvania*, 10- Mem. ed. board, 'Jour. Biol. Chem'; assoc. ed, 'Jour. Pharmacol. and Exp. Therapeut.' Attached to staff, British Med. Research Committee, 17-18; major, Sanit. C. and in charge, physiol. lab, C.W.S., Chaumont, France, 18. Physiol. Soc; Soc. Exp. Biol; Soc. Biol. Chem; Harvey Soc; Soc. Pharmacol. Chemistry of connective tissues; salivary digestion; adrenalin glycosuria; toxicity of indol; action of cyanids; delayed chloroform poisoning; adrenalin secretion; kidney function; action of histamin and other dilators; shock.
- Richards, Prof. A(ute)**, Norman, Okla. *Zoology*. Tekamah, Nebr, Oct. 31, 85. A.B., Kansas, 08; A.M., Wisconsin, 09; fellow, Princeton, 09-11, Ph.D., 11. Teacher physiol. and physiog, high sch, Wellington, Kans, 07-08; asst. *zool*, Wisconsin, 08-09; instr, Texas, 11-16, adj. prof, 16; *prof*, Wabash, 16-20; *Oklahoma*, 20- A.A.; Soc. Nat; Soc. Zool; Micros. Soc; Tex. Acad; Ind. Acad. Cellular physiology; cytology; effect of X-radiation upon cells.
- Richards, Prof. B(ert) L(orin)**, Utah Experiment Station, Logan, Utah. *Plant pathology*. Farmington, Utah. B.S., 14; M.S., 16; fellow, Wisconsin, 18-19, Ph.D., 19. Asst. prof. bot, *Utah Col*, 15-16, *assoc. prof*, 19- A.A.; Bot. Soc; Phytopath. Soc. Soil temperature as a factor in plant diseases.
- Richards, Prof. C(harles) R(uss)**, 805 W. Green St, Urbana, Ill. *Mechanical engineering*. Clarkshill, Ind, March 23, 71. B.M.E., Purdue, 90, M.E., 91; M.M.E., Cornell, 95; D.Eng., Nebraska, 20. Instr. mech. eng, Colo. Agr. Col, 91-92; adj. prof. manual training, Nebraska, 92-95, assoc. prof. practical mech, 95-97, prof. mech. eng. and director, sch. mech. arts, 97-06, head prof, 06-11, assoc. dean, indust. col, 07-09, dean, col. eng, 09-11; *prof. mech. eng, Illinois*, 11-, acting dean, col. eng, and acting director, Eng. Exp. Sta, 13-15, *dean, col. eng, and director, Eng. Exp. Sta*, 17-; consulting engineer. A.A.; Mech. Eng; Eng. Educ; West. Soc. Eng. Heating value of corn and of the Nebraska coal supply; efficiency of throttling compound engines; reheating of compressed air; air-steam mixtures; combustion engines.

- Richards, Miss C(larice) Audrey**, Forest Products Laboratory, Madison, Wis. *Forest pathology*. Mendon, Ohio. A.B. Miami, 12, A.M. 14. Asst. bot., Miami, 12-14; research asst., Ohio Biol. Surv., 15; asst. bot., Wisconsin, 15-17, *forest path.*, 17- A.A.; Bot. Soc.; Wis. Acad. Toxicity of preservatives; deterioration of wood pulp due to fungi.
- Richards, E(dgar)**, 60 Ayrault St. Newport, R. I. *Chemistry*. New York, N. Y., Feb. 23, 58. Sch. of mines, Columbia, 76-81. Asst. chemist, U. S. Dept. Agr., 82-87; chemist, internal revenue bur., U. S. Treas. Dept., 87-92. A.A.; Chem. Soc.; Min. Eng.; Soc. Chem. Indust.; Pub. Health Ass.; Electrochem. Soc.; Franklin Inst.; British Soc. Pub. Analysts; London Chem. Soc.; Soc. chim. de Paris. Agricultural chemistry; foods; fermentation; microscopy; mineralogy.
- Richards, Dr. Ernest T(homson) F(raser)**, Lowry Building, St. Paul, Minn. *Medicine*. Kingstown, St. Vincent, B.W.I., July 28, 83. M.D. C.M., McGill, 05. Instr. path. and neur., Harvard Med. Sch., 07-11; med., Minnesota, 11-17, *asst. prof.*, 17- Ed., 'Minn. Med.' 16-18; chief, div. med., Harvard surg. unit, B.E.F., 15-16. Ass. Path. and Bact.; Am. Med. Ass.; Minn. Acad. Med. Hemolytic jaundice; bacillary dysentery; typhoid meningitis; experimental arthritis; polycythemia.
- Richards, Dr. Harold F(rederic)**, University of Cincinnati, Cincinnati, Ohio. *Physics*. Cincinnati, Ohio, Oct. 12, 94. A.M., Cincinnati, 17, Hanna fellow, 17-18, 19-20, Ph.D., 20. *Instr. physics, Cincinnati*, 20- Contact effect between metals and dielectrics.
- Richards, Dr. Herbert M(aule)**, Barnard College, New York, N. Y. **Botany*. Philadelphia, Pa., Oct. 6, 71. B.S., Harvard, 91, Sc.D., 95, Parker fellow, 95-96. Asst. bot., Harvard, and instr. Radcliffe, 91-95; tutor, Barnard, Columbia, 96-98; instr., Harvard, 97-98; *Barnard, Columbia*, 98-03, adj. prof., 03-06, *prof.*, 06- Assoc. ed., 'Physiol. Researches'; mem. board scientific directors, N. Y. Bot. Garden. A.A. (v. pres, 08); Soc. Nat.; Bot. Soc.; Soc. Biol. Chem.; Soc. Exp. Biol.; Torrey Bot. Club (pres); New Eng. Bot. Club. The structure and development of algae and fungi; reactions of plants to the stimulus of wounding and to chemical stimulus; influence of carbon monoxide upon plants; acidity and gas interchange in caeti and other succulents.
- Richards, Mrs. Herbert M. (Marion E)**, Barnard College, Columbia University, New York, N. Y. *Botany*. New York. A.B., Columbia, 03, A.M., 05. Asst. and instr. bot., Barnard, Columbia, 05-15, *lecturer*, 15- Physiological botany.
- Richards, Prof. Horace C(lark)**, 4812 Fairmount Ave., Philadelphia, Pa. *Physics*. Philadelphia, Jan. 4, 68. A.B., Pennsylvania, 88, Ph.D., 91; Hopkins, 91-92. Instr. physics, Pennsylvania, 90; Bryn Mawr, 92-93; *Pennsylvania*, 93-03, asst. prof., 03-09, *prof. math. physics*, 09- Assoc. physicist, Bur. Standards, 18. A.A.; Physical Soc.; Philos. Soc.; Soc. de Physique. Mathematical physics; optics.
- Richards, Prof. Jos(eph) W(illiam)**, Lehigh University, Bethlehem, Pa. **Metallurgy, Electrochemistry*. Oldbury, England, July 28, 64. A.B., Cent. High Sch., Phila., 82, A.M., 87; A.C., Lehigh, 86, M.S., 91, Ph.D., 93; Heidelberg and Freiberg, 97-98. Asst. supt., Del. Metal Refinery, Phila., 86-87; instr. *metal. and miner.*, Lehigh, 87-97, asst. prof., 97-02, acting prof., 02-03, *prof.*, 03- Mem. Assay Commission to Test Coinage, 97; jury awards, Phila. Export Expos., 00; chairman, metal. jury awards, Panama-Pacific Expos., 15. Rep. of Franklin Inst., Int. Geol. Cong., St. Petersburg, 97. A.A.; Chem. Soc. (v. pres, 99); Electrochem. Soc. (first pres, 02, 03, sec'y, 07-); Min. Eng.; Chem. Eng.; Iron and Steel Inst.; Franklin Inst. (pres, chem. sect., 97); Faraday Soc.; British Iron and Steel Inst.; British Inst. Metals; Soc. de Chim. appliquee; Bunsen Gesell. Specific heats, latent heats of fusion and vapor tensions of the metals; physical and chemical properties and isolation of aluminium and its alloys; improved methods of quantitative blow-pipe analysis; thermal efficiency of electric furnaces; rationale of blast-furnace operations; electro-metallurgy of iron and steel.
- Richards, Mrs. Mildred (Albro) Hoge**, Norman, Okla. *Zoology*. Baltimore, Md., July 7, 85. A.B., Goucher, 08; A.M., Columbia, 12, Ph.D., 14. Teacher biol., West. High Sch., Baltimore, 08-11; instr. zool., Indiana, 14-18. A.A.; Soc. Zool.; Ind. Acad. Genetics; inheritance in *Drosophila*.
- Richards, R(alph) W(ebster)**, 2717 Connecticut Ave., N. W., Washington, D. C. *Geology, Mineralogy*. Waterville, Maine, May 30, 79. A.B., Colby, 01; fellow, Tufts, 01-02, A.M., 02. Instr. geol., Tufts, 02-06; aid., U. S. Geol. Surv., 07-08, junior geologist, 08-10, asst. geologist, 10-12, assoc. geologist, 12-13; geologist, foreign dept., Pearson and Son, Ltd., 13-15; Associated Geol. Engineers, 15-16; Petrol. Exploration, Inc., 16-18; asst. valuation expert, bur. int. revenue, U. S. Treas. Dept., 18-19; *consulting geologist*, 19- Asst. geol., Harvard, 02-03, miner., 04-07, petrog., 05-07. Min. and Metal. Eng.; Wash. Geol. Soc. Coal resources of the Bull Mountains, Montana; areal, structural and economic geology of phosphate deposits of Idaho, Utah and Wyoming; geology of petroleum deposits of Ecuador, Algeria, Oklahoma, Kentucky, Ohio, West Virginia, Louisiana, Wyoming and Montana.
- Richards, Prof. Robert H(allowell)**, 32 Eliot St., Jamaica Plain, Mass. *Mining engineering, Metallurgy*. Gardiner, Maine, Aug. 26, 44. B.S., Mass. Inst. Tech., 68; LL.D., Missouri, 08. Asst. chem., Mass. Inst. Tech., 68-69, instr. assaying and qual. anal., 69-70, asst. prof. anal. chem., 70-71, prof. miner. and assaying and in charge, mining and metal. laboratories, 71-72, prof. mining eng., 73-84, head, mining dept., 73-14, *prof. mining eng. and metal.*, 84-14, *emer. prof.*, 14- Sec'y of the faculty, 78-83. Gold medal, Min. and Metal. Soc. A.A.; hon. mem. Min. Eng. (pres, 86); Am. Acad.; Boston Soc. Civil Eng. Ore dressing.
- Richards, Prof. Theodore W(illiam)**, 15 Follen St., Cambridge, Mass. **Chemistry*. Germantown, Pa., Jan. 31, 68. B.S., Haverford, 85, LL.D., 08; A.B., Harvard, 86, A.M., Ph.D., 88, hon. Sc.D., 10; Göttingen, 88-89, 95; Dresden, 89; Leipzig, 95; hon. Sc.D., Yale, 05; hon. Chem.D., Clark, 09; hon. Ph.D., Prague, 09; hon. M.D., Berlin, 10; hon.

- D.Sc, Cambridge, 11; Oxford, 11; Manchester, 11; hon. Ph.D, Christiania, 11; LL.D, Pittsburgh, 15; Pennsylvania, 20. Asst. chem, *Harvard*, 89-91, instr. 91-94, asst. prof. 94-01, *prof.*, 01-, chairman, chem. dept. 03-11, *director*, *Gibbs Mem. Lab.*, 12- Director, summer sch. of chem, *Harvard*, 90; adviser, *Carnegie Institution*, 02, research assoc. 02-; acting director, *Harvard Chem. Lab.*, 05; *Harvard visiting prof.*, *Berlin*, 06-07; lecturer, *Lowell Inst.*, 08; *Faraday lecturer*, *London Chem. Soc.*, 11; mem. *Nat. Research Council*, 16-19; consulting chemist, *War Dept.* and *U. S. Bur. Mines*, 18. *Davy medal*, *Royal Soc.*, 10; *Faraday medal*, *London Chem. Soc.*, 11; *Willard Gibbs medal*, *Chem. Soc.*, 12; *Franklin medal*, 16; *Nobel prize chem.*, 14. *Nat. Acad.*; *A.A.* (pres, 17); *Chem. Soc.* (pres, 14); *Electrochem. Soc.*; *Am. Acad.* (pres, 19); *Philos. Soc.*; *Franklin Inst.*; hon. mem. *N. Y. Chemists Club*; for. mem. *Royal Soc.*; hon. mem. *Royal Inst.*; hon. and for. mem. *London Chem. Soc.*; hon. mem. *Royal Irish Acad.*; cor. mem. *Royal Prussian Acad.*; cor. mem. *Royal Danish Acad.*; for. mem. *Swedish Royal Acad.*; *Accad. dei Lincei*; cor. mem. *Royal Bologna Acad.* Atomic weights; isotopes; radioactive lead; cuprammonium compounds; occlusion and inclusion; taste of acids; spectra of gases; electrical resistance and thermal expansion of gases; electrochemical equivalents and silver voltmeter; heat capacity; equilibrium of chromium solutions; birth and growth of crystals by micro-kinetoscope; thermometry; thermochemical measurements; compressibilities; significance of atomic volume; electrochemistry of amalgams; apparatus and methods for exact investigation; energy relations of systems under varying conditions; standardizing thermometers by bi-component systems.
- Richardson, Prof. C(harles) H(enry)**, *Syracuse University*, *Syracuse*, N. Y. *Mineralogy*, *Geology*. *Topsham*, Vt, Sept. 26, 62. A.B, *Dartmouth*, 92, A.M, 95, fellow, 95-98, Ph.D, 98; *Chicago*, summer, 02. Principal, *Black River Acad.*, *Ludlow*, Vt, 92-93; *Green Mt. Sem.* and *Minard Commercial Col.*, 93-95; asst. chem, *Dartmouth*, 95-98, instr. chem. and miner, 98-01, *miner. and geol.*, 01-06; asst. prof. *Syracuse*, 06-07, assoc. prof. 07-09, *prof.*, 09- Asst. *Vermont Geol. Surv.*, 95-; mem. gen. educ. commission, *Paris Expos.*, 01. Mem. *Eighth Int. Geog. Cong.*, U. S., 04; *Ottawa*. A.A.; *Geol. Soc.*; *fel. Mineral. Soc.*; *Chem. Soc.*; *Vt. Bot. Club*; *Rochester Acad.* Economic geology; building stones; clays; anatomy and physiology of *Pinus sylvestris*; the calciferous mica schist of eastern Vermont; analysis of Washington marbles; the terranes of Vermont; Washington limestone and its associated terranes.
- Richardson, Charles H(oward)**, U. S. Department of Agriculture, Washington, D. C. *Entomology*. *Pasadena*, Calif, July 7, 87. A.B, *Stanford*, 12; M.S, *Harvard*, 13; *Columbia*, 17-18. Asst. entomologist, *N. J. Exp. Sta.*, 13-16; instr. entom, *Rutgers*, 15-16; *specialist insect physiol.*, *bur. entom.*, U. S. Dept. Agr, 19- A.A.; *Entom. Soc.*; *Ass. Econ. Entom.*; *Chem. Soc.*; *Wash. Entom. Soc.* Physiology and toxicology of insects; chemotropism in insects; relation of food constituents to growth of insects.
- Richardson, Dr. Charles W(illiamson)**, 1317 Connecticut Ave, N. W, Washington, D. C. *Medicine*. Washington, D. C, Aug. 22, 61. *Pennsylvania*; M.D, *George Washington*, 84. *Prof. laryngol. and otol.*, *George Washington*, 00- A.A.; *Laryngol. Ass.*; *Otol. Soc.* (pres, 14); *Climat. Ass.*; *Wash. Acad.*; *Wash. Biol. Soc.*; *Wash. Anthropol. Soc.* Keratosis of the tonsils; congenital obstruction of post-nasal orifice; vaso-motor catarrh.
- Richardson, Clifford**, Room 1615, Woolworth Building, New York, N. Y. **Chemistry*. Worcester, Mass, March 6, 56. A.B, *Harvard*, 77. Field asst, U. S. Geol. and Geog. Surv. (*Hayden*), 78; asst. chemist, U. S. Dept. Agr, 78-83, principal asst, 83-87; inspector of asphalt and cements and chemist, Eng. Dept, D. C, 87-94; practising chem. engineer, 94-95; supt. of tests, *The Barber Asphalt Paving Co.*, 96-00; proprietor, *N. Y. Test. Lab.*, 00-10; consulting engineer, 10- Mem. U. S. Assay Commission; assoc. ed, 'Jour. Indust. and Eng. Chem.', 08-09; mem. various commissions on tests and standards. A.A. (v. pres, 06); *Chem. Soc.*; *Soc. Chem. Indust.* (chairman, N. Y. sect, 00-02); *Agr. Chem.* (sec'y, 85-87); *Civil Eng.*; *Min. Eng.*; *Forestry Ass.*; *Soc. Test. Mat.*; *Wash. Acad.*; *N. Y. Chemists Club*; *London Chem. Soc.*; *Chem. Gesell.* Chemistry of the cereals and grasses; sugar; food adulteration; ceramics; petroleum; asphalts and native bitumens; hydraulic cements; constitution of Portland cement; uniformity in chemical analysis.
- Richardson, Prof. Florence E(lia)**, *University of Chicago*, *Chicago*, Ill. *Psychology*. *Hiawatha*, Kans. A.B, *Nebraska*, 02; fellow, *Chicago*, 05-08, Ph.D, 08. Asst. prof. *psychol.*, *Drake*, 08-10, prof, 10-18; lecturer, *Chicago*, 19-20, asst. prof, 20- A.A.; *Psychol. Ass.*; *Iowa Acad.* Animal psychology; defective color vision.
- Richardson, Dr. G(eorge) B(urr)**, U. S. Geological Survey, Washington, D. C. *Geology*. New York, N. Y, Aug. 21, 72. B.S, *Harvard*, 95, M.S, 97; Ph.D, *Hopkins*, 01. *Geologist*, U. S. Geol. Surv, 00- A.A.; *Geol. Soc.*; *Wash. Acad.* Petroleum geology and statistics.
- Richardson, Dr. Mark W(yman)**, 294 Washington St, Boston, Mass. *Medicine*. *Fitchburg*, Mass, Dec. 27, 67. A.B, *Harvard*, 89, M.D, 94, *Bullard* fellow, 98; *Berlin* and *Vienna*, 94-95; *Dalton scholar*, Mass. Gen. Hosp, 98-01. Asst. path, *Harvard*, 97-99, theory and practise of med, 99-00; sec'y, Mass. State Board of Health, 09-14; chief examiner for Boston, *Equitable Life Assurance Soc. of the U. S.* A.A.; *Am. Physicians*; *Ass. Path. and Bact.*; *Am. Med. Ass.* Bacteriology of and immunity in typhoid fever; epidemiology of infantile paralysis.
- Richardson, Dr. Oscar**, 22 Evans Way, Boston, Mass. *Pathology*, *Bacteriology*. East Boston, Jan. 22, 60. M.D, *Harvard*, 00. Asst. pathologist, *Mass. Gen. Hosp.*, Boston, 97-; instr. post-grad. sch. med, *Harvard*. Ass. Path. and Bact; *Am. Med. Ass.* The cause of carcinoma; microorganisms; status lymphaticus; psittacosis; tetanus; Pseudopneumococcus; a new chromogenic bacillus; Friedreich's ataxia; bundle of His in Stokes Adams disease; leprosy; the pathology

of syphilitic aortitis; tetanus bacilli in lymphatic glands in tetanus.

Richardson, Prof. O(wen) W(illans), 4 Cannon Place, Hampstead, N. W. 3, England. **Physics*. Dewsbury, England, April 26, 79. B.A., Trinity, Cambridge, 00, fellow, 02-08, M.A., 04, Clerk Maxwell student, 04-06; D.Sc., London, 04. Pre-lector, Trinity, Cambridge, 01-06, director science studies, Corpus Christi, 05-06; prof. physics, Princeton, 06-14; *Wheatstone prof. physics*, Kings College, London, 14- Hughes medal. Royal Soc., 20. Physical Soc.; Philos. Soc.; fel. Royal Soc.; London Physical Soc. (v. pres, 15-19); Cambridge Philos. Soc.; Soc. de Physique. Thermionics; photo-electricity; discharge of electricity through gases; diffusion of gases through solids; effect of pressure on spectral lines; theory of magnetism; nature and energy of thermions; nature of electromagnetic radiations; thermal effects of the emission and absorption of electricity by bodies; electrons and chemical action.

Richardson, Robert E(arl), Havana, Ill. *Ichthyology*. Brighton, Ill., Nov. 22, 77. A.B., Illinois, 01, A.M., 03. Biol. asst., Ill. Nat. Hist. Surv., 03-06; research asst. ichthyol., Stanford, 06-07; preparator zool., California, 07-08; instr. bio-nomics, Stanford, 08-09; *biologist in charge*, Ill. Biol. Sta., 09- With Bur. Fisheries, 07-08, 12. Fisheries Soc.; Ecol. Soc.; Ill. Acad. Systematic ichthyology; ecology of fishes; general hydro-biology; sanitary biology.

Richardson, Prof. R(oland) G(eorge) D(wight), Brown University, Providence, R. I. **Mathematics*. Halifax, N. S., May 14, 78. A.B., Yale, 03, A.M., 04, Ph.D., 06; Göttingen, 08-09. Instr. math., Yale, 04-07; asst. prof., Brown, 07-12; assoc. prof., 12-15, *prof.*, 15- Lecturer, Chicago, summer, 18. A.A.; Math. Soc. (v. pres, 20, sec'y, 21); Math. Ass. (v. pres, 19); Am. Acad.; Math. Verein; Circolo Mat. di Palermo. Mathematical analysis.

Richardson, W(illiam) D, Swift and Co, Chicago, Ill. **Chemistry*. Jackson, Mich., Nov. 24, 76. Chicago, 94-99. Chemist, *Swift and Co*, 99-01, *chief chemist*, 01-, *director, research lab*, 20- Ed. 'Jour. Indust. and Eng. Chem.', 09-12. A.A.; Chem. Soc.; Electrochem. Soc.; Chem. Eng.; Soc. Test. Mat.; Oil Chem. Soc.; Ornith. Union; Cooper Ornith. Club; Wilson Ornith. Club.

Richart, Frank Erwin, University of Illinois, Urbana, Ill. *Civil engineering*. B.S., Illinois, 14, M.S., 15. Concrete designer, C. F. Massey Co., 15; Concrete Steel Products Co., 16; instr. *theoret. and applied mech*, Illinois, 16-18, *research assoc*, 19- Soc. Test. Mat.; Concrete Inst. Materials of construction; structural engineering; reinforced concrete.

Richey, Dr. De Wayne G(reenwood), Mercy Hospital, Pittsburgh, Pa. *Pathology*. New Brighton, Pa., Oct. 25, 92. M.D., Pittsburgh, 15, B.S., 17. Intern, St. Francis Hosp., Pittsburgh, 15-16; junior house pathologist and bacteriologist, *Mercy Hosp*, 16-18, *pathologist and bacteriologist*, 19- Lieut., M.C. U.S.N.R.F., 18-19. Ass. Path. and Bact. Streptococcus tonsillitis; quinin idiosyncrasy; agonal bacteraemia; influenza; metaplasia; cutaneous anaerobs.

Richmond, Dr. Cha(rle)s W(allace), U. S. National Museum, Washington, D. C. *Ornithology*. Kenosha, Wis., Dec. 31, 63. Corcoran Sci. Sch., George Washington, 86-87; M.D., Georgetown, 97. Special agent, Census Office, 89-90; ornith. clerk, biol. surv., U. S. Dept. Agr., 90-91; asst. curator, *div. of birds*, U. S. Nat. Museum, 94-18, *assoc. curator*, 18- Fel. Ornith. Union; Wash. Acad.; Wash. Biol. Soc.; Cooper Ornith. Club; hon. mem. British Ornith. Union. Exotic ornithology; bibliography of ornithology; catalogue of genera and species of birds, with synonyms.

Richmond, Prof. Francis A, 601 College Ave, Elmira, N. Y. *Chemistry*. Adams, Mass., Aug. 15, 74. B.S., Cornell, 98. Instr. chem., Cornell, 98-99; *prof. chem. and physics*, Elmira, 99- Chem. Soc. Phenyl mustard oil as a reagent for the detection of the alcoholic hydroxyl group; sulphur in illuminating gas.

Richter, Arthur William, Price Manufacturing Co, Yakima, Wash. *Mechanical engineering*. Manitowoc, Wis., Sept. 2, 65. B.M.E., Wisconsin, 89; M.E., 91; M.M.E., Cornell, 99. Instr. and asst. prof. steam eng., Wisconsin, 91-96, asst. prof. and later prof. exp. eng., 96-09; prof. eng. and dean, eng. sch., Montana, 09-19; *pres*, *Price Mfg. Co*, 19- Consulting engineer, Wis. State Board of Control, 08-09; Fuel Ad. for Mont. Mont. Soc. Eng. (pres, 16). Transmission of heat through metals; small electric light and railway plants.

Richtmann, Prof. W(illiam) O(scar), 1709 Adams St, Madison, Wis. *Pharmacognosy*. Arcadia, Wis., Nov. 30, 76. Ph.G., Wisconsin, 94, fellow, 94-97, B.S., 97, Ph.D., 19. Instr. practical pharmacy, Wisconsin, 98-00, pharmacog., 00-02; expert pharmacog., U. S. Dept. Agr., 02-06; res. manager, Satsuma Co., 06-15; Am. Flavoring Extract Ass. research fellow, *Wisconsin*, 15-16, *pharmacognosist*, *Pharmaceut. Exp. Sta*, 17-, *asst. prof. pharmacog*, 19- A.A.; Pharmaceut. Ass. (sec'y, sci. sect, 11, chairman, 12, sec'y, hist. sect, 19, chairman, 20); Chem. Soc. Practical pharmacy and pharmacognosy.

Richtmyer, Prof. F(loyd) K(arker), Cornell University, Ithaca, N. Y. **Physics*. Cobleskill, N. Y., Oct. 12, 81. A.B., Cornell, 04, Ph.D., 10. Instr. *physics*, Drexel Inst., 04-06; *Cornell*, 06-10, asst. prof., 10-18, *prof*, 18- Investigator, research lab, Gen. Elec. Co., 19-20. Physicist, Bur. Standards, summer, 15; radio engineer, Sig. C., U.S.A., 18. A.A.; Physical Soc.; Optical Soc. (pres, 20); Eng. Educ.; Illum. Eng. Soc.; Ass. Prof. Heat of vaporization of liquid air; the photo-electric effect; heterochromatic photometry; properties of thin metal films; X-ray absorption.

Rickard, T(homas) A(rthur), 420 Market St, San Francisco, Calif. *Mining engineering*. Pertusola, Italy, Aug. 29, 64. Assoc. Royal Soc. Mines, London. State geologist, Colo., 96-02; ed., 'Eng. and Mining Jour.', 03-05; 'Mining and Scientific Press,' 06-09; founder and ed., 'Mining Mag,' London, 09-15; ed., *Mining and Scientific Press*, 15- Special lecturer, Stanford, California, Columbia and Harvard. Min. Eng.; British Min. and Metal. Inst. The structure of ore deposits.

- Rickards, Burt R(ansom)**, N. Y. State Department of Health, Albany, N. Y. *Bacteriology, Chemistry*. Cambridge, Mass, Sept. 28, 76. B.S. Mass. Inst. Tech, 99. Instr. anal. chem. Textile Sch, Lowell, Mass, 99-00; first asst. bacter. and chem, Boston Board of Health Lab, 00-05, director, 05-09; chief of laboratories, Ohio Board of Health, 09-11; assoc. prof, munic. and sanit. dairying, Illinois, 11-12; asst. director, biol. dept. Eli Lilly and Co, 12-15; development dept, Randall Faichney Co, 15-17; asst. to deputy commissioner, N. Y. State Dept. of Health, 17-; ed, 'Pub. Health News'; 'Health Officers' Bul'; 'Pub. Health Nurses' Bul.' Ed, 'Am. Jour. Pub. Health,' 05-12. Pub. Health Ass. (sec'y, lab. sect, 06-12); Soc. Bact; Child Hygiene Ass. Public health; bacteriological methods; morphology of bacteria; longevity of B. tuberculosis in sputum; investigation of methods of disinfection and their value; value of shaking suspended sputum specimens; types and morphology of B. diphtheriae; methods of digestion of suspected tubercular sputum specimens.
- Ricker, Maurice (G)**, U. S. Public Health Service, Washington, D. C. *Natural science*. Wataga, Ill. July 18, 69. B.S. Drake, 92. Teacher science, high sch, Marshalltown, Iowa, 92-96; biol, Burlington, 96-99, principal, 99-06; West High Sch, Des Moines, 06-18; with Y. M. C. A, 18-19, in charge, motion picture laboratories and sch. of projection, int. committee, 19-20; asst. director educ. work, U. S. Pub. Health Service, 20- Lecturer, biol. sta, Montana, 01-06; photographer, Univ. Iowa exped. to Barbados and Antigua, 18. A.A; fel. Iowa Acad; fel. St. Louis Acad. Plankton in Montana lakes and rivers; hydra and hydrachnids; ecology; physiography; photography applied in biological problems; motion-picture photography.
- Ricker, Prof. N(athan) Clifford**, 612 W. Green St, Urbana, Ill. *Architecture, Engineering*. Aceton, Maine, July 24, 43. B.S, Illinois, 72, M.Archit, 77, hon. D.Archit, 00. Instr. archit, Illinois, 73-75, asst. prof, 75-78, prof, 78-, dean, col. of eng, 78-05. Pres, Ill. Board of Examiners of Architects, 99- Hon. mem. and fel. Am. Inst. Archit; Eng. Educ; West. Soc. Eng; Ill. Soc. Eng. and Surveyors; Ill. Acad. History of architecture; architectural engineering; graphic statics; economical design of roofs.
- Ricker, P(ercey) L(eroy)**, U. S. Department of Agriculture, Washington, D. C. *Botany*. Brunswick, Maine, March 27, 78. B.S, Maine, 00, M.S, 01. Asst. biol, Maine, 01; sci. asst. agrost, U. S. Dept. Agr, 01-05, asst. office of botanist, 05-07, asst. botanist taxon. and range investigations, 08-17, forage crop investigations, 17- A.A; Bot. Soc; New Eng. Bot. Club; Wash. Bot. Soc; Wash. Biol. Field Club; Portland (Maine) Soc. Nat. Hist. Systematic mycology; grasses; legumes; taxonomy of cultivated plants; synopsis of genera of cryptogams.
- Ricketts, Pres. Palmer C(hamberlaine)**, Troy, N. Y. *Mathematics*. Elkton, Md, Jan. 17, 56. C.E, Rensselaer, 75; hon. D.E, Stevens, 05; LL.D, N. Y. Univ, 11. Instr. math, Rensselaer, 75-82, asst. prof, 82-84; prof. rational and tech. mech, 84-, director, 92-, pres, 01- Consulting engineer, Troy and Boston R. R. and R. W. and O. R. R; engineer, Pub. Improv. Commission, Troy, N. Y. A.A; Civil Eng. (director, 99-01, v. pres, 16); Mech. Eng; Min. and Metal. Eng; Philos. Soc; British Inst. Civil Eng. Constants of structural steel.
- Riddle, Prof. L(incoln) W(are)**, University Museum, Cambridge, Mass. *Botany*. Boston, Mass, Oct. 17, 80. A.B, Harvard, 02, A.M, 05, Ph.D, 06. Asst. bot, Harvard, 02, 05-06; instr, Wellesley, 06-09, assoc. prof, 09-18, prof, 18-19; asst. prof. crypt. bot, Harvard, 19- Ropes mem. lecturer, Salem, Mass, 16, 17. A.A; Am. Acad; New Eng. Bot. Club (pres, 17); Boston Soc. Nat. Hist. Fungi; lichens; lichen-flora of Florida and the West Indies; North American Arthoniaceae.
- Riddle, Dr. Oscar**, Cold Spring Harbor, N. Y. *Zoology, Physiology*. Cincinnati, Ind, Sept. 27, 77. A.B, Indiana, 02; Ph.D, Chicago, 07. Teacher biol, Training Sch, San Juan, P. R, 99-01; physiol, Cent. High Sch, St. Louis, Mo, 03-05; asst, Chicago, 04-07, assoc. 07-08, instr. exp. therapeut. and zool, 08-10; investigator in Europe, 10-11; research assoc, Carnegie Institution, 12-15, investigator, sta. for exp. evolution, 14- Nat. hist. exped. up Orinoco River, 01: with U.S.A, 18-19. A.A; Soc. Nat; Soc. Zool; Physiol. Soc; Soc. Exp. Biol; Pub. Health Ass; Am. Acad. Med; Ill. Acad; Wash. Acad. Bionomic physiology; color development; physiology of reproduction; the nature and functional basis of sex.
- Rider, Prof. Paul R(eece)**, Washington University, St. Louis, Mo. *Mathematics*. Independence, Mo, Oct. 14, 88. A.B, William Jewell, 09, A.M, 10; Yale, 14, Ph.D, 15. Instr. math, Sheffield Sci. Sch, Yale, 15-16; Washington (St. Louis), 16-18. asst. prof, 18- A.A; Math. Soc; Math. Ass. (sec'y-treas, Mo. sect). Calculus of variations.
- Ridgway, R(obert)**, U. S. National Museum, Washington; D. C. *Ornithology*. Mount Carmel, Ill, July 2, 50. Hon. M.S, Indiana, 84. Zoologist, U. S. Geol. exploration of 40th Parallel, 67-69; curator, div. of birds, U. S. Nat. Museum, 76- Mem. advisory council, World's Cong, Columbian Expos, 92. Mem. Int. Permanent Ornith. Committee, Vienna, 85; Int. Ornith. Cong, Budapest, 91; Walker prize, Boston Soc. Nat. Hist, 13. Nat. Acad; A.A; fel. Ornith. Union (v. pres, 84-01, 96-98, pres, 99-00); Forestry Ass; hon. mem. Nuttall Ornith. Union; Wash. Acad; Wash. Biol. Soc; Wash. Philos. Soc; Ill. Acad; hon. mem. Mich. Ornith. Club; cor. mem. N. Y. Lyceum Nat. Hist; cor. mem. Chicago Acad; cor. mem. Phila. Acad; cor. mem. Boston Soc. Nat. Hist; cor. mem. Boston Zool. Soc; cor. mem. Davenport Acad; hon. mem. Brookville (Ind) Acad; hon. mem. Maywood (Ill) Bird Club; hon. mem. Newton (Mass) Nat. Hist. Soc; hon. mem. British Ornith. Union; cor. mem. London Zool. Soc; hon. mem. Manchester (England) Lit. and Philos. Soc; hon. mem. Australian Ornith. Union; hon. mem. Ornith. Gesell. Ornithology, especially systematic or technical; botany, principally geographic and with reference to that of the lower Wabash Valley; ornithology of Illinois; no-

- menclature of colors; birds of North and Middle America; ornithology of the fortieth parallel; color standards and nomenclature.
- Ridgway, Rob(er)t**, 49 Lafayette St, New York, N. Y. *Civil engineering*. Brooklyn, N. Y., Oct. 19, 62. Hon. M.S., N. Y. Univ, 15, hon. C.E., 19. Chairman and instrumentman, North. Pacific R. R., 82-84; instrumentman and asst. engineer, Aqueduct Commission, N. Y. City, 84-00; asst. engineer, Rapid Transit Railroad Commission, 00-05; div. engineer, Board of Water Supply, 05-12; *engineer of subway construction*, Pub. Service Commission, 12-19; *Transit Construction Commission*, 19- Mem. Chicago Traction and Subway Commission, 16-17. A.A.; Civil Eng. (director, 11-13); Soc. Munic. Improv.; New Eng. Water Works Ass.; Franklin Inst.; N. Y. Munic. Eng. (director, 03-06, v. pres, 06-07; pres, 08); Harvard Eng. Soc.
- Ries, Dr. Heinrich**, Cornell University, Ithaca, N. Y. **Geology*. Brooklyn, N. Y., April 30, 71. Ph.B., Columbia, 92, fellow, 93-95, A.M., 94, Ph.D., 96, Barnard fellow, 97-00. Asst. miner, Columbia, 96-97; instr. *econ. geol.*, Cornell, 98-02, asst. prof., 02-06, *prof.*, 06-, in charge of dept., 09- Asst. geologist, N. Y. Geol. Surv., summers, 91, 92, 95; geologist, Mich., 98, 06; Md., 00; N. J., 01, 02; Tex., 03; Wis., 04; Va., 05, 15, 16; Can., 10, 11, 12, 13; special agent, U. S. Geol. Surv., 95-01, geologist, 18; lecturer, New York pub. schools, 95-97; mem. jury awards, Atlanta Expos., 95; Pan-Am. Expos., 01; La. Purchase Expos., 04. A.A.; Geol. Soc.; Min. Eng.; Am. Geog. Soc.; Ceramic Eng. Soc.; Ceramic Soc. (pres, 09-10); Can. Min. Inst. Clay, its occurrence, uses and geological distribution.
- Riesman, Dr. David**, 1715 Spruce St, Philadelphia, Pa. *Medicine*. Stadt-Lengsfeld, Germany, March 25, 67. M.D., Pennsylvania, 92. Demonstrator path, *Pennsylvania*, 97-01, instr. med., 01-08, asst. prof., 08-12, *prof. clin. med.*, 12- Visiting physician, Phila. Gen. Hosp. A.A.; Am. Physicians; Gastro-Enterol. Ass.; Am. Med. Ass.; Phila. Col. Physicians (pres, counselor, 13-17); Phila. Path. Soc. (pres, 09). Internal medicine; diseases of circulation, liver, gall bladder, kidney and lungs.
- Rietz, Dr. H(enry) L(ewis)**, 128 E. Fairchild St, Iowa City, Iowa. **Mathematics*. Gilmore, Ohio, Aug. 24, 75. B.S., Ohio State, 99; fellow, Cornell, 00-01, Ph.D., 02. Asst. math, Cornell, 01-02; prof. math. and astron., Butler, 02-03; instr. math., Illinois, 03-04, asst. prof., 04-11, statistician, Exp. Sta., 07-18; assoc. prof., 11-13, prof., 13-18; *prof. math. and head of dept.*, Iowa, 18- A.A.; Math. Soc.; Inst. Actuaries; Statist. Ass.; Royal Statist. Soc.; Circolo Mat. di Palermo. Group theory; the mathematics of statistics.
- Rigg, Prof. Geo(rge) B(urton)**, University of Washington, Seattle, Wash. *Botany*. Woodbine, Iowa, Feb. 9, 72. B.S., Iowa, 96, B.Di., 99; A.M., Washington (Seattle), 09; Ph.D., Chicago, 14. Assoc. principal, pub. schools, Rockwell City, Iowa, 96-98; teacher science, Woodbine Nor. Sch., Iowa, 98-07; bot. and zool., Lincoln High Sch., Seattle, Wash., 07-09; instr. *bot.*, *Washington (Seattle)*, 09-13, asst. prof., 13-19, *assoc. prof.*, 19- Asst. prof. plant physiol., Chicago, summer, 17; scientist kelp investigations, bur. soils, U. S. Dept. Agr., Puget Sound, 11-12, in charge of party, Alaska, 13. A.A.; Bot. Soc.; Ecol. Soc.; West. Soc. Nat. Plant physiology; sphagnum bogs; toxicity; kelps; tree growth.
- Rigge, Prof. William F(rancis), S.J.**, Creighton University, Omaha, Nebr. *Astronomy*. Cincinnati, Ohio, Sept. 9, 57. St. Xavier, 70-75; Woodstock Col., Md., 81-84, 87-91; Georgetown, 95-96, Ph.D., 17. Prof. science, St. Ignatius (Chicago), 84-87; St. Louis, 91-95; asst. astronomer, observatory, Georgetown, 95-96; *prof. physics and astron. and director, observatory, Creighton*, 96- Head, Creighton eclipse exped. to Washington, Ga., 00. A.A.; Astron. Soc.; Nebr. Acad.; fel. Royal Astron. Soc.; Soc. astron. de France. Eclipse and occultation maps; compound harmonic curves.
- Riggs, E(lmer) S.**, Field Museum of Natural History, Chicago, Ill. *Vertebrate paleontology*. Nineveh, Ind., 69. A.B., A.M., Kansas, 96; fellow, Princeton, 97-98; Chicago, 02-04. Asst. paleont., museum, Kansas, 96-97; asst. curator *paleont.*, *Field Museum Nat. Hist.*, 99-21, *assoc. curator*, 21- Geol. Soc.; Paleont. Soc.; Mus. Ass.; Kans. Acad. Dinosaurs; Carnivora; Miocene mammals; middle Eocene mammals.
- Riggs, Dr. Lloyd K(endrick)**, 39 N. Fifth Ave, New Brunswick, N. J. *Biological chemistry*. Castalia, Iowa, June 12, 88. A.B., Leander Clark, 10, A.M., 14; M.S., Chicago, 15, Ph.D., 18. Prof. chem., Leander Clark, 11-14; instr. *physiol. chem.*, Chicago, 17-18; *head, serum dept.*, *E. R. Squibb and Sons*, 18- The action of salts on metabolism of nerves.
- Riggs, Dr. Louis Warner**, Yarmouth, Maine. *Chemistry, Toxicology*. Georgetown, Maine, April 13, 62. B.M.E., Maine, 85; Ph.B., Ill. Wesleyan, 87, A.M., Ph.D., 94. Instr. sciences, Greely Inst., Cumberland, Maine, 84-86; Mt. Hermon Sch., Mass., 87-89; Sch. for Boys, Englewood, N. J., 90-93; chem., N. Y. Univ., 93-98; chem. and exp. therapist, med. col., Cornell, 98-11; *chemist*, 11- Chem. Soc. Post-mortem imbibition of arsenic; testing various schemes of quantitative analysis, with special reference to toxicological separations; determination of iodine in protein combinations; human sweat.
- Riggs, Prof. N(orman) C(olman)**, R. F. D. 2, Bridgeville, Pa. *Mechanics*. Bowling Green, Mo., Nov. 1, 70. B.S., Missouri, 95; M.S., Harvard, 98. Instr. math., Missouri, 94-95, acting asst. prof., 97-98; instr., Pa. State, 99-02; asst. prof., Armour Inst., 02-04, assoc. prof., 04-08; *asst. prof.*, *Carnegie Inst. Tech.*, 08-14, *prof. mech.*, 14- A.A.; Math. Soc.; Eng. Educ.
- Riggs, Prof. R(ober) B(aird)**, Trinity College, Hartford, Conn. *Chemistry*. Hazelwood, Minn., May 22, 55. A.B., Beloit, 76; Ph.D., Göttingen, 83. Chemist, U. S. Geol. Surv., 84-87; prof. chem., Nat. Col. of Pharmacy, 85-87; Trinity (Conn.), 87-20; retired, 20. A.A.; Chem. Soc. Constitution of tourmaline.
- Riley, Prof. C(harles) F(rederick) Curtis**, University of Manitoba, Winnipeg, Can. *Biology*. Manchester, England, 78. A.B., Doane, 01, A.M., 13; Nebraska, 01-02; B.S., Michigan, 04; M.S., Illinois, 12, fellow, 12-14. Asst. biol., astron. and

- meteor, observatory, Doane, 97-00; asst. zool. Michigan, 02-04; acting head, dept. biol. State Nor. Sch., Duluth, Minn., 05-06; prof. and head, dept. nat. sciences, State Training Col. for Teachers, Pittsburg, Kans., 06-07; head, dept. biol. and curator, museum, State Nor. Sch., Mankato, Minn., 07-11; asst. zool. Illinois, 11-12; head, dept. biol. State Teachers Col., Milwaukee, Wis., 13-17; asst. prof. and special lecturer animal behavior, N. Y. State Col. Forestry, Syracuse, 17-18, asst. prof. forest zool., 18-20, prof., 20; asst. prof. zool. Manitoba, 20- Principal and instr. biol. chem. and physics, high schools, Nebr. and Ind., 01-02, 04-05; assoc. prof. science, in charge biol. Simpson, 06; asst. zool. Illinois, summer, 13. First rank award, Trans-Mississippi Expos. A.A.; Entom. Soc.; Ecol. Soc.; Micros. Soc.; Nature Study Soc. Nature study; animal behavior; responses of young toads; ecology and habits of aquatic insects.
- Riley, Prof. H(oward) W(ait)**, Cornell University, Ithaca, N. Y. *Rural engineering*. Orange, N. J., May 2, 79. M.E., Cornell, 01. Chief draftsman, United Telphorage Co., 01-04; engineer, Morse Chain Co., 04-06; instr. exp. eng. Cornell, 06-07, farm mech., 07-09, asst. prof., 09-12, prof., 12-13, *rural eng.*, 13- Soc. Agr. Eng. (pres, 11). Rural domestic sewage disposal.
- Riley, Prof. J(oseph) C(ains)**, Massachusetts Institute of Technology, Cambridge, Mass. *Mechanical engineering*. Boston, Mass., 76. B.S., Mass. Inst. Tech., 98. *Assoc. prof. mech. eng.*, Mass. Inst. Tech. Mech. Eng. Heat engineering; mechanical design.
- Riley, Prof. J(oseph) L(eslie)**, Stephenville, Tex. *Mathematics*. Port Royal, Ky., June 26, 80. A.B., A.M., Georgetown; hon. M.S., Southern Minnesota; fellow, Rice Inst., 14-15; Indiana; Chicago; Wisconsin. Instr. physics and math, Oklahoma, 13-14; *prof. math.*, Northeast. State Nor. Sch., Okla., 15-17; *John Tarleton*, 17- Math. Soc.; Math. Ass. Theory of numbers.
- Riley, Prof. W(illiam) A(lbert)**, University Farm, St. Paul, Minn. *Entomology*. Mankato, Minn., Jan. 10, 76. B.S., DePauw, 97; fellow, Cornell, 98-99, Ph.D., 03. Asst. zool., DePauw, 96-98; entom., Cornell, 99-01, instr., 01-06, asst. prof., 06-12, *prof. entom. and parasitol.*, 12-18; *entom. and chief, div. entom. and econ. zool.*, Minnesota, 18- Mem. ed. board, 'Jour. Parasitol'; 'Jour. Agr. Research'; 'Bact. Abstracts.' A.A.; Soc. Nat.; fel. Entom. Soc. (mem. ed. board); Ass. Econ. Entom.; Soc. Zool. Insect histology and embryology; medical entomology; parasitology.
- Rindfus, Dr. Ralph Emerson**, American Writing Paper Co., Holyoke, Mass. *Chemistry*. Larwill, Ind., May 30, 87. A.B., Oberlin, 11, A.M., 16; Ph.D., Illinois, 18. Teacher, Houghton Sem., 10-14; asst. Oberlin, 14-16; instr. chem., Illinois, 16-19; *director chem. research*, Am. Writing Paper Co., 19-, *asst. to pres.*, 20- Consulting chemist, Special Chem. Co., 18- Chem. Soc.; Ass. Pulp and Paper Indust. Synthetic and structural organic chemistry; cellulose and cellulose products; colloids.
- Rines, David**, 99 State St., Boston, Mass. *Astronomy*. Russia, April 6, 84. A.B., Harvard, 07; LL.B., LL.M., M.P.L., National Univ., 16. Com-
- puter, U. S. Coast and Geod. Surv., 07-09; asst. U. S. Naval Observatory, 10-14; U. S. Patent Office, 14-17; asst. patent attorney, Westinghouse Elec. and Mfg. Co., 17-19; *patent attorney*, 19- A.A.; assoc. mem. Elec. Eng.; Radio Eng. Determination of time.
- Ringer, Prof. A(dolph) I(rving)**, 141 W. 78th St., New York, N. Y. *Physiological chemistry*. Wirballen, Russia, Aug. 18, 83. M.D., Bellevue Med. Col., 08, fellow, 08-09; Munich, 11. Instr. pharmacol., Univ. and Bellevue Hosp. Med. Col., 08-09; asst. physiol. med. col., Cornell, 09-11; instr. physiol. chem., Pennsylvania, 11-13, asst. prof., 13-15; *prof. clin. med.*, Fordham, 17- Lecturer physiol. med. col., Cornell, 18-19; consulting physician, Lenox Hill Hosp.; adj. attending physician, Montefiore Home and Hosp. Lusk prize, N. Y. Univ., 08. A.A.; Physiol. Soc.; Am. Med. Ass.; Soc. Biol. Chem.; Soc. Exp. Biol.; Harvey Soc.; N. Y. Acad. Med. Physiology of kidney; kidney and adrenal products; blood pressure; influence of adrenalin; diseases of metabolism; gluconeogenesis; nephritis; psoriasis; diabetes.
- Ripley, Dr. W(illiam) Z(ebina)**, Newton Center, Mass. *Economics, Sociology*. Medford, Mass., Oct. 13, 67. B.S., Mass. Inst. Tech., 90; fellow, Columbia, 91-93, A.M., 92, Ph.D., 93. Instr. econ., Mass. Inst. Tech., 93-95, asst. prof., 96-97, assoc. prof., 97-99, *prof.*, 00-02; *Harvard*, 02- Lecturer demography, Columbia, 93-01; expert in transportation, U. S. Indust. Commission, 00-01; labor administrator, U. S. War Dept., 17-18; chairman, nat. adjustment commission, U. S. Shipping Board, 18-20; economic expert, U. S. Interstate Commerce Commission, 19-20. Bertillon prize, Soc. d'Anthrop. de Paris, 01. Econ. Ass. (v. pres, 99); hon. cor. mem. Soc. d'Anthrop. de Paris; Rome Soc. d'Anthrop.; Cherbourg Acad.; Holland Zeeuwisch Genootschap por Wetenschappen. Demography of Europe and United States; transportation; railroad economics; corporations.
- Rising, W(alter) H(amilton)**, Spencer Lens Optical Glass Plant, Hamburg, N. Y. *Chemistry*. Corning, N. Y., Feb. 19, 93. B.S.(Chem), Michigan, 20. With physical lab, Corning Glass Wks., 11-13, chem. lab., 16-17, 19; asst. chem., Michigan, 20; *chief chemist*, Spencer Lens Co., 20- Sergeant, C.W.S., 18. Chem. Soc. War gases; alkali metals; optical glass; casting of large telescope discs.
- Risley, Prof. Walter J(ohn)**, 155 N. Taylor Ave., Decatur, Ill. *Mathematics*. Logan, Ohio, March 4, 74. Ohio (Athens), 95-97; B.S., Michigan, 00; A.M., Illinois, 07; Harvard, 08. Instr. math., Ohio (Athens), 96-97; math. and physics, high sch., Joliet, Ill., 00-03; math., Armour, 03-05; Illinois, 05-07; asst. astron., Harvard, 07-09, instr. math., 09-10; *prof. and head of dept.*, James Millikin, 10- A.A.; Math. Soc.; Math. Ass.; Eng. Educ.; Ill. Acad. Asymptotic series; envelopes of families of curves.
- Risteen, Dr. A(llan) D(ouglas)**, P. O. Drawer P, Hartford, Conn. *Physics*. Amesbury, Mass., Aug. 15, 66. B.S., Worcester, 85; Ph.D., Yale, 03. With U. S. Coast Surv., 85-87; *ed. with Hartford Steam Boiler Inspection and Ins. Co.*, 87- Asst. ed., 'Century Diet.' Physical Soc.

Absolute thermodynamic temperature scale; effect of temperatures on gravitative attraction; theory of binary stars; differential equations of physics.

Ritchey, Prof. G(eorge) W(illis), Solar Observatory Office, Pasadena, Calif. **Astronomy*. Tupper Plains, Ohio, Dec. 31, 64. Cincinnati, 83-84, 86-87. Asst, Cincinnati Observatory, 86-87; instr. manual training, Chicago Manual Training Sch, 88-96; optician, Yerkes Observatory, 96-99, supt. of instrument construction, 99-04; instr. practical astron, Chicago, 01-04, asst. prof, 04-05; *astronomer and supt. of instrument construction, solar observatory, Carnegie Institution, 05-* Astron. Soc; assoc. Royal Astron. Soc. Photography of nebulae and star-clusters in the attempt to detect evidence of development; development of the reflecting telescope as a photographic instrument; development of the horizontal telescope; construction of the two-foot reflecting telescope (Yerkes Observatory); construction of a two-foot horizontal reflecting telescope of 145 feet focal length with coelostat; photography of nebulae and star-clusters with the two-foot reflector; photography of star-clusters and the moon with 40-inch refractor of Yerkes Observatory with color screen; design, construction and use of a reflecting telescope of five-foot aperture and 25 feet focal length for astronomical photography; design, construction and use of a reflecting telescope of 100 inches aperture and 500 inches focal length for astronomical photography.

Ritchie, John, Massachusetts Institute of Technology, Cambridge, Mass. *Astronomy*. Boston, Mass, April 18, 53. English High Sch, Boston. Asst, Harvard Col. Observatory, 83-92; commissioner, Board of Health, Boston, 08-10; *assoc. ed., 'Am. Jour. Pub. Health,' 18-* Meteorol. Soc; Statist. Ass; Nat. Ass. Shell-Fish Commissioners; Library Ass; Appalachian Mt. Club (pres, 04); New Eng. Federation Nat. Hist. Soc. (pres, 07-); Boston Sci. Soc. (pres, 06-); Boston Malacol. Soc. (pres, 18). Conchology; ice caves; bleaching processes; sanitation.

Ritchie, John W(oodsides), World Book Co, Yonkers, N. Y. *Biology*. Near Sparta, Ill, Dec. 6, 71. A.B, Maryville, 98; fellow, Chicago, 04-05. Instr. biol, Maryville, 99-00; with Bur. Educ, P. I, 02-04; prof. biol, William and Mary, 05-19; *science ed, World Book Co, 15-* A.A; Soc. Baet; Pub. Health Ass; Torrey Bot. Club. Sanitation; hygiene; physiology; botany.

Ritt, Dr. Joseph Fels, Columbia University, New York, N. Y. *Mathematics*. New York, Aug. 23, 93. A.B, George Washington, 13; fellow, Columbia, 14-16, Ph.D, 17. Computer, U. S. Coast and Geod. Surv, 11; U. S. Naval Observatory, 12; 'Nautical Almanac' Office, 13-14; asst. *math, Columbia, 16-18*, lecturer, 18-19, *instr, 19-* Master computer, ordnance dept, U.S.A, 18-19. Math. Soc. Theory of functions and functional equations.

Rittenhouse, Prof. Samuel, University of Southern California, Los Angeles, Calif. *Zoology*. Royersford, Pa, Nov. 2, 73. A.B, Ursinus, 01; Ph.D, Hopkins, 05. Instr. biol, Olivet, 05-06, prof, 06-14; assoc. prof. *zool, Southern Cali-*

fornia, 14-16, prof, 16- A.A; Cooper Ornith. Club; West Soc. Nat; S. Calif. Biol. Club. Embryology of *Turritopsis nutricula* and of *Stomatoca apicata*; hygienic values of foods and drinks; marine wood destroying organisms.

Ritter, Dr. Sarah Margaret, Woman's College of Alabama, Montgomery, Ala. *Psychology*. Orleans, Ind, March 31, 73. A.B, Indiana, 10; Ph.D, Chicago, 16. Instr. psychol, Winthrop Col, Rock Hill, S. C, 14-17; *head, dept. educ, Sioux City Nor. Sch, Iowa, 17-19; dept. psychol. and educ, Woman's Col. of Ala, 19-* Psychol. Ass. Experimental education; mental measurements.

Ritter, Prof. W(illiam) E(merson), La Jolla, Calif. **Zoology, Biology*. Otsego, Wis, Nov. 19, 56. B.S, California, 88; A.M, Harvard, 91, Ph.D, 93. Instr. biol, *California, 91-93*, asst. prof. *zool, 93-98*, assoc. prof, 98-02, *prof, 02-* Director, Scripps Inst, California; ed, 'Zool. Publications,' California. A.A. (v. pres, 09, pres, Pacific div, 20); Soc. Nat; Soc. Zool; Ecol. Soc; Am. Acad; Pacific Biol. Soc. (pres, 12); West. Soc. Nat; life mem. and fel. Calif. Acad. (pres, 98-00); cor. mem. Phila. Acad. Pineal organ; eyes of Pt. Loma blind fish; budding in ascidians; morphology and taxonomy of ascidians and Enteropneusta; habits of salamanders; resources and population of North Pacific area; organic growth and integration; animal instincts; philosophical aspects of biology.

Rittman, Dr. W(alter) F(rank), U. S. Bureau of Mines, Washington, D.C. *Chemistry*. Sandusky, Ohio, Dec. 2, 83. A.B, Swarthmore, 08, A.M, 09; Ph.D, Columbia, 14. Instr. chem, Swarthmore, 09-12; chief petrol. chemist, *U. S. Bur. Mines, 14-16, consulting chemist, 16-* Lecturer, Columbia, 14. Chem. Soc; Chem. Eng; Min. Eng; Mech. Eng; Franklin Inst; N. Y. Chemists Club. Chemical engineering; fuel, oil and gas.

Rivas, Dr. Dámascio, School of Medicine, University of Pennsylvania, Philadelphia, Pa. *Medicine*. Nicaragua, C. Am, Dec. 11, 74. M.D, Pennsylvania, 99, B.S, 08. M.S, 09, Ph.D, 10. Bacteriologist, Phila, 03-06; Pa. Dept. Health, 06-10; *asst. prof. trop. med. and director of lab, Pennsylvania, 10-* Asst, Koch Inst, Berlin; coworker, Pasteur Inst, Lille; pathologist, Pa. Dept. Health; serologist, Friends Hosp, Frankford; mem. Malaria and Trop. Diseases Commission of Brioni, Istrie and east shores of Adriatic, 00-03. Am. Med. Ass. Public hygiene; parasitology; bacteriology; biology; pathology; tuberculosis; leprosy.

Rivers, Dr. T(homas) M(ilton), Johns Hopkins Medical School, Baltimore, Md. *Bacteriology*. Jonesboro, Ga, Sept. 3, 88. A.B, Emory, 09; M.D, Hopkins, 15. Asst. bacteriologist, Santo Tomas Hosp, Panama, 12-13; instr. *pediat, Hopkins, 17-18, bacter, 19-20, assoc, 20-* Soc. Baet. Bacteriology of respiratory diseases; classification of influenza bacilli; influenza meningitis.

Rixford, Dr. Emmet, 1795 California St, San Francisco, Calif. *Surgery*. Bedford, Can, Feb. 14, 65. B.S, California, 87; M.D, Cooper Med. Col, 91. *Prof. surg, Cooper Med. Col, 98-*

- Stanford*, 09- Sec'y and mem. board of directors, Cooper Med. Col. A.A.; Surg. Ass. (v. pres, 05); Soc. Clin. Surg.; San Francisco Co. Med. Soc. (pres, 05).
- Rixford, G(ulian) P(ickering)**, 1813 Pierce St, San Francisco, Calif. *Horticulture*. East Highgate, Vt, Sept. 21, 38. C.E, McGill, 64. Journalist, San Francisco 'Evening Bul,' 68-89; with office crop physiol. and breeding investigations, U. S. Dept. Agr. Lecturer hort, California. A.A.; Calif. Acad. (sec'y, 95-01). Plant breeding; fig culture.
- Roback, Prof. A(braham) A(ron)**, 17 Wentworth St, Dorchester, Mass. *Psychology*. Goniondz, Russia, June 19, 90. B.A, McGill, 12; A.M, Harvard, 13, traveling fellow, at Princeton, 16; Ph.D, Harvard, 17. Instr. psychol, Pittsburgh, 17; *prof. psychol. and English, Northeastern*, 18-; *lecturer psychol, Simmons*, 19-; *instr, Harvard*, 20- Prince of Wales gold medal, McGill, 12. Psychol. Ass; Philos. Ass. Experimental and applied psychology; interference of will-impulses; the graphic mechanism; group tests.
- Robb, Dr. W(illia)m L(ispenard)**, Rensselaer Polytechnic Institute, Troy, N. Y. **Physics, Electrical engineering*. Saratoga, N. Y, 61. A.B, Columbia, 80, fellow, 80-83, Barnard fellow, 93-96; Ph.D, Berlin, 83; LL.D, Trinity (Conn), 02. Asst. math, Columbia, 84-85; *prof. physics, Trinity (Conn)*, 85-02; *physics and elec. eng, Rensselaer*, 02- Consulting elec. engineer for several corporations. Physical Soc; Elec. Eng.
- Robbins, Dr. Rainard B(enton)**, 1113 Fardon Road, Ann Arbor, Mich. *Mathematics*. Clinton Co, Ind, April 21, 86. A.B, Indiana, 09, A.M, 10; Ph.D, Harvard, 14. *Instr. math, Harvard*, 12-14; *Sheffield Sci. Sch, Yale*, 14-17; *Michigan*, 17- Math. Soc; Math. Ass; Statist. Ass; Casualty, Actuarial and Statist. Soc. Statistics; actuarial science; applications of mathematics to biology.
- Robbins, Dr. Wilfred William**, Great Western Sugar Co, Longmont, Colo. *Botany*. Mendon, Ohio, May 11, 84. A.B, Colorado, 07, A.M, 09; Ph.D, Chicago, 17. Instr. biol, Colorado, 08-11; bot. and forestry, Colo. Agr. Col, 11-13, asst. prof, 13-14, prof. bot. and botanist, Exp. Sta, 14-19; *plant physiologist and pathologist, Great West. Sugar Co*, 19- A.A; Bot. Soc; Seed Anal. Ecology; plant physiology.
- Robbins, Dr. William J(acob)**, University of Missouri, Columbia, Mo. *Plant physiology*. North Platte, Nebr, Feb. 22, 90. A.B, Lehigh, 10; Ph.D, Cornell, 15. Instr. biol, Lehigh, 10-11; plant physiol, N. Y. State Col. Agr, Cornell, 12-16; *prof. bot, Ala. Polytech, and plant physiol, Exp. Sta*, 16-17; soil biochemist, bur. plant indust, U. S. Dept. Agr, 19; *prof. bot, Missouri*, 19- Second lieut, Sanit. C, 18. A.A; Bot. Soc; Chem. Soc. Plant nutrition; enzyme secretion by fungi.
- Robbins, William K(eltner)**, Amoskeag Manufacturing Co, Manchester, N. H. *Chemical engineering*. Redfield, Iowa. B.S, Iowa State, 78, M.S, 80. Asst. instr. quant. and org. chem, Mass. Inst. Tech, 79-82; chemist, *Amoskeag Mills*, 82-02, *supt. coloring*, 03- Clerk, Board of Health, Manchester, N. H, 94-19; established bacter. and milk inspection laboratories.
- A.A; Chem. Soc; N. H. Acad. Textile coloring and manufacturing; causes of uneven dyeing of all-wool worsted piece goods.
- Roberts, Dr. E(dith) A(delaide)**, Vassar College, Poughkeepsie, N. Y. *Botany*. Dover, N. H, 81. A.B, Smith, 05; M.S, Chicago, 11, Ph.D, 15. Instr. and later assoc. prof. bot, Mt. Holyoke, 15-17; exten. worker with women, U. S. Dept. Agr, 17-19; *assoc. prof. bot, Vassar*, 19- A.A; Bot. Soc. Plant physiology and ecology.
- Roberts, Prof. E(dwin) J(ay)**, 16 Fenton Ave, Laconia, N. H. *Chemistry*. Gilford, N. H, Feb. 2, 85. B.S, N. H. Col, 06; Ph.D, Yale, 11. Asst. chem, Yale, 08-10; instr, Colby, 11-14; *asst. prof, anal. chem. Brooklyn Polytech*, 14- A.A; Chem. Soc. Rare earth metals.
- Roberts, Dr. Elmer**, 508 W. Iowa St, Urbana, Ill. *Zoology*. Burnside, Ky, June 29, 86. B.S, Illinois, 13, Ph.D, 17. Asst. *genetics, Illinois*, 13-14, instr, 14-18, assoc, 18-20, *asst. prof, 20- A.A; Soc. Zool. Genetics; agriculture; twinning; selection; butter-fat and milk production*.
- Roberts, Prof. Geo(rge)**, University of Kentucky, Lexington, Ky. *Agronomy*. Burnside, Ky, June 16, 73. B.Pd, Kentucky, 99, M.S, 01. Asst. chemist, Ky. Exp. Sta, 01-03; Calif. Exp. Sta, 03-06; *Ky. Exp. Sta*, 06-09, *agronomist, 09-, prof. agron, Kentucky, 09-, asst. dean, col. agr, 19- Soc. Agron. (treas, 13-17). Soil fertility*.
- Roberts, Prof. H(erbert) F(uller)**, University of Manitoba, Winnipeg, Man, Can. *Botany*. Manhattan, Dec. 2, 70. A.B, Kansas, 91; LL.B, Northwestern, 93; M.S, Kansas State, 98; Chicago, 98-99. Instr. bot, Washington (St. Louis), 99-01; *prof, Kansas State*, 01-19, in charge exp. plant breeding, Exp. Sta, 10-19; *asst. prof. bot, Manitoba*, 20- Soc. Nat. Breeding of cereals, alfalfa and small fruits.
- Roberts, H(oward) S(hreve)**, 2d, Geophysical Laboratory, Washington, D. C. *Physical chemistry*. Philadelphia, Pa, Dec. 12, 90. E.E, Pennsylvania, 12; Drexel Inst, 13. Chemist, Wirt Co, 14-17; *asst. physicist, geophys. lab. Carnegie Institution*, 17- Manufacturer optical glass, W.I.B, 18. Chem. Soc; Wash. Philos. Soc. Oxid of iron and copper; optical glass.
- Roberts, Prof. I(saac) P(hillips)**, Palo Alto, Calif. *Agriculture*. East Varick, N. Y, July 24, 33. M.Agr, Iowa State, 75. Prof. agr. and dean, faculty agr, *Cornell*, 73-94, director, Exp. Sta, 88-03, col. agr, 94-03, *emer. prof. and lecturer agr, 03- Soc. Prom. Agr. Sci; Ass. Agr. Col; N. Y. State Agr. Soc. (pres); N. Y. State Dairymen's Ass. (pres). Conservation of moisture in the soil; tillage; clover crops; preservation of manures; effect of tillage on potatoes; Melilotus as a green manure crop; effect on production by continuous growth of intertilled crops*.
- Roberts, Dr. John B(ingham)**, 313 S. 17th St, Philadelphia, Pa. *Anatomy, Surgery*. Philadelphia, Feb. 29, 52. A.B, Pennsylvania, 71, A.M, 74, M.D, 88; Jefferson Med. Col, 74. *Prof. surg, Phila. Polyclinic*, 82-18; *Pennsylvania, 18- Surgeon, Methodist Epis. Hosp*, 01-13; *lecturer anat, Pennsylvania*, 88-91; *prof.*

- surg, Woman's Med. Col. of Pa, 80-99; surgeon, Jewish Hosp; pres, Phila. Polyclinic and Col. for Grad. Med, 90-98; lecturer, Civilian Sch. Plastic and Oral Surg, U.S.A, 17-18. A.A.; fel. Surg. Ass. (v. pres, 88, 94, pres, 20); Ass. Anat; Am. Med. Ass; fel. Am. Acad. Med. (pres, 04); Pa. Med. Soc. (pres, 94), fel. Phila. Acad. Surg. (pres, 06, 07); Phila. Co. Med. Soc. (pres, 91, 92); Phila. Col. Physicians (Mütter lecturer, 00, treas, 12-17); Phila. Path. Soc. (v. pres, 82); Soc. Int. de Chirurg. Operative surgery; surgical anatomy; surgery of the brain, heart and of fractures.
- Roberts, Dr. John W(illiam)**, U. S. Department of Agriculture, Washington, D. C. *Plant pathology*. Alma, Nebr, July 4, 82. A.B, Nebraska, 04, fellow, 08, A.M, 09; Ph.D, George Washington, 17. Instr. Latin and German, high sch, Falls City, Nebr, 05-06; asst. bot, Nebraska, 07-09; scientific asst, *bur. plant indust*, U. S. Dept. Agr, 09-11, asst. pathologist, 12-13, *pathologist*, 13- A.A.; Bot. Soc; Phytopath. Soc; Wash. Bot. Soc; Wash. Soc. Bact. Diseases of apple, peach, plum and cherry.
- Roberts, Prof. Maria M**, Iowa State College, Ames, Iowa. *Mathematics*. Dunlap, Iowa, June 29, 67. B.Litt, Iowa State, 90; Cornell; Chicago. Instr, asst. prof. assoc. prof. and later *prof. math*, Iowa State, 13- Math. Soc; Math. Ass. Analytical geometry.
- Roberts, Dean Milnor**, 4501 15th Ave, N. E, Seattle, Wash. *Mining engineering*. New York, N. Y, March 10, 77. A.B, Stanford, 99, 00-01. Instr. miner, Stanford, 00-01; *prof. mining and metal, and dean, col. mines, Washington (Seattle)*, 01-; *consulting mining engineer in Pacific Northwest and Alaska*, 01- Wash. Geol. Surv, 01, 02; in charge collecting ores of Washington for La. Purchase and Portland Expositions; consulting mining engineer, U. S. Bur. Mines; mem. int. jury of awards, Alaska-Yukon-Pac. Expos, 09. Min. and Metal. Soc; Min. Eng; Pacific Northwest Soc. Eng. (past v. pres, pres, 09). The mineral industry; the ores and coals of the Pacific Northwest, British Columbia and Alaska; ore dressing and coal washing methods.
- Roberts, Dr. Tho(mas) S(adler)**, Zoological Museum, University of Minnesota, Minneapolis, Minn. *Medicine, Ornithology*. Philadelphia, Pa, Feb. 16, 58. Minnesota; M.D, Pennsylvania, 85. *State ornithologist*, Minn, 90-; *prof. pediat*, Minnesota, 01-06, clin. prof, 06-13, *emer. prof*, 13-, *prof. ornith. and director, zool. museum*. Physician, Home for Aged Women and for Children. A.A; fel. Ornith. Union; Soc. Mammal; Wilson Ornith. Club; Am. Med. Ass; cor. mem. Wash. Biol. Soc; Minn. Acad. (trustee and past pres); cor. mem. N. Y. Linnean Soc; cor. mem. Nuttall Ornith. Club; Cooper Ornith. Club. Ornithology of Minnesota.
- Robertson, Prof. A(ibert) D(uncan)**, 911 Wellington St, London, Ont, Can. *Zoology*. Wellington Co, Ont, Aug. 24, 76. B.A, Toronto, 10, fellow, 10-12. Lecturer *biol*, Toronto, 12-15; assoc. prof, *Western*, 15-19, *prof*, 19- A.A; Ass. Anat; Soc. Zool; Can. Inst. Mollusca; oysters; Limnophila.
- Robertson, Prof. Alice**, 334 17th Ave, Seattle, Wash. *Zoology*. Philadelphia, Pa. B.S, California, 98, M.S., 99, Ph.D, 02. Asst. hygiene for women, California, 02-04, zool, 04-06; instr, Wellesley, 06-09, assoc. prof, 09-12, prof, 12-19. A.A; Soc. Nat; Soc. Zool. Embryology, morphology and taxonomy of the Bryozoa; Bryozoa of the west coast of North America; Cyclostomata; Bryozoa of the Northwest Pacific; Bryozoa of the Bay of Bengal.
- Robertson, Prof. Charles**, Carlinville, Ill. *Biology*. Carlinville, June 12, 58. Blackburn, Ill. Instr. bot. and Greek, Blackburn, 80-86, prof. *biol*, 97-09. A.A; Ecol. Soc. Mutual relations of flowers and insects.
- Robertson, Prof. H(arold) E(ugene)**, University of Minnesota, Minneapolis, Minn. *Pathology*. Waseca, Minn, Oct. 8, 78. A.B, Carleton, 99; Columbia, 00-01; M.D, Pennsylvania, 05; Berlin, 14; Freiburg, 15. Instr. path, Albany Med. Col, 05-06; Harvard Med. Sch, 07; path. and bacter, *Minnesota*, 07-09, asst. prof, 10-11, assoc. prof, 11-13, *prof. path*, 13-, acting head, dept. path, bacter. and pub. health, 13-15, *director*, 15-18, *path. and pub. health*, 18- Pathologist, Boston City Hosp, 06-07; major, M.C, A.E.F, 17-18. A.A; Am. Med. Ass; Ass. Path. and Bact; Soc. Bact; Am. Acad. Med; Soc. Cancer Research; Int. Ass. Med. Museums. Anterior poliomyelitis; ganglio-neuromata; ductus arteriosus; bacteriology; lipoma myxomatodes; tetanus.
- Robertson, Prof. T(horburn) Brailsford**, Mt. Lofty, South Australia. *Biochemistry*. Edinburgh, Scotland, March 4, 84. B.S, Adelaide, 05, D.Sc, 08; Ph.D, California, 07. Asst. physiol, California, 05-06, instr, 06-07, acting asst. prof. physical chem, 07-08, asst. prof, 08-10, assoc. prof, 10-17, *prof. biochem. and pharmacol*, 17-18; biochem, Toronto, 18-19; *physiol. and biochem, Adelaide*, 19- A.A; Physiol. Soc; Soc. Biol. Chem; Soc. Exp. Biol; Ass. Study Int. Secretions (v. pres). Protoplasmic motion and excitation; antagonistic action of salts and alkalis; influence of electrolytes on staining of tissues by dyes; physical chemistry of the proteins; synthesis of proteins through the agency of enzymes; permeability of cells; absorption; biochemistry of growth and cell division; memory.
- Robertson, Dr. W(illiam) R(ees) B(rebner)**, 1701 Louisiana St, Lawrence, Kans. *Zoology*. Manchester, Kans, 81. A.B, Kansas, 06, A.M, 07; Ph.D, Harvard, 15. Instr. *zool*, Kansas, 07-09, asst. prof, 12-20, *assoc. prof*, 20- A.A; Soc. Nat; Soc. Zool; Ass. Anat; Ass. Study Int. Secretions; Kans. Acad. Cytology; genetics; eugenics.
- Robey, Dr. William Henry**, 202 Commonwealth Ave, Boston, Mass. *Medicine*. Boston, July 3, 70. M.D, Harvard, 95. Asst. bacter, *Harvard*, 00-05, clin. med, 04-09, instr, 09-19, *asst. prof*, 15-, *med*, 19- Visiting physician, Boston City Hosp; consulting physician Milton Hosp; lieut. Col. M.C. and consultant med. A.E.F. Ass. Path. and Bact; Am. Med. Ass; Boston Soc. Med. Improv. Clinical medicine.
- Robin, Dr. Albert**, Wilmington, Del. *Bacteriology*. Ouman, Russia, April 6, 75. M.D, West. Pa. Med. Sch, 97. Pathologist and bacteriologist, Del. State Board of Health Lab, 99-03;

- prof. path. and hygiene, Temple, 02-; bacteriologist, City Water Dept., Wilmington, 03- Asst. ed., Phila. Med. Jour., 01-03; dept. ed., 'Therapeut. Monthly,' 02-03; pathologist, Samaritan Hosp; med. director, Hope Farm Sanatorium. Soc. Bact; Pub. Health Ass; Am. Med. Ass; Phila. Path. Soc. Pathology; laboratory methods; sanitary problems; internal medicine; Röntgenology.*
- Robinson, Dr. B(enjamin) L(incoln),** 3 Clement Circle, Cambridge, Mass. **Botany.* Bloomington, Ill. Nov. 8, 64. Williams, 83; A.B., Harvard, 87; Ph.D., Strasbourg, 89; Bonn, 90. Asst. Gray Herbarium, Harvard, 90-92, curator, 92-, *Asa Gray prof. syst. bot., 00- Ed., 'Rhodora.' A.A.; Bot. Soc. (pres, 00); Am. Acad; New Eng. Bot. Club (pres, 06-08); cor. mem. Mass. Hort. Soc; cor. mem. R. I. Hort. Soc; Vt. Bot. Club; Boston Soc. Nat. Hist; Wash. Acad; cor. mem. Bot. Gesell; cor. mem. Brandenburg Bot. Verein; cor. mem. Czecho-Slovakian Bot. Soc. Classification and distribution of the spermatophytes of North America, Mexico, northern South America and the Galapagos Islands; revision of the Compositae-Eupatorieae.*
- Robinson, Dr. Beverley,** 42 W. 37th St, New York, N. Y. *Medicine.* Philadelphia, Pa, March 22, 44. A.B., Pennsylvania, 62; M.D., Paris, 72. Clin. prof. med, Univ. and Bellevue Hosp. Med. Col., emer. prof. Emer. mem. Am. Physicians; N. Y. Acad. Med.
- Robinson, Dr. Charles J(udson),** 106 Park Ave, Saranac Lake, N. Y. *Chemistry.* Eureka, Ill, Dec. 12, 82. M.S., Ill. Wesleyan, 03; Ph.D., Hopkins, 06. Instr. Univ. and Bellevue Hosp. Med. Col, 06-09; prof. chem, Univ. of Louisville, 09-17; research chemist, Saranac Lake, 17- Capt, Sanit. C, 18-19. Chem. Soc; Soc. Physiol. Chem; Chem. Gesell. Action of amins on camphoroxalic acid; combustion of halogen compounds in presence of copper oxid; phosphorus compounds in wheat bran; chemotherapy of tuberculosis; syntheses of dyestuffs.
- Robinson, Dr. C(harles) S(ummers),** East Lansing, Mich. *Agricultural chemistry.* Chicago, Ill, April 17, 85. A.B., Michigan, 07, M.S., 09, Ph.D., 17. Asst. chem, Michigan, 06-08; with Western Elec. Co, 09; research asst. chem, Mich. Exp. Sta, 09-15, research assoc, 15- Organic nitrogenous compounds, osmosis and adsorption in soils; osmotic pressure with inert membranes.
- Robinson, Dr. D(aisy) M(aude) (Orleman),** U. S. Public Health Service, Washington, D. C. *Biology, Medicine.* Forty Riley, Kans. M.D., M.S., George Washington. Teacher, pub. schools, Fla; surgeon and med. examiner, Peekskill Mil. Acad; lecturer, N. Y. Polyclinic Med. Sch; v. pres, North West. Dispensary, N. Y. City; pres, woman auxiliary board, N. Y. Polyclinic Med. Sch; regional consultant, U. S. Pub. Health Service. Major and surgeon, French Army; capt, M.C., U.S.A. A.A.; N. Y. Acad. Med; Soc. de Dermatol. Ill effects of Röntgen rays; diagnosis and treatment of herpes zoster; the Noguchi system in the serum diagnosis of syphilis; early diagnosis and treatment of cancer.
- Robinson, Edward Stevens,** Faculty Exchange, University of Chicago, Chicago, Ill. *Psychology.* Lebanon, Ohio, April 18, 93. A.B., Cincinnati, 16; fellow, Carnegie Inst. Tech, 16-17, A.M., 17; fellow, Chicago, 17-18, 19, Ph.D., 20. Asst. psychol., Cincinnati, 17-18; instr., Yale, 19-20; asst. prof., Chicago, 20- Acting director of research, trade test div, W.D., U.S.A., 18-19; asst. psychol., Chicago, summer, 19. Psychol. Ass. Experimental, industrial and theoretical psychology; learning; work and fatigue; ability.
- Robinson, Dr. G(eorge) Canby,** Vanderbilt University Medical School, Nashville, Tenn. *Medicine.* Baltimore, Md, Nov. 4, 78. A.B., Hopkins, 99, M.D., 03; Munich, 08-09. Asst. demonstrator anat., Cornell, 03-04; res. pathologist, Pennsylvania Hosp, 04-06, res. physician, 06-08; director, path. lab. Presb. Hosp, Phila., 09-10; assoc. med., Rockefeller Inst, and res. physician, Hosp, 10-13; assoc. prof. med., Washington (St. Louis), 13-20, acting dean and dean, sch. med, 17-20; prof. med. and dean, med. sch., Vanderbilt, 20- Am. Physicians; Physiol. Soc; Soc. Exp. Biol; Am. Med. Ass. Diseases of the heart; typhoid bacilli; meningococcus; treatment of tetanus by magnesium sulphate; tuberculous meningitis; the presphygmie period of the heart; the blood pressure in meningitis; electrocardiography.
- Robinson, Dr. George Henry,** 3818 Barrington Road, Baltimore, Md. *Bacteriology.* Lewiston, Maine, May 23, 89. A.B., Bates, 11; A.M., Brown, 12, Ph.D., 14. Research worker, H. K. Mulford Co, 14-18; assoc. bacter. sch. hygiene and pub. health, Hopkins, 18- Soc. Bact. Immunology.
- Robinson, Dr. H(arold) C(unningham),** Pearl River, N. Y. *Bacteriology.* Riverside, Calif, April 21, 89. B.A., Acadia, 10; A.B., Yale, 13, Ph.D., 17. Asst. bacter., Yale, 15-16; bacteriologist, Quarantine Station, N. Y. City, 16-17; Lederle Antitoxin Lab, 17- A.A.; Soc. Bact. Bacterial growth and metabolism in protein free digestion products.
- Robinson, Heath M(ontgomery),** 60 Broadway, New York, N. Y. *Geology.* Pilot, Va, Oct. 11, 90. B.S., Va. Polytech, 10, M.S., 12; Yale, 14, 15. Geologist, U. S. Geol. Surv, 12-15; with F. Julius Fohs, 16; U. S. Geol. Surv, 17-18; F. Julius Fohs, 19- Min. and Metal. Eng; Wash. Geol. Soc. Structural geology; oil and gas; ozokerite.
- Robinson, T(homas) Ralph,** U. S. Department of Agriculture, Washington, D. C. *Agronomy.* Syracuse, N. Y., Aug. 25, 76. A.B., Syracuse, 98, A.M., 99. Plant physiologist, U. S. Dept. Agr, 01-10; in charge commercial citrus grove, 11-18; crop physiologist, U. S. Dept. Agr, 18- Phytopath. Soc; Wash. Bot. Soc. Soil bacteriology; plant breeding; breeding of citrus fruits.
- Robinson, Prof. W(ilber) I(rving),** School of Mines, Golden, Colo. *Geology.* Portland, Mich, May 15, 89. B.S., M.S., Michigan, 14; Ph.D., 16. Instr. in charge, dept. geol., Vassar, 16-18; asst. prof., Colo. Sch. Mines, 19- Paleont. Soc. Stratigraphy; paleontology; theory of evolution.
- Robinson, W(illiam) O(rrin),** Bureau of Soils, Washington, D. C. *Physical chemistry.* Marlboro, N. H., Oct. 2, 84. B.S., N. H. Col, 05, M.S., 06. Instr. chem, N. H. Col, 05-06, Exp. Sta, 06; asst. chemist, bur. soils, U. S. Dept. Agr, 06- With R.O.T.C., U.S.A., 17; capt, C.W.S., 17-

- 19; major, Q.M.R.C. Chem. Soc. Chemical statics with reference to the salts composing natural alkali; iron compounds; beryllium compounds; natural alkali; lime and lime salts as soil amendments; color and composition of, and rare elements in soils; soil analysis; poison gas shell filling; soil colloids; soil solution; composition of plant ash.
- Robinson, Miss Winifred J (osephine)**, Delaware College, Newark, Del. *Botany*. Johnstown, Mich, Oct. 17, 67. B.S., B.Pd, Michigan, 99, hon. A.M., Mich. Nor. Col, 12; A.M., Columbia, 04; Ph.D, 10. Instr. bot. training dept, Mich. State Nor. Col, 93-95; biol. Vassar, 00-07; bot, 09-13, asst. prof, 13-14; *dean, Woman's Col. of Del, 14-* Research fellow, N. Y. Bot. Garden, 03. A.A.; Soc. Nat; Bot. Soc; Fern Soc; Bryol. Club; Inst. Social Sci; Torrey Bot. Club. Plant morphology; taxonomy of Hawaiian ferns; life history of Hymenophyllaceae.
- Robinson, Col. Wirt, U. S.** Military Academy, West Point, N. Y. *Explosives, Natural history*. Buckingham Co, Va, Oct. 16, 64. Grad, U. S. Mil. Acad, 87. Instr. French and Spanish, U. S. Mil. Acad, 91-92; mil. science, Harvard, 94-98; asst. prof. French and Spanish, *U. S. Mil. Acad*, 99-04, head, dept. explosives, sch. submarine defense, 04-06, instr. *chem, miner, geol. and elec*, 06-11, *prof, 11-* Mem. Ornith. Union. Analysis and determination of high explosives, especially of nitro-substitution compounds.
- Rock, Prof. Joseph F (rancis Charles)**, U. S. Department of Agriculture, Washington, D. C. *Botany*. Vienna, Austria, Jan. 13, 84. Vienna. Botanist, Univ. of Hawaii, 11-19, prof. syst. bot, 19; *with office of foreign seed and plant introduction, U. S. Dept. Agr, 20-* Consulting botanist, Board of Commissioners of Agr. and Forestry, Honolulu, 11-; collaborator, U. S. Dept. Agr, 13-14; mem. advisory committee, Exp. Sta, Hawaiian Sugar Planters Ass, 18- Bot. Soc; Torrey Bot. Club; Wash. Biol. Soc. Phytogeography; Hawaiian trees and plants.
- Rockwood, Prof. E (lbert) W (illiam)**, Iowa City, Iowa. *Chemistry, Toxicology*. Franklin, Mass, July 4, 60. B.S., Amherst, 84, hon. A.M., 01; Göttingen, 89; Strasbourg, 90-91; Leipzig, 92, 94; M.D., Iowa, 95; Ph.D., Yale, 04. Instr. chem, Wesleyan, 84-86; Cornell, 86-87; chemist, Hatch Exp. Sta, 88; *prof. chem. and toxicol, and head, dept. chem, Iowa, 88-* Instr. English High Sch, Cambridge, Mass. A.A.; Chem. Soc; Soc. Biol. Chem; Chem. Gesell. Physiological chemistry; adsorption; nutrition; uric acid; enzyme action.
- Rodebush, Dr. Worth H (uff)**, University of California, Berkeley, Calif. *Chemistry*. Selden, Kans, May 24, 87. A.B., Kansas, 12, A.M., 14; Ph.D., California, 17. Asst. chem. engineer, U. S. Bur. Mines, 18; chemist, U. S. Indust. Alcohol Co, 18-19; *Nat. Research Council fellow, California, 19-* Chem. Soc. Freezing points of solutions; low temperatures.
- Rodgers, Ralph C (hapman)**, 406 N. Cayuga St, Ithaca, N. Y. *Physics*. Binghamton, N. Y, July 13, 82. M.E., Cornell, 05, A.M., 08, Ph.D., 19. Asst. instr. *physics, Cornell, 05-06, instr, 06-* A.A.; assoc. mem. Physical Soc; Mech. Eng;
- Illum. Eng. Soc. Resistance of the alkali metals and sodium amalgams at various low temperatures.
- Rodman, Prof. W (alter) S (heldon)**, University, Va. *Electrical engineering*. Wakefield, R. I, Sept. 1, 83. B.S., R. I. Col, 04, M.S., 07; Mass. Inst. Tech, 09, Saltonstall fellow, 09-10. A.A.; Elec. Eng; Eng. Educ; Illum. Eng. Soc. Transients in circuits with magnetic cores.
- Roe, Prof. E (dward) D (rake)**, Jr, 123 W. Ostrander Ave, Syracuse, N. Y. **Mathematics, Astronomy*. Elmira, N. Y, Jan. 4, 59. A.B., Syracuse, 80; A.B., Harvard, 85, A.M., 86; Ph.D., Erlangen, 98. Instr. *math, acad, Media, Pa, 86-88; instr. pro tem, Harvard, 90; instr, Boston, 90-92; assoc. prof, Oberlin, 92-99; Syracuse, 00-01, prof, 01-*, *director of observatory, 19-* Research assoc, Yerkes Observatory, summer, 15. A.A.; Math. Soc; Math. Ass; Astron. Soc; Ass. Prof; Optical Soc; Ass. Teachers Math. Middle States and Md; Math. Verein; Circolo Mat. di Palermo; Soc. astron. de France. Symmetric functions; invariants; discovery and measurement of double stars; testing of objectives; irreducible factors.
- Roe, Dr. J (osephine) R (obinson)**, 123 W. Ostrander Ave, Syracuse, N. Y. *Mathematics*. Meredith, N. H. A.B., Oberlin, 94; hon. A.M., Berea, 02; A.M., Dartmouth, 11; Ph.D., Syracuse, 18. Principal, high sch, Laconia, N. H, 80-82; instr. math, Literary Inst, New Hampton, N. H, 82-90; Latin and math, and preceptress, Kimball Union Acad, Meriden, N. H, 94-97; dean of women, Berea, 97-07, *prof. math, 97-11. A.A; life mem. Math. Soc. Symmetric functions.*
- Roe, Dr. Mabel L (ewis)**, 209 E. Broadway, Anaheim, Calif. *Botany*. Chicago, Ill, March 24, 81. A.B., Vassar, 03; M.S., Chicago, 14, fellow, 14-15, Ph.D., 15. Instr. bot. and Latin, Faulkner Sch. for Girls, Chicago, Ill, 09-13; bot, Carnegie Inst. Tech, 16; asst. plant pathologist, Ky. Exp. Sta, 19; seed analyst, Dickinson Seed Co, 19. A.A.; Bot. Soc; Phytopath. Soc; Ecol. Soc. Reproduction in brown algae; aecogynous liverwort.
- Roebuck, Prof. John R (ansom)**, 2210 Hollister Ave, Madison, Wis. *Physics, Physical chemistry*. London, Ont, Sept. 23, 76. B.A., Toronto, 02, Ph.D., 05. Lecturer *physics, McGill, 02-07; instr, Wisconsin, 07-12, asst. prof, 12-19, assoc. prof, 19-* A.A.; Chem. Soc; Physical Soc. Porous plug work.
- Roever, Prof. W (illiam) H (enry)**, Washington University, St. Louis, Mo. **Mathematics*. St. Louis, May 26, 74. B.S., Washington (St. Louis), 97; A.M., Harvard, 04, Ph.D., 06. Instr. astron, Washington (St. Louis), 99-01; *math, Mass. Inst. Tech, 05-08; asst. prof, Washington (St. Louis), 08-16, assoc. prof, 16-17, prof, 17-* Prof. math. and instr. nautical astron, Chicago, 18; master computer, Aberdeen Proving Ground, 18. A.A. (see'y, A, 20); Math. Soc; Math. Ass; St. Louis. Acad; Circolo Mat. di Palermo. Geometry; mechanics.
- Rogers, Dr. Agnes Low**, Goucher College, Baltimore, Md. *Psychology*. Dundee, Scotland, 84. M.A., St. Andrews, Scotland, 06; Cam-

- bridge, 08-11; Ph.D, Columbia, 17. Asst. St. Andrews, Scotland, 06-08; lecturer, Aberdeen, 11-14; asst. educ. psychol, Columbia, 16-17, lecturer, 17-18; *prof. educ. Goucher*, 18- Psychol. Ass; British Ass. Educational psychology; measurement of class room products and mathematical intelligence; mental tests for college entrance.
- Rogers, Dr. Allen**, Pratt Institute, Brooklyn, N. Y. **Chemistry*. Hampden, Maine, May 22, 76. B.S, Maine, 97, M.S, 00; Ph.D, Pennsylvania, 02. Instr. chem, Maine, 97-00; senior fellow, Pennsylvania, 02-03, instr. org. chem, 03-04; research chemist, Oakes Mfg. Co, 04-05; *in charge indust. chem, Pratt Inst*, 05- Chem. Soc. (chairman, N. Y. sect, 14); Soc. Chem. Indust. (sec'y, Am. sect, 15-); Soc. Test. Mat; Leather Chem. Ass; Franklin Inst; N. Y. Chemists Club (trustee, 19); Soc. de Chim. indust. Complex inorganic acids; tanning and leather.
- Rogers, Allen H (astings)**, 201 Devonshire St, Boston, Mass. *Engineering*. Marshfield, Mass, Feb. 19, 71. B.S, Mass. Inst. Tech, 90. Various operating positions, 90-06; *mining and metal. engineer*, 06- A.A; Min. Eng; Min. and Metal. Eng; Min. and Metal. Soc. Ore dressing; extraction of potash from silicate rocks.
- Rogers, Dr. Anna Sophie**, Dennison Hotel, Columbus, Ohio. *Psychology*. Bushnell, Ill, July 3, 89. A.B, Illinois, 11, A.M, 14, Ph.D, 17. Demonstrator biol, Bryn Mawr, 17-18; *instr. psychol, Ohio State*, 18- Psychol. Ass; Ohio Acad. Experimental psychology; perception; visual perception; chemical analysis of nervous tissue.
- Rogers, Dr. Austin F (lint)**, Stanford University, Calif. *Mineralogy, Crystallography*. Lathrop, Mo, Aug. 15, 77. Sch. of mines, Missouri, 96-97; A.B, Kansas, 99, A.M, 00; fellow, Columbia, 00-02, Ph.D, 02. Asst. miner, Kansas, 98-00; tutor, Columbia, 02-05; *prof. miner. and petrog, Stanford*, 05- Asst. geologist, Univ. Geol. Surv. of Kans, 98-00, 03, 08. Assoc. ed. 'Am. Mineralogist,' 19- A.A; fel. Geol. Soc. Graphical methods in crystallography; coal measures fauna; minerals of Kansas, California and Joplin lead and zinc district; calcite; silica; copper; sulphid ores; sericite; apatite and amorphous minerals.
- Rogers, Dr. Burton R (ay)**, 369 Exchange Boulevard, Chicago, Ill. *Veterinary science*. Polk City, Iowa, Nov. 1, 79. D.V.M, Iowa State, 99; P.G, McKillip Vet. Col, 00; Dearborn Night Med. Sch, Chicago, Ill, 05-06. House surgeon and demonstrator vet. anat, Iowa State, 00; inspector meat, bur. animal indust, U. S. Dept. Agr, 00-06; vet. anatomist, Kansas State, 06-14; dean and sec'y, St. Joseph Vet. Lab, 14-17; veterinarian, West. Weighing and Inspection Bur, 17-18; *prof. anat. and histol, McKillip Vet. Col*, 18- A.A; Vet. Med. Ass; Ass. Tuber; U. S. Live Stock Sanit. Ass; Ill. Cattle Breeders' Ass; Pub. Health Ass; Kans. Acad. Veterinary anatomy; angiology; neurology; tuberculosis; pneumonia; influenza; hog cholera; infantile paralysis; milk; hogs as tuberculosis tests in cattle herd units.
- Rogers, Prof. C (harles) G (ardner)**, 378 Reamer Place, Oberlin, Ohio. *Physiology*. Perry, N. Y, March 4, 75. A.B, Syracuse, 97, A.M, 99, hon. Sc.D, 19; Chicago, autumn, 02; Ph.D, California, 04. Instr. physiol, Syracuse, 99-02; asst, Chicago, autumn, 02; California, 03-04; Kansas, 04; asst. prof, Syracuse, 05-07, assoc. prof, 07-10, *prof*, 10-13; zool, *Oberlin*, 13-15, *comp. physiol*, 15- Mem. staff, Woods Hole, summers, 15-19. A.A; Soc. Nat; Physiol. Soc; Soc. Zool; Am. Geog. Soc. Physiology of nerve cells; heat production in the animal body; fat digestion and absorption in lower animals.
- Rogers, Dr. David C (amp)**, Smith College, Northampton, Mass. *Psychology*. New Britain, Conn, May 25, 78. Amherst, 95-97; A.B, Princeton, 99; Hartford Theol. Sem, 99-01; A.M, Harvard, 02, Ph.D, 03. Asst. philos, Harvard, 02-05, instr. social ethics, 05-09; asst. prof. *psychol*, Kansas, 09-14; *prof, Smith*, 14- A.A; Psychol. Ass.
- Rogers, Dr. F (rancis) M (itchell)**, Standard Oil Co, Whiting, Ind. *Chemistry*. Morgantown, N. C, March 22, 83. A.B, Davidson, 03, A.M, 04; Ph.D, Hopkins, 07. Chemist, *Standard Oil Co. of Ind*, 08-14, *chief chemist*, 14- Asst. ed. 'Chem. Abstracts.' Chem. Soc.
- Rogers, Prof. Fred A**, 618 N. Elmwood Ave, Oak Park, Ill. *Physics*. Kent Co, Mich, Sept. 26, 69. B.S.(E.E), Michigan, 94. Instr. physics and elec. eng, *Lewis Inst*, 91-02, asst. prof, 02-08, *prof. physics*, 08- A.A; assoc. Elec. Eng; Illum. Eng. Soc.
- Rogers, Prof. Fred T (erry)**, Baylor Medical Sch, Dallas, Tex. *Physiology*. Stevensport, Ky, May 24, 89. A.B, Baylor, A.M; Ph.D, Chicago, 16. Instr. and later asst. prof. *physiol*, Chicago, 16-20; *prof, Baylor*, 20- A.A; Physiol. Soc; Soc. Zool. Physiology of the stomach and brain.
- Rogers, Prof. F (rederick) J (ohn)**, Stanford University, Calif. *Physics*. Neoga, Ill, Sept. 9, 63. B.S, Kansas State, 85, M.S, 87; M.S, Cornell, 91. Asst. and instr. *physics*, Cornell, 91-00; asst. prof, *Stanford*, 00-08, *assoc. prof*, 08- A.A; Physical Soc; Seismol. Soc. Magnesium as a source of light; frequencies of a horizontally extended spring; earthquake experiments with a shaking machine; conditions involving a decrease of secondary current with increasing primary current; dielectric constant of silk; the heterostatic use of an electrometer with alternating E.M.F's.
- Rogers, L (ore) A (lford)**, U. S. Department of Agriculture, Washington, D. C. *Dairy bacteriology*. Patten, Maine, Feb. 7, 75. B.S, Maine, 96; Wisconsin, 97-98. Asst. bacteriologist, N. Y. Exp. Sta, Geneva, 99-02; *dairy bacteriologist, U. S. Dept. Agr*, 02- Soc. Bact; Pub. Health Ass; Wash. Acad. Bacteria occurring in dairy products; changes in milk, butter and cheese.
- Rogoff, Prof. J (ulius) M (oses)**, Western Reserve Medical School, Cleveland, Ohio. *Medicine*. Russia, 80. Ph.G, 00; M.D, Cleveland Col. Physicians and Surg, 08. Asst. physiol, Ohio Wesleyan, 08-10; demonstrator physiol. and pharmacol, Vanderbilt, 12-13, instr, 13-14, asst. prof. mat. med. and pharmacy, 14-15; instr. *exp. med, Western Reserve*, 15-17, assoc, 17-19, asst. prof, 19- A.A; Physiol. Soc; Soc. Pharmacol. Ex-

- perimental medicine; internal secretions; the central nervous system.
- Rohdenburg, Dr. G(eorge)L(ouis)**, 905 West End Ave, New York, N. Y. *Pathology*. New York, April 5, 83. M.D., Cornell, 05. *Assoc. cancer research, Columbia*, 10- Director, laboratories, Lincoln Hosp, 10-; Life Exten. Inst, 17-18; Lenox Hill Hosp, 17-; pathologist various hospitals. Ass. Path. and Bact; Ass. Cancer Research; Ass. Study Int. Secretions; Am. Med. Ass; N. Y. Path. Soc. (see'y, 18-20). Cancer.
- Rohwer, S(ievert) A(llen)**, Bureau of Entomology, Washington, D. C. *Entomology*. Telluride, Colo, Dec. 22, 87. Colorado, 07-09. *Specialist in forest entom, bur. entom, U. S. Dept. Agr*, 09- Wash. Acad. (v. pres, 19); Wash. Entom. Soc. (see'y-treas, 10-); Wash. Biol. Soc. Systematic entomology; Hymenoptera; insects injurious to forest and shade trees.
- Rolfe, Prof. C(harles) W(esley)**, University of Illinois, Urbana, Ill. *Geology*. Arlington Heights, Ill, April 17, 50. B.S., Illinois, 72, M.S., 76. Asst. science, Illinois, 72-73; teacher, Jennings Sem, Aurora, Ill, 74-76; supt. pub. schools, Kankakee, Ill, 77-81; instr. science, Illinois, 81-83, asst. prof. *geol*, 83-85, *prof*, 85- A.A.; Geol. Soc. Artesian wells of northeastern Illinois; genera of Paleozoic brachiopods; origin of the Illinois prairies; use of the aneroid barometer in geologic surveys; geology of clays; hydrography and topography of Illinois; altitudes in Illinois; the geology of Illinois in relation to its water supply; rocks and minerals.
- Rolfe, Geo(rge) W(illiam)**, Oak Bluffs, Mass. *Chemistry*. Cambridge, Mass, Feb. 10, 64. A.B., Harvard, 85, A.M., 86; Mass. Inst. Tech, 95. Asst. chem. lab, Harvard, 86; chemist, glucose company, 86-89; sub-master, high sch, Brookline, 90; *chemist, various glucose and sugar companies, Cuba and Porto Rico*, 91- Sewage investigations with Col. Geo. C. Waring, 95; instr. sugar analysis and anal. chem, Mass. Inst. Tech, 95-97, sugar analysis, 97-15, instr. food chem, Boston Nor. Sch. Household Arts, 99. Int. Cong. Applied Chem, London, 09. Chem. Soc; Ass. Chim. de Sue. et de Dist. de France. Cane and milk sugar manufactures; starch, glucose and allied products; hydrolysis of starch; optical analysis; sewage.
- Rolfs, Prof. F(red) M(aas)**, Stillwater, Okla. *Botany*. Le Claire, Iowa, March 5, 74. B.S., Iowa State, 97; M.S., Colo. Agr. Col, 04; Columbia, 07; Ph.D., Cornell, 13. Student asst. bot, N. Y. Exp. Sta, Geneva, 99-00; assoc. prof. bot. and hort, Colo. Agr. Col, and asst. horticulturist, Colo. State Exp. Sta, 00-04; prof. bot. and hort, Florida, and botanist and horticulturist, Fla. State Exp. Sta, 04-06; plant pathologist, Mo. State Fruit Exp. Sta, 06-10; assoc. bot, plant path. and baeter, Clemson, and assoc. botanist, plant pathologist S. C. Exp. Sta, 13-15; *prof. hort, Okla. Col, and horticulturist and plant pathologist, Exp. Sta*, 16- Pomol. Soc; Soc. Hort. Sei; Phytopath. Soc. Corticum on the Irish potato; winter killing of twigs; cankers and sun scald of peach trees; bacterial diseases of stone fruits.
- Rolfs, Director P(eter) H(enry)**, Bello Horizonte, Minas Geraes, Brazil. *Botany*. Le Claire, Iowa, April 17, 65. B.S., Iowa State, 89, M.S., 91. Asst. botanist, Iowa State, 91, entomologist and botanist, 91-92; Fla. Exp. Sta, 92-98, botanist and horticulturist, 98-99; botanist and bacteriologist, Clemson, and S. C. Exp. Sta, 99-01; plant pathologist in charge of sub-tropical lab. and garden, bur. plant indust, U. S. Dept. Agr, Miami, 01-06; director, Fla. Exp. Sta, 06-21, agr. exten, Florida, 13-21, dean, col. agr, 15-21; *on leave as organizer agr. institutions, State of Minas Geraes, Brazil*, 21- Prof. biol, Fla. State, 92-95, biol. and hort, 95-99; state supt, Fla. Farmers' Institutes, 07-19. A.A.; Phytopath. Soc; Bot. Soc; Soc. Hort. Sei; Ass. Econ. Entom; Pomol. Soc; Ass. Agr. Col; Fla. Hort. Soc. (pres, 07); Iowa Acad; St. Louis Acad; Wash. Entom. Soc; Int. Ass. Bot. Plant pathology and physiology; citrus and tropical plant diseases.
- Rolle, Dr. Clifford J(ay)**, 629 Barry Ave, Chicago, Ill. *Chemistry*. Cincinnati, Ohio, Oct. 13, 94. A.B., Cincinnati, 15, A.M., 16, Ph.D., 18. Instr. physical and org. chem, Cincinnati, 18-20; *research chemist, Van Schaack Bros. Chem. Works*, 20- Chem. Soc. Organic chemistry; nitrocellulose; synthetic drugs; nitro paraffines.
- Romberg, Prof. Arnold**, University of Hawaii, Honolulu, Hawaii. *Physics*. Muldoon, Tex, July 7, 82. A.B., Texas, 10; Ph.D., Harvard, 15. *Prof. physics, Univ. of Hawaii*, 15- Physical Soc. Heat; seismology.
- Rommel, Geo(rge) M(cCullough)**, U. S. Department of Agriculture, Washington, D. C. *Animal husbandry*. Mount Pleasant, Iowa, Feb. 26, 76. B.S., Iowa Wesleyan, 97; B.S.A., Iowa State, 99. Asst. animal husbandry, Iowa State, 00-01; manager, O. R. and N. Exp. Farm, Walla Walla, Wash, 01; expert animal husbandry, bur. animal indust, U. S. Dept. Agr, 01-05, animal husbandman, 05-09, *chief, animal husbandry div*, 10- Lecturer animal breeding, grad. sch. agr, Illinois, 06. U. S. delegate, Pan-Am. Sci. Cong, Santiago, Chile, 08, Washington, D. C, 14-15. A.A.; Soc. Prom. Agr. Sci. Inheritance of fecundity.
- Rood, Prof. James T(heron)**, University of Wisconsin, Madison, Wis. *Electrical engineering*. Worcester, Mass, March 26, 76. B.S., Worcester, 98; Ph.D., Clark, 06. *Prof. math. and physics, Ursinus*, 06-07; physics and elec. eng, Alabama, 07-09; elec. eng, Lafayette, 09-18, ry. elec. eng, Illinois, 18-20; *elec. eng, Wisconsin*, 20- Delegate, Pan-Am. Cong, 16. A.A.; Elec. Eng; Eng. Educ; Nat. Elec. Light Ass; Ass. Prof. Vibration of telephone diaphragms; magnetism and tension; electric traction.
- Roos, Leo**, 33 Ithaca St, Elmhurst, L. I., N. Y. *Chemistry*. New York, N. Y., Aug. 6, 92. Ph.Ch., Columbia, 10; M.S., N. Y. Univ, 16. Instr. chem, Columbia, 12-15; asst, N. Y. Univ, 15-16; chief, chem. div, E. R. Squibb and Sons, 16-19; *consulting chemist*, 19- Chem. Soc; Pharmaceut. Ass. Pharmaceutical colloid chemistry.
- Roorbach, Prof. G(eorge) B(yron)**, Harvard University, Cambridge, Mass. *Geography*. Utica, N. Y., Dec. 8, 78. A.B., Colgate, 03; Harvard; A.M., Pennsylvania, 14. Principal, De Ruyter High Sch, N. Y., 03-05; science master, Peddie

- Inst, 05-08; instr. geog. Pennsylvania, 11-15, asst. prof, 15-19; *prof. foreign trade, grad. sch. business administration, Harvard, 19-* Ed, 'Phila. Geog. Soc. Bul,' 12- Special investigation, Carnegie Endowment Int. Peace, Venezuela. A.A.; Am. Geog. Soc.; Ass. Geog. (treas, 20). Geographic influences.
- Root, Dr. F(rancis) M(etcalf)**, School of Hygiene and Public Health, Baltimore, Md. *Medical entomology*. Oberlin, Ohio, Sept. 24, 89. A.B, Oberlin, 11, A.M, 12; Ph.D, Hopkins, 17. Teaching fellow *med. entom. sch. of hygiene and pub. health, Hopkins, 19-20, assoc, 20-* Instr. invert. zool, Woods Hole, summers, 16, 17. Soc. Zool. Genetics of Protozoa.
- Root, Prof. Ralph E(ugene)**, U. S. Naval Academy, Annapolis, Md. *Mathematics*. Trenton, Mo, July 18, 79. B.S, Morningside, 05; M.S, Iowa, 09; fellow, Chicago, 10-11, Ph.D, 11. Teacher, Forest City High Sch, Iowa, 05-06; instr. math, Iowa, 06-10; Missouri, 11-13; *U. S. Naval Acad, 13-14, prof. math. and mech. post-grad. dept, 14-* A.A.; Math. Soc.; Math. Ass.; Eng. Educ. Iterated limits in general analysis; theory of limits and continuity.
- Root, Dr. W(illiam) W(ebster)**, Slaterville Springs, N. Y. *Medicine*. Niagara Falls, N. Y., Aug. 19, 67. B.S, Cornell, 90, 92-94; M.D, Rush Med. Col, Chicago, 04. Instr. nat. sciences, Peddie Inst, 90-92; chem, Chicago Manual Training Sch, and Chicago, 95-03; *practising physician, 04-* In charge, Emergency Hospitals, and sec'y to director, biol. dept, Parke, Davis and Co, 08-11; lieut, M.R.C, 12-17, contract surgeon, Cornell, 18. Am. Med. Ass.; Ass. Mil. Surg.; fel. Am. Acad. Med. Serum sickness; medical education; smallpox vaccine; thymic death; anaphylaxis.
- Roper, Denney W(arren)**, 72 W. Adams St, Chicago, Ill. *Electrical engineering*. Grafton, Ill, Oct. 18, 69. M.E, Cornell, 93. Supt. elec. equipment, Mo. Edison Co, 98-02; consulting engineer, 02-05; asst. to chief operating engineer, *Commonwealth Edison Co, 05-15, supt, street dept, 15-* Elec. Eng.; West. Soc. Eng.; Nat. Elec. Light Ass. Distribution of electricity; lightning protection; electrolysis.
- Rorer, James Birch**, Asociación de Agricultores del Ecuador, Guayaquil, Ecuador, S. Am. *Plant pathology*. Ogontz, Pa, Dec. 29, 76. A.B, Harvard, 99, A.M, 01. Asst. bot, Harvard, 99-02, Austin teaching fellow, 01-02; sci. asst, U. S. Dept. Agr, 02-07, asst. pathologist, 07-09; *mycologist*, Board of Agr, Trinidad, 09-18; *chief, dept. agron, Asoc. de Agr. del Ecuador, 18-* A.A.; Bot. Soc.; Phytopath. Soc. Diseases of apples, peaches, cacao, coconuts and sugarcane.
- Rorer, Dr. Jonathan T(aylor)**, 333 N. 34th St, Philadelphia, Pa. *Mathematics, Astronomy*. West Chester, Pa, Aug. 21, 71. A.B, Colorado, 95; Ph.D, Pennsylvania, 01. Instr. math. and English, Colo. Col, 94-95; math, Cent. High Sch, Phila, 95-99, asst. prof, 99-03, prof, 03-09; *head, dept. math, William Penn High Sch, 09-* Assoc. ed, 'The Math. Teacher,' 08-11; instr. math, S.A.T.C, Pennsylvania, 18; Hopkins, summer, 20; supt. instruction, second div, A.E.F, 19. A.A.; Math. Soc.; Math. Ass.; Ass. Teachers
- Math. Middle States and Md. (sec'y, 05-07, pres, 15-17). Mathematical astronomy; education; the orbit of Brooks's comet, 1898 X.
- Rosa, Prof. Edward B(ennett)**, Bureau of Standards, Washington, D. C. **Physics*. Rogersville, N. Y, Oct. 4, 61. B.S, Wesleyan, 86, hon. Sc.D, 06; fellow, Hopkins, 90-91, Ph.D, 91. Instr. physics, Wisconsin, 90; assoc. prof, Wesleyan, 91-92, prof, 92-02; physicist, *Bur. Standards, 01-10, chief physicist, 10-* Elliott Cresson medal, Franklin Inst. Sec'y, Int. committee on elec. units and standards, Int. Elec. Cong, London, 08; Am. Eng. Standards Committee. Nat. Acad.; A.A. (sec'y, B, 98, v. pres, 10); Physical Soc.; Elec. Eng.; Illum. Eng. Soc.; Wash. Acad.; Wash. Philos. Soc. (v. pres, 07-12, pres, 12). Value of v , the ratio of electrical units; dielectric constants of electrolytes; dielectric losses in condensers; forms of alternating curves; respiration calorimeter; equations of electromagnetic waves; testing of induction integrating meters; absolute measurement of capacity and inductance; calculation of self and mutual inductances; theory of instruments employed in absolute electrical measurements; absolute measurement of electrical current and of resistance; the silver coulometer; photometric standards; standard condensers.
- Rosa, Joseph Tooker, Jr**, University of Missouri, Columbia, Mo. *Horticulture*. Waverly Mills, S. C, July 16, 95. B.S.A, Clemson, 15; M.S, Iowa State, 17. Instr. hort, Iowa State, 15-16; asst. horticulturist, Va. Truck Exp. Sta, 16-17; *asst. prof. hort, Missouri, 17-* A.A.; Bot. Soc.; Phytopath. Soc.; Soc. Hort. Sci. Olericulture; hardness to cold in herbaceous plants; degeneracy in the potato.
- Rosanoff, Dr. A(aron) J(oshua)**, Kings Park, N. Y. *Psychiatry*. Pinsk, Russia, June 26, 78. M.D, Cornell, 00. Med. intern, *State Hosp, Kings Park, N. Y, 01-02*, junior asst. physician, 02-05, asst. physician, 05-08, senior asst. physician, 08-11, *clin. director, 11-* Major, M.C, 17-19. A.A.; Am. Med. Ass.; Medico-Psychol. Ass.; Psychol. Ass.; Eugenics Research Ass. (executive committee, 14). Insanity; syphilis and insanity; mental measurement; war neuroses; residuals of epidemic cerebro-spinal meningitis; association.
- Rosanoff, Prof. Lillian**, Connecticut College, New London, Conn. *Physical chemistry*. Russia, July 26, 86. A.B, Columbia, 08, A.M, 11; Ph.D, Clark, 14. Research fellow, Bryn Mawr, 15-17; instr. physics, Wells, 17-18; *asst. prof, Conn. Col. for Women, 18-* Diffusion; magnetochemistry.
- Rosanoff, Prof. M(artin) A(ndré)**, Mellon Institute, Pittsburgh, Pa. **Chemistry*. Nicolaeff, Russia, Dec. 28, 74. Ph.B, N. Y. Univ, 95, Sc.D, 08; Berlin, 95-96; Paris, 96-98. Research asst. to Prof. Friedel, Paris, 97-98; to Dr. J. M. Crafts, Mass. Inst. Tech, 98-99; research fellow, N. Y. Univ, 99-00; ed. for exact science, 'New Int. Enceye,' 00-03; research asst. to Mr. Thomas A. Edison, 03-04; instr. theoret. chem, N. Y. Univ, 04-05, asst. prof, 05-07; head, dept. chem. and director, chem. laboratories, Clark, 07-11, *prof, 11-14; chem. research, Mellon Inst, 14-* Nichols medal, Chem. Soc, 11. Chem. Soc;

- Am. Acad. Classification of stereo-isomers; principle of optical superposition; the quantitative determination of halogens in the presence of sulphocyanates; the Victor Meyer law in esterification; partial vapor pressures of binary mixtures; isopiestic study of partial vapor pressures; variation of vapors of binary mixtures with the temperature; fractional distillation; the steric hindrance hypothesis; kinetics of certain inorganic reactions; theory of direct esterification; sugar inversion; homogeneous catalysis.
- Rose, Dr. Anton R(ichard)**, Edgewater, N. J. *Biological chemistry*. Minn., Feb. 22; 77. B.S., Minnesota, 04; M.S., Yale, 11; Ph.D., Columbia, 12. Instr. chem., N. H. Col., 05; asst. chem., N. Y. Exp. Sta., Geneva, 06-10; biol. chem., Columbia, 10-13; private research, 14-16; *assoc. path. chem., N. Y. Post-Grad. Med. Sch.*, 16- Capt., Sanit. C., 18-19. Chem. Soc.; Soc. Biol. Chem.; Soc. Exp. Biol.; Columbia Biochem. Ass. Nutrition; chemistry of plants.
- Rose, Mrs. Anton R. (Prof. Mary Swartz)**, Teachers College, Columbia University, New York, N. Y. *Biological chemistry*. Newark, Ohio, Oct. 31, 74. B.Lit., Denison, 01; diploma, Mechanics Inst., 02; B.S., Columbia, 06, Teachers Col. traveling fellow, 07-09; Ph.D., Yale, 09. Teacher, secondary schools, Wooster, Ohio, 99-00; Fond du Lac, Wis., 02-05; asst. *nutrition, Teachers Col., Columbia*, 06-07, instr., 09-10, asst. prof., 11-17, *assoc. prof.*, 18- Deputy director, bur. conservation, Food Ad., 18-19. A.A.; Soc. Exp. Biol.; Home Econ. Ass.; Dietetic Ass.; Pub. Health Ass. Nutrition; dietetics; carbohydrates of marine algae; potato nitrogen; creatin metabolism in women.
- Rose, Dr. B(ruce)**, Whitehall Petroleum Corp., Canada Life Building, Calgary, Alta., Can. *Geology*. Mountain, Ont., Jan. 5, 85. B.Sc., Queen's (Can.), 09; Ph.D., Yale, 13. Inst. geol., Queen's (Can.), 09-10; lecturer, forest sch., Yale, 12; *geologist*, Can. Geol. Surv., 14-20; *Whitehall Petrol. Corp.*, 20- A.A.; Geol. Soc.; Can. Min. Inst. Geology of coal areas in Saskatchewan, Alberta and British Columbia.
- Rose, Carlton R(aymond)**, The Alameda, Berkeley, Calif. *Chemistry, Metallurgy*. Ann Arbor, Mich., June 16, 73. Ph.B., Michigan, 94, A.M., 96. Instr. chem., Illinois, 96-00; prof. metal, Colo. Sch. Mines, 01-03; supt., smelters, V. S. Zinc. Co., 03-14; consulting engineer, 14-19; *sales manager, Met. and Chem. Extraction Corp.* Min. Eng.; Colo. Sci. Soc.
- Rose, Dr. D(ean) H(umboldt)**, 139 N. Clark St., Chicago, Ill. *Botany*. Ionia, Kans., Dec. 15, 78. A.B., Kansas, 04; A.M., Washington (St. Louis), 05; fellow, Chicago, 16-17, Ph.D., 17. Instr. bot., Kansas State, 09-12; pathologist, Mo. Fruit Exp. Sta., 13-18; asst. pathologist and later pathologist, *office fruit disease investigations, bur. plant indust., U. S. Dept. Agr.*, 18-Phytopath. Soc. Plant pathology and physiology; germination of seeds.
- Rose, Miss Jessie P(erkins)**, Oregon Agricultural College, Corvallis, Oregon. *Plant pathology*. Neosha Falls, Kans., 73. A.B., Stanford, 09, A.M., 10. Teacher science and principal, pub. schools and high schools, 95-18; scientific asst. *bur. plant indust., U. S. Dept. Agr.*, 18, *asst. pathologist*, 18- A.A.; Bot. Soc.; Phytopath. Soc. Geographical distribution of plants; relation of soil fungi to seed treatment.
- Rose, Dr. J(oseph) N(elson)**, 1812 Calvert St., N. W., Washington, D. C. **Botany*. Union Co., Ind., Jan. 11, 62. A.B., Wabash, 85, A.M., 86, Ph.D., 89. Asst. bot., Wabash, 86-88; bot. asst., U. S. Dept. Agr., 88-96; asst. curator, *div. plants, U. S. Nat. Museum*, 96-05, *assoc. curator*, 05-12, *assoc. bot.*, 12-; *research assoc. bot., Carnegie Institution*, 12- A.A.; Bot. Soc. (v. pres, 03); Wash. Acad. (v. pres, 08, 18); Wash. Bot. Soc. (v. pres, 07); Wash. Biol. Soc. (v. pres, 09-18, pres, 18). Mexican and South American plants; Umbelliferae; Crassulaceae and Cactaceae of North America.
- Rose, Dr. Robert E(vstafieff)**, E. I. duPont de Nemours and Co., Wilmington, Del. *Chemistry*. Palermo, Sicily, June 2, 79. Ph.D., Leipzig, 03. Research asst., St. Andrews, Scotland, 03-05; lecturer and demonstrator chem., Univ. Col., Nottingham, 05-07; asst. prof., Washington (Seattle), 07-17; fellow, Mellon Inst., 17; *org. chemist, E. I. duPont de Nemours and Co.*, 17- Organic chemistry; alkylated sugars and glucosids; reduction of anhydroids; wood decay; dyes.
- Rose, Prof. W(illiam) C(umming)**, School of Medicine, University of Texas, Galveston, Tex. *Biological chemistry*. Greenville, S. C., April 4, 87. B.S., Davidson, 07; Ph.D., Yale, 11; Freiburg, 13. Asst. chem., Davidson, 06-07; asst. *physiol. chem., Sheffield Sci. Sch.*, Yale, 08-11; instr., Pennsylvania, 11-13; *assoc. prof., biol. chem., Texas*, 13-14, *prof.*, 14- Chem. Soc.; Soc. Biol. Chem. Pepsin and creatin; creatinin; metabolism of mucic acid; origin of uric acid; copper in marine organisms.
- Rose, Brig. Gen. W(illiam) H(enry)**, U.S.A., 3809 Livingston St., Chevy Chase, D. C. *Electrical engineering*. Safe Harbor, Pa., Oct. 24, 81. Franklin and Marshall, 98-99; grad., U. S. Mil. Acad., 03; grad., U.S.A. Eng. Sch., 07. Director, dept. elec. and mech. eng., U.S.A. Eng. Sch., 08-11; elec. engineer, corps eng., Panama Canal, 14-17; all grades from second lieut. to brig. gen., corps eng., U.S.A., 03-19; *district manager, Lockwood Green and Co.*, 19- A.A.; Elec. Eng.; assoc. Civil Eng.
- Rosen, Prof. H(arry) R(ober)**, Agricultural Experiment Station, Fayetteville, Ark. *Plant pathology*. Wilmington, Del., Aug. 8, 89. B.S., Pa. State, 13; M.S., Wisconsin, 15. Asst. bot., Pa. State, 12-13; Wisconsin, 13-15; scientific asst., Smithsonian Inst., 15-17; asst. botanist, Purdue Exp. Sta., 17-18; *asst. prof. plant path. and asst. plant pathologist, Ark. Exp. Sta.*, 18- A.A.; Bot. Soc.; Phytopath. Soc.; Wash. Biol. Soc. Plant anatomy; rusts; bacterial diseases of cereals.
- Rosenau, Dr. M(ilton) J(oseph)**, Harvard Medical School, Boston, Mass. **Preventive medicine, Hygiene*. Philadelphia, Pa., Jan. 1, 69. M.D., Pennsylvania, 89; Hygienic Inst., Berlin, 92; Pasteur Inst., Paris, 00; hon. A.M., Harvard, 14. Asst. surgeon, U. S. Marine Hosp. Service, 90-95, past asst. surgeon, 95, surgeon, 07; quarantine officer, San Francisco, 95-98; Santiago and other Cuban ports, 98; director, hygienic lab, U.

- S. Pub. Health and Marine Hosp. Service, 98-09; *prof. prev. med. and hygiene, Harvard Med. Sch.*, 09-, *director, sch. pub. health, Harvard*, 11- Special lecturer serum therapy, U. S. Naval Med. Sch., 04-09; *trop. diseases, Georgetown*, 05-09; *commander, U.S.N.R.F. Sanit. attaché, Int. Conf. of Am. States, Mex.*, 02; *delegate, Tenth Int. Cong. of Hygiene and Demog.*; 13th Int. Med. Cong, Paris, 00; *mem. Int. Commission to Revise Nomenclature of Causes of Death, Paris*, 00; *delegate, Int. Sanit. Conf, Wash.*, 02. A.A.; *Ass. Path. and Bact*; *Soc. Bact*; *Am. Med. Ass*; *Soc. Exp. Biol*; *Pub. Health Ass*; *Ass. Mil. Surg*; *Am. Physicians*; *Am. Acad.* The milk question; disinfection and disinfectants; anaphylaxis; bacteriology; immunology; public health.
- Rosenbach, J(oseph) B(ernhardt)**, 806 S. Goodwin St, Urbana, Ill. *Mathematics*. New York, N. Y., Oct. 5, 97. A.B., New Mexico, 17; Colorado, 17; M.S., Illinois, 19. *Instr. math*, New Mexico, 17-18; *Illinois*, 18- Engineer of maintenance, A. T. and S. F. Ry, summers, 15, 16. A.A.; *Math. Soc*; *Math. Ass.* Analysis; differential equations.
- Rosenbaum, Dr. Joseph**, U. S. Department of Agriculture, Washington, D. C. *Plant pathology*. Russia, Dec. 87. B.S.A., Cornell, 11, Ph.D., 14. *Asst. plant path, Cornell*, 11-13, *instr.*, 13-14, *bot.*, 14; *pathologist, bur. plant indust, U. S. Dept. Agr.* Special agent, U. S. Dept. Agr., 11-14. A.A.; *Bot. Soc*; *Phytopath. Soc.* Ginseng diseases; *Phytophthora*; nutrition of fungi.
- Rosenbloom, Dr. J(acob)**, 120 W. 70th St, New York, N. Y. *Biochemistry*. Braddock, Pa., Feb. 26, 84. B.S. Pittsburgh, 05; M.D., Ph.D., Columbia, 09. *Asst. biochem, Columbia*, 09-12; *chemist, German Hosp.*, 09-12; *asst. prof. biochem, Pittsburgh*, 12-13; *biochemist, West. Pa. Hosp.*, 12-14. A.A.; *Soc. Biol. Chem*; *Chem. Soc*; *Soc. Exp. Biol*; *Am. Med. Ass.* Experimental medicine; proteins; tungsten; compounds of mucoid; diseases of metabolism; medical history.
- Rosendahl, Prof. C. O(tto)**, University of Minnesota, Minneapolis, Minn. *Botany*. Spring Grove, Minn., Oct. 24, 75. B.S., Minnesota, 01, A.M., 02; Ph.D., Berlin, 05. *Instr. bot, Minnesota*, 01-02, *asst. prof.*, 05-10, *prof.*, 10- *Asst. Minn. Geol. and Bot. Surv.*, 02-03. A.A.; *Bot. Soc*; *Ecol. Soc*; *Am. Geog. Soc.* Systematic botany; plant geography; morphology.
- Rosenfeld, Arthur H(inton)**, Ingenio Santa Ana, Tucuman, Argentina. *Entomology*. Petersburg, Va., July, 86. B.S., M.S., Va. Polytech. *Asst. Va. State Crop Pest Commission*, 05; *state hort. inspector, Ill.*, 05-06; *special field agent, bur. entom.*, U. S. Dept. Agr., 06; *asst. entomologist, La. State Crop Pest Commission*, 06-10; *entomologist, Tucuman Sugar Exp. Sta.*, 10-11, *sub-director*, 11-13; *Gefe de Agr. del Ingio*, 16- Founding board mem. Univ. Tucuman; *delegate, Pan-Am. Scientific Cong.*, 16. A.A.; *for. mem. Ass. Econ. Entom.* Agricultural engineering.
- Rosengarten, George D(avid)**, P. O. Box 1625, Philadelphia, Pa. **Chemistry*. Philadelphia, Feb. 12, 69. B.S., Pennsylvania, 90; Ph.D., Jena, 92. *V. pres*, Rosengarten and Sons, Inc., 01-05; *Powers-Weightman-Rosengarten Co.*, 05- Mem. committee of revision, U. S. Pharmacopœia, 10- A.A.; *Chem. Soc*; *Chem. Eng.* (past pres); *Philos. Soc*; *Franklin Inst.*
- Rosenheim, Dr. Sylvan**, 1710 Linden Ave, Baltimore, Md. *Rhinology, Laryngology, Otolology*. Baltimore, Sept. 16, 74. A.B., Hopkins, 95, M.D., 99. *Asst. laryngol, Hopkins*, 02-07; *consulting laryngologist and chief of clinic, Hebrew Hosp*; *aural surgeon, Baltimore Eye, Ear and Throat Hosp*; *consulting laryngologist and otologist, Endowood Hosp. for Consumptives*; *Jewish Hosp. for Consumptives*. *Ass. Anat*; *Am. Med. Ass*; *Laryngol. Rhinol. and Otol. Soc*; *Md. Med. and Chirurg. Faculty*; *Md. Laryngol. Ass.* Tracheal tumors; leuko-keratosis buccolitis; compression myelitis; nasal tumors; tuberculous laryngitis; tonsillar ring; esophagoseopy.
- Rosenow, Dr. Curt**, 1420 Ohio St, Lawrence, Kans. *Psychology*. Berlin, Germany, Dec. 27, 76. B.S., Michigan, 97; Ph.D., Chicago, 16. *Instr. psychol, Chicago*, 16-20; *biometrist, Juvenile Psychopathic Inst.*, 17-20; *asst. prof. psychol, Kansas*, 20- Biometry.
- Rosenow, Dr. E(dward) C(arl)**, Mayo Clinic, Rochester, Minn. **Bacteriology*. Alma, Wis., July 14, 75. M.D., Rush Med. Col., 02. Fellow path, Rush Med. Col., 02-04, *med.*, 04-09, *instr.*, 07-15; *mem. McCormick Inst. for Infectious Diseases*, 04-15; *prof. exp. bacter, Mayo Foundation, Minnesota*, 15- Gold medal, Am. Med. Ass., 12. A.A.; *Ass. Path. and Bact*; *assoc. mem. Am. Physicians*; *Soc. Clin. Invest*; *Soc. Exp. Path*; *Am. Med. Ass*; *Pub. Health Ass.* Transmutation of Pneumococci and Streptococci; elective localization of bacteria; poliomyelitis; influenza; lobar pneumonia.
- Rosenstein, Dr. Ludwig**, 9 Main St, San Francisco, Calif. *Chemistry*. Cologne, Germany, March, 29, 86. B.S., Mass. Inst. Tech., 10; Ph.D., California, 14. *Instr. chem, Mass. Inst. Tech.*, 10-12; *California*, 12-16; *gen. manager, Chem. Specialties Co.*, 17-18; *chem. director, Great West. Electrochem. Co.*, 19- Theoretical chemistry.
- Rosenthal, Dr. George J**, 1984 82d St, Brooklyn, N. Y. *Biological chemistry*. New York, N. Y., Aug. 8, 90. A.B., Columbia, 10, A.M., 11, Ph.D., 16. *Leather chemist, Pratt Inst.*, 12- *Chem. Soc. Skins*.
- Rosenzweig, S(iegfried)**, 215 W. 88th St, New York, N. Y. *Mechanical engineering*. Berlin, Germany, April 27, 79. M.S., Polytech, Berlin, 02. *Mech. engineer with Hugo Lentz, Erie City Iron Works*, 04-14; *consulting engineer, steam engine dept, York Mfg. Co.*, 14- *Lecturer steam eng, various colleges*. A.A.; *Mech. Eng.*; *assoc. Nat. Ass. Cotton Mfrs*; *Verein Ing.* High pressures; superheated steam; uni-flow engines.
- Rosewall, Prof. O(scar) W(aldemar)**, Louisiana State University, Baton Rouge, La. *Entomology*. Algona, Iowa, March 12, 89. Cornell (Iowa), 08-11; A.B., Iowa, 13; M.S., Louisiana, 16. *Instr. entom, Louisiana*, 13-17, *asst. prof.*, 17-20, *assoc. prof.*, 20- *Asst. entom, Lakeside Lab, Iowa*, summer, 12; *field asst, bur. entom.*, U. S. Dept. Agr., summer, 13; *asst. Bur. Fish-eries*, summer, 14. A.A.; *Ass. Econ. Entom.*

- Ross, Prof. B(ennett) B(attle)**, Auburn, Ala. *Chemistry*. Tuskegee, Ala., Dec. 25, 64. A.B., Ala. Polytech, 81, M.S., 86; Göttingen and Berlin. Asst. chemist, Ala. State Lab, 84-87; *prof. chem*, Louisiana, 87-93; *Ala. Polytech, and state chemist, Ala*, 93- Special chem. work for special agent in charge of nutrition investigations, U. S. Dept. Agr, 05-96. Mem. committee of organization, Int. Cong. of Applied Chem, Berlin, 03. A.A.; Chem. Soc.; Agr. Chem. (pres, 95); Ass. Chim. de Sue. et de Dist. de France; Chem. Gesell. Methods of analysis of sugars; methods of analysis of fertilizers.
- Ross, Clyde P(olhemus)**, 1404 15th St. N. W., Washington, D. C. *Geology*. New York, N. Y., March 23, 91. B.S., Mass. Inst. Tech, 14, M.S., Mass. Inst. Tech. and Harvard, 15. Geologist, Old Dominion Copper Co, 16-17; asst. geologist, U. S. Geol. Surv., 17-19, *assoc. geologist*, 19-Min. and Metal. Eng; Wash. Geol. Soc. Mining; hydrology; geography.
- Ross, Prof. Ellison Lloyd**, 1935 Morse Ave, Chicago, Ill. *Pharmacology*. Dixon, Ill., June 13, 81. B.S., Iowa State, 04; Ph.D., Illinois, 12; M.D., Northwestern, 18. Science teacher, high sch, Wymore, Nebr, 04-05; North Platte, 05-06; Everett, Wash, 07-10; research chemist, Ill. State Psychopathic Inst, 12-14; *instr. pharmacol, Northwestern*, 14-18, *asst. prof*, 18- Soc. Biol. Chem; Soc. Pharmacol. Biological chemistry; effect of anesthetics on carbohydrate metabolism.
- Ross, Dr. Frank E(lmore)**, Eastman Kodak Co, Rochester, N. Y. *Astronomy*. San Francisco, Calif, April 2, 74. B.S., California, 96, fellow, 97-98, Lick Observatory, 98-99, Ph.D., 01. Teacher math. and physics, Mt. Tamalpais Mil. Acad, Calif, 96-97; asst. prof. math, Nevada, 00; computer for Watson Trustees, 01-02; asst, 'Nautical Almanac' Office, 02-03; research asst, Carnegie Institution, 03-05; director, Int. Latitude Observatory, 05-15; *physicist, Eastman Kodak Co*, 15- Astron. Soc; Optical Soc. The general perturbations of the Watson asteroids; orbits of satellites, of the moon and of Mars; lunar theory; variation of latitude; the photographic plate; photographic photometry; photographic and astronomical objectives.
- Ross, Prof. H(arold) E(llis)**, Cornell University, Ithaca, N. Y. *Agriculture*. Leadville, Colo., Oct. 23, 81. B.S.A., Cornell, 06, M.S.A., 09. Asst, dept. dairy indust, Cornell, 06-07, *instr*, 07-10, asst. prof, 10-13, *prof*, 13- Dairy industry.
- Ross, Prof. L(uther) S(herman)**, 1308 27th St, Des Moines, Iowa. *Biology*. Reno, Ill, Sept. 6, 64. B.S., Illinois, 89, M.S., 90, fellow, 01-02; Ph.D., Chicago, 19. Prof. nat. science, State Nor. Sch, Winono, Minn, 90-91; principal, pub. sch, Oswego, Ill, 91-92; *prof. biol, Drake*, 92-Mem, Union Pacific geol. exped, Wyo, 99. A.A.; Iowa Acad. (sec'y, 06-13, pres, 18). Crustacea; crayfish nerve cell; bacteria in dust of school rooms; bacterial content of desiccated egg; historical development of quarantine regulations in Iowa.
- Ross, P(erley) A(son)**, Stanford University, Calif. *Physics*. Panacea, Mo, April 6, 83. A.B., Stanford, 08, A.M., 10, Ph.D., 11. *Instr. physics, Stanford*, 10-16, *asst. prof*, 16- A.A.; assoc. Physical Soc. Refractive index of metals.
- Ross, Dr. W(illiam) H(orace)**, Bureau of Soils, Washington, D. C. *Chemistry*. Louisville, N. S., Dec. 27, 75. B.S., Dalhousie, 03, M.S., 04, 1851 Science Research scholar, 04-07; Hopkins, 04-05; Ph.D., Chicago, 07. Demonstrator chem, Dalhousie, 03-04; research asst, Chicago, 05-07; asst. chemist, Agr. Exp. Sta, Arizona, 07-12; *chemist, bur. soils, U. S. Dept. Agr*, 12- Abstractor, 'Chem. Abstracts,' 06- A.A.; Chem. Soc; Wash. Acad. Potash extraction and recovery; preparation of phosphoric acid; analysis of fluorin, and of mixtures of acetylene and ethylene.
- Rossi, Augusto J**, P. O. Box 745, Niagara Falls, N. Y. *Metallurgy*. Paris, France, Oct. 22, 39. B.S., A.M., France, 55; C.E., M.E., Ecole Cent. des Arts et Manufactures, Paris, 59. Asst. engineer, Morris and Essex Ry, 62-64; tech. director, blast-furnaces, Fuller Lord and Co, 64-76; chief engineer, N. Y. Ice Machine Co, 77-90; *expert metallurgist, Titanium Alloy Mfg. Co*, 90- Int. Cong. Chem, Berlin and N. Y. City. A.A.; Electrochem. Soc; Chem. Soc; Min. Eng; N. Y. Chemists Club. Electrometallurgy; alloys; thermodynamics; artificial refrigeration.
- Rost, Dr. C(layton) O(rd)**, University Farm, St. Paul, Minn. *Chemistry*. Ord, Nebr., Nov. 24, 85. B.S., Nebraska, 11, A.M., 12; Ph.D., Minnesota, 18. Research asst. agr. chem, Nebr. Exp. Sta, 12-13; *instr. soils, Minnesota*, 13-18, *asst. prof*, 18-, asst. soils chemist, *Exp. Sta*, 13-18, *assoc. soils chemist*, 18- A.A.; Chem. Soc; Soc. Agron. Soil chemistry; prairie and glacial soils; soil phosphorus.
- Roth, Charles F(erdinand)**, Grand Central Palace, New York, N. Y. *Chemistry*. New York, Dec. 24, 86. B.S., Cooper Union, 12. Control chemist, Nat. Brewers Acad, N. Y., 07-10; chemist and chief chemist, Standard Oil Co. of N. Y., 11-14; chemist and mfg. manager, Hartford Cast Stone Co, 14-15; *organizer and manager, Nat. Expos. Chem. Indust*, 15- Consulting chemist, Int. Filtration Corp, 15-16; officer in charge, adjustment branch of personnel, C.W.S., 18-19; director, Beekman and Linden Eng. Corp, 19- Mem. Nichols medal award jury; Perkin medal award committee, Cooper medal, 12. Eighth Int. Cong. of Applied Chem. Chem. Soc. (sec'y-treas, N. Y. sect, 16, 17, mem. toluol committee, 17); Electrochem. Soc. (chairman committee in charge of Appalachian tour); Min. and Metal. Eng; N. Y. Chemists Club (ed. staff, 'The Perculator'); Soc. de Chim. indust. Chemical industries.
- Roth, Prof. Filibert**, University of Michigan, Ann Arbor, Mich. *Forestry*. Wilhelmsdorf, Germany, April 20, 58. B.S., Michigan, 90. Expert, U. S. Dept. Agr, 90-98; asst. prof. forestry, Cornell, 98-01; chief, div. forest reserves, Dept. Interior, 01-03; *prof. forestry, Michigan*, 03- Forest warden, Mich, 03-09. A.A.; Forestry Ass; Soc. Foresters; Soc. Test. Mat; Wash. Acad. Technical properties of timber; forest conditions of Wisconsin; cypress; timber physics; grazing on forest reserves; forest regulation and valuation.

- Roth, Dr. George E(yron)**, 25th and E Sts, N. W., Washington, D. C. *Pharmacology*. Mt. Eaton, Ohio, May 22, 79. A.B., Michigan, 06, Parke-Davis fellow, 07-08; M.D., 09. Instr. pharmacol., Michigan, 09-13; *pharmacologist, hygienic lab, U. S. Pub. Health Service, Washington, D. C.* 13- Soc. Pharmacol. (mem. council, 16); Physiol. Soc.; Soc. Exp. Biol.; Chem. Soc. Camphoric acid; action of quinin on the leucocytes; aconite; pituitary preparations; curare and physostigmin; barium chlorid; nitroglycerin tablets; digitalin tablets; fluid extract of ergot.
- Rothrock, Prof. D(avid) A(ndrew)**, University of Indiana, Bloomington, Ind. *Mathematics*. Milltown, Ind., Jan. 31, 64. A.B., Indiana, 92, A.M., 93; Chicago, 94-95; Ph.D., Leipzig, 98. Instr. math., Indiana, 92-95, asst. prof., 95-99, assoc. prof., 99-05, junior prof., 05-08, *prof.*, 08- Prof. math., West. State Nor. Sch., Mich., summer, 04. A.A.; Math. Soc. Plane and spherical trigonometry; logarithmic, trigonometric and other tables; the point invariants of the groups of the plane; differential invariants derived from point invariants; the essentials of algebra.
- Rothrock, Dr. J(oseph) T(rimble)**, West Chester, Pa. *Botany, Forestry*. McVeytown, Pa., April 9, 39. B.S., Harvard, 64; M.D., Pennsylvania, 67. Prof. bot., Pa. State, 67-69; Pennsylvania, 79-09; commissioner of forestry, Pa., 93-04. Surgeon, Wheeler explor. exped., 73-75. Forestry Ass.; Soc. Foresters; Philos. Soc.; Pa. Forestry Ass.; Phila. Acad. Medicine; forestry for Pennsylvania.
- Rothschild, Dr. M(arcus) A(dolphus)**, 930 Park Ave., New York, N. Y. *Medicine*. Woodville, Miss., July 4, 87. A.B., Columbia, 08, M.D., 11. Asst. physiol. chem., *Mt. Sinai Hosp., N. Y. City*, 12, asst. cardiographist, 12-, *adj. attending physician*, 20- Ass. Path. and Bacter.; Soc. Exp. Biol.; Soc. Physiol. Chem. Physiology of the heart; electrocardiography; cholesterol metabolism.
- Rothschild, S(tanford) Z(adoc)**, Sun Life Building, Baltimore, Md. *Actuarial science*. Richmond, Va., June 7, 94. Pennsylvania. A.B., Michigan, 16. Asst. instr. actuarial science, Michigan, 15-16; actuary, *Sun Life Ins. Co.*, 16-19, *third v. pres. and actuary*, 19- Capt., U.S.A., 17-19. Lecturer math. of investments, night sch., Hopkins, 16-17. Assoc. Actuarial Soc.; assoc. Inst. Actuaries; Math. Soc.; Statist. Ass.; Acad. Polit. and Social Sci. Life insurance.
- Rouiller, Dr. Cha(rle)s A(ugust)**, Buck's Lane, Arlington, Md. *Chemistry*. Paraje, N. Mex., June 10, 83. A.B., Stanford, 03; Ph.D., Hopkins, 06. Fellow, Rockefeller Inst., 06-07; asst. chem., Hopkins, 07-14; asst. and assoc. pharmacol., 14-18; chemist, Hynson, Westcott and Dunning, 18-20; *assoc. pharmacol., Hopkins*, 20- A.A.; Chem. Soc.
- Round, Dr. Lester A(ngell)**, State Board of Health, Providence, R. I. *Bacteriology*. Foster, R. I., Nov. 5, 88. A.B., Brown, 10, A.M., 11, Ph.D., 14; Harvard, 13-14, 20-21. Asst. bacteriologist and biologist, R. I. Commissioners of Shell Fisheries, 11-14, sanit. inspector, 12-14; asst. bacteriologist, Providence Health Dept., 12-14; bacteriologist, bur. chem., U. S. Dept. Agr., 14-18; *pathologist, R. I. State Board of Health*, 18- Soc. Bact.; Pub. Health Ass. Biology; shellfish; food and industrial bacteriology; sanitary and pathogenic bacteriology; serology.
- Roundy, P(aul) V(ere)**, U. S. Geological Survey, Washington, D. C. *Geology*. Cooperstown Junction, N. Y., Jan. 8, 84. A.B., George Washington, 12. *With U. S. Geol. Surv.*, 09- Paleont. Soc.; Ass. Petrol. Geol.; Wash. Geol. Soc. Carboniferous paleontology; oil and gas geology.
- Rous, Dr. (Francis) Peyton**, Rockefeller Institute, New York, N. Y. **Medicine*. Baltimore, Md., Oct. 5, 79. A.B., Hopkins, 00, M.D., 05. Res. house officer, Hopkins Hosp., 05-06; instr. path., Michigan, 06-08; asst. and assoc. mem. *Rockefeller Inst.*, 09-12, assoc. mem. *path. and bacter.*, 12-20, *mem.*, 20- V. chairman, div. med., Nat. Research Council, 18-19, mem. exec. committee, 19- A.A.; Am. Physicians; Soc. Exp. Biol.; Soc. Exp. Path. (see'y, 15); Harvey Soc. (councilor, 17). Cancer; immunity; physiology and pathology of the blood.
- Roush, Prof. G(ar) A**, Lehigh University, Bethlehem, Pa. *Metallurgy*. Harrisburg, Ind., Oct. 21, 83. A.B., Indiana, 05; M.S., Wisconsin, 10. Asst. prof. *metal, Lehigh*, 12-20, *assoc. prof.*, 20- Ed. 'Mineral Industry,' 13- Capt., ordnance dept., 18-19. Min. and Metal. Eng. (managing ed., 17); Electrochem. Soc. (asst. sec'y, 12-18); Chem. Soc.; N. Y. Chemists Club; Phila. Eng. Club. Electrochemistry; electrometallurgy.
- Rousseau, Rear Admiral H(arry) H(arwood)**, 3238 R St., Washington, D. C. *Civil engineering*. Troy, N. Y., April 19, 70. C.E., Rensselaer, 91. Civil engineer, *U.S.N.*, 98-07, served on Isthmus of Panama, 07-14, *rear admiral, corps eng.*, 14- Mem. Isthmian Canal Commission, 07; given thanks of Congress for services at Panama Canal, 14. A.A.; Civil Eng.; West. Pa. Eng. Soc.
- Rowe, Prof. A(llan) W(inter)**, 295 Commonwealth Ave., Boston, Mass. *Chemistry*. Gloucester, Mass., July 31, 79. B.S., Mass. Inst. Tech., 01, fellow, 04-06; M.S., Wesleyan, 04; Ph.D., Göttingen, 06. Asst. chem., Wesleyan, 02-04; lecturer, *sch. med., Boston*, 06-08, *prof.*, 08- Grad. sch. Harvard, 07-14; research assoc. chem., Evans Mem. Hosp.; chemist, Mass. Homeop. Hosp. A.A.; Soc. Bact.; Electrochem. Soc.; Chem. Soc. Liquefaction of gases; reaction velocities; thermochemistry; metabolism; vital function; respiration.
- Rowe, Prof. J(esse) (Perry)**, Missoula, Mont. *Geology*. Salem Centre, Mich., May 5, 71. B.S., Nebraska, 97, fellow, 97-98, A.M., 03, Ph.D., 06. Asst. geol., Nebraska, 94-98; asst. principal, high sch., Butte, Mont., 98-99, principal, 99-00; instr. physics and geol., *Montana*, 00-01, *prof.*, 01-08, *geol.*, 08-, *director, summer session*, 16-18, 20- Asst., U. S. Geol. Surv., 06, 07; mem. Mont. State Text Book Commission; War Camp Community Service 19-20. A.A.; fel. Geol. Soc.; Min. Eng.; Ass. Petrol. Geol.; Mont. Ass. Sch. Trustees (pres, 15, 16); Mont. Acad.; Mont. State Teachers Ass. (pres, 08). Coal; clay; copper, lead; gypsum; coals and lignites of the northwest; theory of ore deposits; petroleum, chromite and molybdenum deposits of Montana.

- Rowe, Prof. Joseph E(ugene)**, Plum Point, Aberdeen Proving Grounds, Md. *Mathematics*. Emmitsburg, Md, March 21, 83. A.B, Gettysburg, 04; Virginia, 04-05; fellow, Hopkins, 09-10, Ph.D, 10. Teacher *math*, Mercersburg Acad, 05-06; Jefferson Sch, Baltimore, 06-09; instr, Goucher, 10-11; Haverford, 11-12; Dartmouth, 12-14; asst. prof, Pa. State, 14-16, assoc. prof, 16-20; *math. and dynamics expert, ordnance dept, U.S.A. and chief ballistician, Aberdeen Proving Ground, 20-* Math. Ass; Math. Soc. Rational curves; covariants and invariants of rational quartic; bicombinants; pencils of tangents and their parameters; cusp and undulation invariants; point equation; collinear relation; quinqueseant line; theory of numbers; Fermat's theorem; formation of combinants.
- Rowe, Dr. Stuart H(enry)**, 104 Hillcrest Ave, Yonkers, N. Y. *Pedagogy, Psychology*. New Haven, Conn, May 24, 69. A.B, Yale, 90; fellow, Columbia, 92-94; Ph.D, Jena, 95. Instr. Latin and Greek, Pennington, N. J, 90-92; prof. pedag. and director practise, State Nor. Sch, Mankato, Minn, 95-98; supervising principal, Lovell Sch, Dist, New Haven, 98-04; lecturer pedagogy, Yale, 01-04; head, dept. psychol. and pedag, Brooklyn Training Sch. for Teachers, 04-10; *principal, Wadleigh High Sch, N. Y. City, 10-* Lecturer educ. psychol, Brooklyn Inst, 08-09; Adelphi, 09-10. A.A; Psychol. Ass; Soc. Exp. Study Educ. Hygiene and child-study in methods of school procedure; lighting of schoolrooms; habit formation; physical nature of the child; educational principles; secondary education.
- Rowland, Prof. Arthur J(ohn)**, 3008 Chestnut St, Milwaukee, Wis. *Electrical engineering*. Cincinnati, Ohio, Feb. 19, 67. Pennsylvania, 83-84; Hopkins, 84-86, 90-93; Sc.D, Bucknell, 06. Instr. elec. eng, Drexel Inst, Phila, 93-94, prof, 94-18, director, sch. eng, 06-13, dean, 13-18; district officer, Fed. Board Vocational Educ. 18-19; *educ. director, Milwaukee Elec. Ry. and Light Co, 19-* Elec. Eng; Illum. Eng. Soc; Nat. Ass. Vocational Educ; Nat. Ass. Corp. Schools. Industrial education; lighting; illumination.
- Rowland, Prof. Floyd E(lba)**, Oregon Agricultural College, Corvallis, Oregon. *Chemistry*. Hartwick, Iowa, Dec. 18, 85. B.S, Oregon Col, 07; A.B, Illinois, 14, A.M, 15, Ph.D, 18. Instr. *chem*, Oregon Col, 10-13; asst, Illinois, 15-18; asst. prof, Oregon Col, 18; Kansas, 19-20; *head chem. eng, Oregon Col, 20-* Lieut. C.W.S, 18. Electrochem. Soc; Eng. Soc; Chem. Soc. Effect of temperature, pressure and steam on hydrocarbon vapors; war gases.
- Rowlee, Prof. W(illard) W(infield)**, Cornell University, Ithaca, N. Y. **Botany*. Fulton, N. Y, Dec. 15, 61. B.L, Cornell, 88, Sc.D, 93. Instr. *bot. Cornell*, 88-93, asst. prof, 93-06, *prof, 06-* A.A; Soc. Nat; Bot. Soc; Soc. Prom. Agr. Sci; Pa. Forestry Ass. Flora of the United States; North American willows; comparative anatomy of woods; tropical trees.
- Rowley, John**, 42 Plaza Drive, Berkeley, Calif. *Zoology*. Hastings-on-Hudson, N. Y, March 11, 66. Brooklyn Polytech, 84-87. Chief, dept. taxidermy, Am. Museum Nat. Hist, 89-04; taxidermist, Stanford; *curator mammals, Calif. Acad. Sciences; director, Oakland Pub. Museum*. Mem. Ornith. Union; Audubon Soc; N. Y. Zool. Soc; N. Y. Linnean Soc; Cooper Ornith. Club. Taxidermy; north American mammals.
- Rowley, Prof. R(obert) R(ossell)**, 1115 North Carolina St, Louisiana, Mo. *Zoology*. Near Louisiana, Jan. 4, 54. Missouri. Teacher science, high sch, Fort Smith, Ark, 91-93; principal and teacher biol, high sch, Louisiana, Mo, 94-11; *supt. schools, Louisiana, Mo, 11-* Expert paleontologist, Mo. Geol. Surv, several summers. A.A; Paleont. Soc. Invertebrate morphology; paleontology; Lepidoptera; Crinoidea; Blastoida; Sphingidae; Catocala.
- Rowntree, Prof. L(eonard) G(eorge)**, University of Minnesota, Minneapolis, Minn. *Medicine*. London, Can, April 10, 83. M.D, Western Med. Col, London, Can, 05. Res. physician, Victoria Hosp, London, 05-06; asst. med, Hopkins, 07-08, instr. pharmacol, 08-10, assoc. exp. therapist, 10-13, assoc. prof, 13-14, med, 14-16; *prof. med. and chief of dept, Minnesota, 16-* A.A; Am. Med. Ass; Am. Physicians; Physiol. Soc; Soc. Pharmacol; Soc. Biol. Chem; Soc. Exp. Path; Soc. Clin. Invest. Renal and hepatic functional tests; absorption from pleural and peritoneal cavities; vividiffusion; plasmapheresis; radium; antimonials in trypanosomiasis; subcutaneous purgatives.
- Roy, Prof. Arthur J(ay)**, 369 Morris St, Albany, N. Y. *Astronomy*. Clyde, N. Y, Nov. 7, 69. C.E, Union, 93, A.M, 97. *First asst, Dudley Observatory, Albany, 93-*; *chief astronomer, dept. meridian astron, Carnegie Institution, 07-* A.A; Astron. Soc. Comets; asteroids; meridian observations of stars and their reduction; star positions and motions.
- Ruby, Dr. Charles Ernest**, Massachusetts Institute of Technology, Cambridge, Mass. *Physical chemistry*. Louisville, Ky, Nov. 20, 93. B.S, Kentucky, 16; Ph.D, Mass. Inst. Tech, 20. Fellow, Mellon Inst, 16-17; asst. *physical chem, Mass. Inst. Tech, 17-18*, instr, 18-19, asst, 19-20, *research assoc, 20-* A.A; Chem. Soc; Electrochem. Soc. Equilibrium; ionic theory; industrial application of theoretical chemistry.
- Rucker, Dr. Augusta**, 120 E. 34th St, New York, N. Y. *Zoology*. Paris, Tex, May 24, 73. A.B, Texas, 96, fellow, 96-97, A.M, 99; M.D, Hopkins, 11. Tutor biol, Texas, 97-99, instr, 99-00, zool, 00; *practising physician*. Attending physician pediat; N. Y. Infirmary for Women and Children. A.A; fel. Tex. Acad. Peripatus eisenii; the Texan Koecenia; the anatomy of Koecenia and its position among the Arachnida.
- Ruckes, Prof. Herbert**, Dean and Fairmount Avenues, Westchester, N. Y. *Cytology*. New York, Feb. 1, 95. B.S, Cornell, 17, A.M, 17. Head, dept. biol, Grove City, 17-18; *instr. mil. sanit, Columbia, 18-19; comp. anat, Col. City of N. Y, 20-* Instr. bot, Columbia, summer, 19. A.A; Entom. Soc. Limnology; insect histology; plant cytology of secretion.
- Ruckmick, Prof. Christian A(lban)**, University of Illinois, Urbana, Ill. *Psychology*. New York, N. Y, Sept. 4, 86. A.B, Amherst, 09,

- A.M, 12; Ph.D, Cornell, 13. Instr. science and math, Cent. High Sch, Springfield, Mass, 09-10; *psychol*, Cornell, 11-13; *Illinois*, 13-15, assoc, 15-17, asst. prof. and acting head of dept, 17-19, *assoc. prof*, 19- Lecturer psychol, Harvard, summer, 15. A.A.; Psychol. Ass. Psychology of rhythm and music; historical and systematic psychology.
- Rudd, Prof. Wortley F(uller)**, 1716 Grove Ave, Richmond, Va. *Chemistry*. Chesterfield Co, Va, Oct. 6, 76. A.B, Richmond, 98; Ph.B, Virginia, 02; A.M, Columbia, 11. *Prof. chem, Med. Col. of Va*, 10- Lecturer org. chem, Richmond, 18- Chem. Soc. (chairman and sec'y, Va. sect); Pharmaceut. Ass. (chairman, sect. on educ. and legislation, 18). Vegetable oils.
- Ruddiman, Prof. E(dsel) A(lexander)**, Vanderbilt University, Nashville, Tenn. *Pharmacy*. Dearborn, Mich, Dec. 27, 64. *Phar.C*, Michigan, 86, *Phar.M*, 87; M.D, Vanderbilt, 93. Asst. in charge pharmacog, Michigan, 86-87; chemist in charge, lab, Williamson, Ingram and Griggs, 87-90; *prof. pharmacy and mat. med*, Vanderbilt, 90- Chemist, Tenn. Board of Pharmacy, 97-; U. S. food and drug inspection chemist, 07-14. Pharmaceut. Ass; Chem. Soc. Prescriptions; materia medica; proprietary medicines.
- Rudis-Jicinsky, Dr. John**, 1933 S. Avers Ave, Chicago, Ill. *Pathology*. Bohemia, 60. A.M, Prague Acad, 94; M.D, Rush Med. Col, 96; M.E, Paris, 04. Director, Mil. Hosp, Skoplije, Serbia, 14-16; lieut-col, Serbian M. C, 14-16. Ed, hygienic dept, 'Sokol Americky.' Mem. Int. Commission on Typhus, Serbia, 14-15; Am. Red Cross med. exped, Siberia, 19-20. A.A; Am. Med. Ass; Am. Röntgen Ray Soc. (founder, sec'y, 00-). Radiology; electrology; epidemiology; typhus evanthematicus, febris recurrence, dysentery and cholera in Serbia.
- Rudnick, Paul**, Armour and Co, Chicago, Ill. *Chemistry*. Chicago, Nov. 27, 72. Ph.G, Illinois, 93, B.S, 99. Chemist, E. Schneider and Co, 99-01; *Armour and Co*, 01-07, *chief chemist*, 07- A.A; Chem. Soc; Soc. Chem. Indust; Soc. Test. Mat. Chemistry of meat packing and fertilizers.
- Rudolf, Dr. R(obert) D(awson)**, 100 College St, Toronto, Can. *Therapeutics, Medicine*. Pietou, N. S, June 29, 65. M.B, C.M, Edinburgh, 89, M.D, 96; M.R.C.P, London, 00, F.R.C.P, 10, C.B.E, 18. *Prof. therapist, Toronto*, 08- Col. and consulting physician, M.C, Can. Army. Asst. physician, Toronto Gen. Hosp; Sick Children's Hosp. Therapeut. Soc. (v. pres, 20); Am. Physicians; Toronto Acad. Med; Toronto Med. Soc; Toronto Path. Soc; fel Royal Soc. Med; Royal Med. Soc. Edinburgh (past pres). Clinical medicine.
- Ruedemann, Dr. R(udolf)**, Education Building, Albany, N. Y. **Paleontology, Geology*. Georgenthal, Germany, Oct. 16, 64. Ph.D, Jena, 87; Strasbourg, 89. Asst. geol, Strasbourg, 87-92; teacher, high schools, Lowville and Dolgeville, N. Y, 92-99; *asst. state paleontologist*, N. Y, 99- Curator paleont, N. Y. State Museum, 13- Walker prize, Boston Soc. Nat. Hist, 01. A.A; Geol. Soc. (v. pres, 16); Paleont. Soc. (v. pres, 11, pres, 16). Fossils and geology of gneiss beds of New York; graptolites; cephalopods of Ordovician; eurypterids; inliers; pre-Cambrian continents; stratigraphy of Ordovician.
- Ruediger, Dr. E(rnest) H(enry)**, Bismarck, N. Dak. *Pathology*. Fountain City, Wis, 75. M.D, Rush Med. Col, 03. Serologist, Bur. Science, P. I, and assoc. prof. path. and bacter, Philippine Med. Sch, 04-16; *pathologist, Bismarck Hosp*, 16- A.A; Am. Med. Ass. Bacteriology of the blood in typhoid fever; virulent pseudodiphtheria bacilli in gangrenous laryngitis; Bacillus typhosus associated with pyonephrosis; Wassermann reaction.
- Ruediger, Dr. Gustav F(erdinand)**, 325 Flint St, Reno, Nev. *Pathology, Bacteriology*. Fountain City, Wis, June 9, 76. B.S, Wisconsin, 00; M.D, Rush Med. Col, 03; Ph.D, Chicago, 07. Assoc, Mem. Inst. for Infectious Diseases, Chicago, 03-06; prof. path. and bacter, North Dakota, 07-14; director, State Pub. Health Lab, 07-14; *director*, Hygienic Inst. for LaSalle, Peru and Oglesby, Ill, 14-17; *state hygienic lab, Nevada*, 17- A.A; Ass. Path. and Bact; Am. Med. Ass; Pub. Health Ass. The self-purification of streams; streptococcus infections; purity of natural ice from polluted waters.
- Ruediger, Prof. W(illiam) C(arl)**, George Washington University, Washington, D. C. *Psychology, Education*. Fountain City, Wis, March 29, 74. Ph.B, Wisconsin, 99, Ph.M, 03; Ph.D, Columbia, 07. Prof. methods, Nor. Col, Dillon, Mont, 03-05; asst. psychol, Columbia, 06-07; asst. prof. educ. psychol, George Washington, 07-11, *prof*, 11-, *dean, teachers col*, 12-, *director, summer sch*, 15- Lecturer, summer sch, Virginia, 08, 09; West Virginia, 12, 13; Dartmouth, 14. A.A; Psychol. Ass; S. Soc. Philos. and Psychol. The field of distinct vision; the period of mental reconstruction; formal culture through ideals; qualities of merit in teachers; improvement of teachers in service; principles of education.
- Ruehle, G(odfrey) L(eonard) A(lvin)**, 336 Marshall St, East Lansing, Mich. *Bacteriology*. Stillwater, Minn, Oct. 30, 84. Ph.G, Washington (Seattle), 06, B.S, 08, M.S, 10. Asst. bacteriologist, N. Y. Exp. Sta, Geneva, 11-18; *research assoc. bacter, Mich. Exp. Sta*, 18- A.A; fel. Soc. Bact; Pub. Health Ass. Dairy bacteriology; germ content of milk; bacterial analysis of air and milk; bacteriology of butter.
- Ruffner, Charles S(humway)**, 30 Broad St, New York, N. Y. *Electrical engineering*. Chicago, Ill, June 22, 80. B.S, Missouri, 00. Engineer, Telluride Power Co, 00-09; supt. of operation, Cent. Colo. Power Co, 09-11; gen. manager, Miss. River Power Distributing Co, 11-13; *v. pres. and gen. manager*, Elec. Co. of Mo, 13-17; *Union Elec. Light and Power Co*, 17-; *v. pres*, N. Am. Co, 19- Fel. Elec. Eng; Electrochem. Soc. High voltage electrical phenomena; business administration.
- Rufus, Prof. W(ill) Carl**, Detroit Observatory, Ann Arbor, Mich. *Astronomy*. Chatham, Ont, July 1, 76. A.B, Albion, 02, A.M, 08; fellow, Michigan, 13-15, Ph.D, 15. Asst. math, Albion, 01-02; teacher, high sch, Flint, Mich, 02-04; Lansing, 04-05; instr. math. and astron, Pyeong Yang Col, Korea, 07-11; supt. educ, Meth. Mission, Seoul, 11-13; prof. math. and astron,

- Seoul Col, 15-17; instr. astron, *Michigan*, 17-20, asst. prof, 20- A.A.; Astron. Soc; Royal Asiatic Soc. Astrophysics; stellar spectroscopy; the celestial planisphere of King Yi Tai Jo.
- Ruger, Prof. Henry A(lford)**, Teachers College, Columbia University, New York, N. Y. *Psychology*. Janesville, Wis, Sept. 18, 72. A.B., Beloit, 95; fellow, Wisconsin, 01-03; A.M., Chicago, 05; Ph.D., Columbia, 10. Principal, acad, Port Byron, Ill, 96-00; asst. psychol, Columbia, 03-04; asst. prof, Colo. Col, 04-10; educ. psychol, *Teachers Col, Columbia*, 10- A.A.; Psychol. Ass; West. Philos. Ass. Psychology of efficiency; learning processes.
- Rugg, Dr. Harold Ordway**, 59 Edgecliff Terrace, Park Hill, Yonkers, N. Y. *Psychology*. Fitchburg, Mass, Jan. 17, 86. B.S., Dartmouth, 08, C.E., 09; Ph.D., Illinois, 15. Instr. civil eng, James Millikin, 09-11; Illinois, 11-15; educ, Chicago, 15-17, asst. prof, 17-18, assoc. prof, 18-19; assoc. prof. educ. and educ. psychologist, *Lincoln Sch, Teachers Col, Columbia*, 19- Statistician, committee on classification of personnel in the army, 18; specialist, investigation of U. S. Civil Service Commission, 19. A.A.; Soc. Col. Teachers Educ. Educational measurement; statistics; mental tests; the school curriculum.
- Ruggles, Prof. Arthur Gordon**, University Farm, St. Paul, Minn. *Entomology*. Annapolis Royal, N. S., May 30, 75. B.S.A., Cornell, 01, A.M., 04. Asst. prof. entom. Minnesota, and asst. to state entomologist, 02-13, assoc. prof, 13-18, prof. and state entomologist, *Minn*, 18- Entomologist, Pa. Chestnut Blight Commission, 12-13. A.A.; Entom. Soc; Ass. Econ. Entom. Economic entomology.
- Ruhrh, Dr. John**, 11 E. Chase St, Baltimore, Md. *Pediatrics*. Chillicothe, Ohio, Sept. 26, 72. M.D., Col. Physicians and Surg, Baltimore, 94. Co-editor, 'Bul. Med. Library Ass'; assoc. ed, 'Annals Med. History.' *Pediat Soc*. Diseases of children; dietetics; poliomyelitis.
- Rumbold, Dr. Caroline (Thomas)**, U. S. Department of Agriculture, Washington, D. C. *Plant pathology*. St. Louis, Mo, July 27, 77. B.L., Smith, 01; A.M., Washington (St. Louis), 03, Ph.D., 11, fellow, Mo. Bot. Garden, 10-11; Munich, 07. Scientific aid, bur. plant indust, U. S. Dept. Agr, 03-05; asst. bot, Missouri, 08-10; expert and collaborator, bur. plant indust, U. S. Dept. Agr, 11-17, asst. pathologist, sugar plant investigations, 17-19, plant pathologist, 19- Plant physiologist, Pa. Chestnut Blight Commission, 12-13. A.A.; Bot. Soc; Phytopath. Soc. Fungous diseases of trees; injection of chemicals into chestnut trees; diseases of sugar beets.
- Ruml, Dr. Beardsley**, Carnegie Corporation, 522 Fifth Ave, New York, N. Y. *Psychology*. Cedar Rapids, Iowa, Nov. 5, 94. B.S., Dartmouth, 15; Ph.D., Chicago, 17. Instr. psychol, Carnegie Inst. Tech, 18; sec'y, Scott Co, 19-20; asst. to pres, *Carnegie Corp*, 20- Co-director, trade test div, U.S.A., 18. A.A.; Psychol. Ass. Statistics; industrial personnel.
- Rumsey, Prof. L(ouys) A**, Institute of Baking, Minneapolis, Minn. *Chemistry*. Stryker, Ohio, May 7, 89. B.S., Denison, 12, M.S., 13; Chicago; Iowa State. Instr. chem, Iowa State, 13-17; asst. prof, Denison, 17-20; with *Am. Inst. Baking*, 20- Chem. Soc. Baking powders; baked products.
- Runkle, Prof. Erwin W(illiam)**, State College, Pa. *Psychology*. Lisbon, Iowa, May 20, 69. A.B., Leander Clark, 90; Ph.D., Yale, 93; hon. fellow, Clark, 99. Lecturer hist. philos, Yale, 92-93; prof. psychol. and ethics, Pa. State, 93- Librarian, Carnegie Library, Pa. State, 04- A.A.; Psychol. Ass. The phenomenalism of Berkeley; psychology of confession; psychology of prejudice and prejudgment.
- Running, Prof. Theodore R(udolph)**, 1019 Michigan Ave, Ann Arbor, Mich. *Mathematics*. Colfax, Wis, Dec. 14, 66. B.S., Wisconsin, 92, fellow, 95-97, M.S., 96, Ph.D., 99. Prof. math, physics and chem, St. Olaf, 93-95; asst. math, Wisconsin, 97-99, instr, 99-00; prof. math. and nat. science, St. Olaf, 00-03; instr. math, *Michigan*, 03-07, asst. prof, 07-13; assoc. prof, 13-20, prof, 20- A.A.; Math. Soc; Math. Ass; Eng. Educ. Graphical methods.
- Runyan, E(lmer) G(ardner)**, 419 Tenth St, N. W., Washington, D. C. *Chemistry*. Disco, Mich. Ph.C., Michigan, 86; B.S., George Washington, 89. Asst. chemist, bur. chem, U. S. Dept. Agr, 90-03; inspector gas and meters for D. C., 03- A.A.; Chem. Soc; Soc. Chem. Indust. Agricultural chemistry; method of fertilizer analysis; gas analysis; photometry.
- Rupert, Dr. F(rank) F(inch)**, Mellon Institute, Pittsburgh, Pa. *Chemistry*. Caledonia, N. Y., Oct. 18, 83. A.B., Kansas, 06, A.M., 08; Ph.D., Mass. Inst. Tech, 12. Instr. chem, Kansas, 07-09; asst, Mass. Inst. Tech, 10-11; instr, Kansas, 11-12; junior physical chemist, U. S. Bur. Mines, 12-13; fellow, *Mellon Inst*, 13- Chem. Soc. Colloid chemistry; phase rule; electrical potential; catalysis.
- Rupert, Dr. R(ichard) R(oot)**, University of Utah School of Medicine, Salt Lake City, Utah. *Anatomy*. Buchanan, Mich, Jan. 1, 82. M.D., Illinois, 12. Demonstrator anat, departments med. and dentistry, Illinois, 11-12, asst. prof, 12-13, instr, 13-14, asst. clin. surg, med. dept, 14; prof. gross anat, *Utah*. Ass. Anat. Irregular kidney vessels; innervation; variations in blood supply to thyroid gland.
- Rusby, Prof. Henry H(urd)**, 115 W. 68th St, New York, N. Y. **Botany, Materia medica*. Franklin, N. J., April 26, 55. M.D., N. Y. Univ, 84. Prof. bot, physiol, mat. med. and dean, faculty, N. Y. Col. Pharmacy, 88-20; mat. med, Univ. and Bellevue Hosp. Med. Col, 97-02. Sci. director and curator of econ. collection, N. Y. Bot. Garden; agent for Smithsonian Inst. bot. exploration of N. Mex. and Ariz, 80-83; explored Madeira River Valley and Bolivia, S. A., 85-87, delta of Orinoco, 96; Mexican rubber forests, 08-10; southern Columbia, 17; pharmacologist, U. S. Dept. Agr, 07-14; prof. principles of stock feeding, Am. Vet. Col, 89-96; mem. committee of revision, U. S. Pharmacopœia, 90-20; on med. flora, Pan-Am. Med. Cong. Medal, Centennial Expos, 76. A.A.; Pharmaceut. Ass; fel. N. Y. Acad; N. Y. Sci. Alliance; Torrey Bot. Club (past pres); hon. mem. Mex. Inst. Med. Nac; cor. mem. Gt. Britain Pharmaceut. Soc. South American flora; vegetable materia medica.

- Rush, Prof. J(ames) E(dwain)**, Carnegie Institute of Technology, Pittsburgh, Pa. *Biology, Bacteriology*. Dorchester, Mass. May 20, 87. B.S. Mass. Inst. Tech, 12; D.P.H., N. Y. Univ, 15; M.D., Pittsburgh, 20. Asst. Mass. Inst. Tech, 12-13; instr. bacter, Wisconsin, 13-14; *asst. prof. sanit. eng, Carnegie Inst. Tech, 14*- Asst. bacteriologist, Boston Bio-Chem. Lab; chemist, Springfield water supply; director of health, Edgeworth, Pa, 16- Pub. Health Ass. Death rate of *B. coli* at low temperatures; ptomaine poisoning.
- Rushmore, David B(arker)**, General Electric Co, Schenectady, N. Y. *Electrical engineering*. Old Westbury, N. Y., Aug. 21, 73. B.S. Swarthmore, 94, C.E., 97; M.E., Cornell, 95. Westinghouse Elec. and Mfg. Co, 95-96; Royal Elec. Co, Montreal, 96-97; Stanley Elec. Mfg. Co, 99-05; *chief engineer, power and mining dept, Gen. Elec. Co, 05*- Elec. Eng; Mech. Eng; Civil Eng; Electrochem. Soc. Electricity in industrial plants.
- Rushmore, Prof. Stephen**, 520 Commonwealth Ave, Boston, Mass. *Medicine*. Rochester, N. Y., Oct. 19, 75. A.B., Amherst, 97; M.D., Hopkins, 02. Asst. res. gynecologist, Hopkins Hosp, 03; house physician, Hudson St. Hosp, N. Y. City, 03-04; house surgeon, St. Mary's Hosp. for Children, 04-05; res. gynecologist, Hopkins Hosp, 05-06; house officer, Boston Lying-in Hosp, 07-08; instr. *gynec, Tufts, 09-12, assoc. prof, 12*- Instr. gynec, Hopkins, 06; gynecologist, Symmes' Arlington Hosp; obstetrician, Evangeline Booth Hosp. A.A.; Am. Med. Ass; Col. Surg. Gynecology; obstetrics.
- Rusk, Prof. G(lanville) Y(eisley)**, 117 Alton Ave, San Francisco, Calif. *Pathology*. Baltimore, Md, Feb. 15, 75. A.B., Hopkins, 96, M.D., 00. Med. house officer, Hopkins Hosp, 00-01; Enoch Pratt Hosp, 01-02; pathologist, Manhattan State Hosp, N. Y. City, 02-10; asst. prof. *path, California, 10-14, assoc. prof, 14*- Asst. Path. and Bact. Oidiomycotic meningitis; antibody production; glycogen determination; neoplasms.
- Rusk, Prof. Rogers D**, Napierville, Ill. *Physics*. Washington, D. C., Nov. 17, 92. B.S., Ohio Wesleyan, 16; A.M.; Ohio State, 17. Instr. physics, acad, Ohio Wesleyan, 15-16; head, dept. science, high sch, Niles, Ohio, 17-18; *prof. physics, Northwestern Col, 19*- A.A.; Physical Soc; Meteorol. Soc. Conduction of electricity through gases; aerology.
- Rusk, Prof. W(illiam) J(ames)**, Grinnell, Iowa. *Mathematics*. Ontario, Can, Sept. 30, 69. B.A., Toronto, 95, fellow, 95-98, M.A., 98; Chicago, 00-01, fellow, 01-02. Instr. *math, Bishop's Col, 98-00*; assoc. prof, Grinnell, 02-05, *prof, 05*- A.A.; Math. Soc.
- Russell, Col. F(rederick) F(uller)**, U.S.A., Cosmos Club, Washington, D. C. **Pathology*. Auburn, N. Y., Aug. 17, 70. M.D., Columbia, 93; Sc.D., George Washington, 17. Intern, Bellevue Hosp, N. Y., 93-95, res. physician, 95-96; Sloane Maternity Hosp, N. Y., 95; lieut, M.C., U.S.A., 98-03, capt, 03-08, major, 09, 17, *col, 17*-, *curator, Army Med. Museum, 08*-, *instr, Army Med. Sch, 08*;- *prof. path. and bacter, George Washington, 09*;- director, lab, Board of Health, Ancon, C. Z., 15-17; in charge, div. of laboratories infectious and venereal diseases, M.C; mem. div. med. sciences and govt. relations, Nat. Research Council. Ass. Path. and Bact; Am. Physicians; Soc. Exp. Path; Soc. Trop. Med; Ass. Mil. Surg; Am. Med. Ass. (delegate, U.S.A.); Nat. Board Med. Examiners. Anchylostomiasis; malaria; opsonins; typhoid vaccination; dysentery bacilli; the prevention of typhoid fever.
- Russell, Prof. G(eorge) E(dmond)**, 191 Park Ave, Arlington, Mass. *Civil engineering*. B.S., Mass. Inst. Tech, 00. Mech. engineer, Am. Car and Foundry Co, 00-04; instr. civil eng, Cornell, 04-05; *Mass. Inst. Tech, 05-07*, asst. prof. civil eng, 07-13, *assoc. prof. hydraulic eng, 13*- Lecturer, Lowell Sch. for Indust. Foremen, 06-; examiner, Civil Service Commission, Mass, 10-; traffic expert, Boston Transit Commission, 06- Boston Soc. Civil Eng. Hydraulics.
- Russell, Prof. H(arry) L(uman)**, University of Wisconsin, Madison, Wis. **Bacteriology*. Poynette, Wis, March 12, 66. B.S., Wisconsin, 88, fellow, 88-90, M.S., 90; Berlin, 90; Pasteur Inst, Paris, and Naples Zool. Sta, 90-91; fellow, Chicago, 92-93; Ph.D., Hopkins, 92. Asst. prof. bacter, *Wisconsin, 93-96*, *prof, 96-07, dean, col. agr, 07*;- bacteriologist, *Wis. Exp. Sta, 93-07*, *director, 07*- Consulting bacteriologist, Wis. Board of Health, 94-08; bacteriologist, Wis. Live Stock Sanitary Board, 01-07; lecturer bacter, dairy sch, Minnesota, 01-16; director, Wis. State Hygienic Lab, 03-08. A.A.; Soc. Bact. (chairman, 08); Pub. Health Ass. (chairman, lab. sect, 03); Soc. Prom. Agr. Sci; Land Grant Col. Ass. (pres, 20). Dairy bacteriology; bovine tuberculosis; bacterial plant diseases; pasteurization of milk; the curing of cheese.
- Russell, Dr. Henry N(orris)**, 79 Alexander St, Princeton, N. J. **Astronomy*. Oyster Bay, N. Y., Oct. 25, 77. A.B., Princeton, 97, fellow, 97-00, A.M., 98, Ph.D., 00. Carnegie research asst, Cambridge Observatory, 03-05; instr. *astron, Princeton, 05-08*, asst. prof, 08-11, *prof, 11*-, *director of Observatory, 12*- Engineer, Bur. Aircraft Production, 18-19; mem. Nat. Research Council. Nat. Acad; A.A.; Astron. Soc; Philos. Soc; for. assoc. and fel. Royal Astron. Soc. Stellar parallax; stellar evolution; stellar statistics; photographic astronomy; binary stars; eclipsing variables.
- Russell, Dean James E(arl)**, Teachers College, Columbia University, New York, N. Y. *Education*. Hamden, N. Y., July 1, 64. A.B., Cornell, 87, 91-93; Jena, 93-94; Leipzig, 94-95, Ph.D., 94; LL.D., Dickinson, 03; Colorado, 05; McGill, 09. Teacher and principal of secondary schools, 87-93; *prof. philos. and pedag, Colorado, 95-97*; *hist. of educ, Teachers Col, Columbia, 97*-, *dean, 98*-, *Barnard prof. educ, Columbia, 04*- Special agent, U. S. Bur. Educ, 93-94; European commissioner for Univ. of State of N. Y., 93-95. A.A. (v. pres, 09); Psychol. Ass; Nat. Council Educ. German higher schools; university extension in England and America; education in Porto Rico and the South; technical education.
- Russell, Prof. W(illiam) P(olk)**, Claremont, Calif. *Mathematics*. Gaylesville, Ala, Dec. 29, 63. A.B., Cumberland, 85, A.M., 09. Prof. math.

- and astron, Lincoln (Ill), 89-04; instr. math, Pomona, 04-08, asst. prof, 08-12, assoc. prof, 12- A.A; Math. Soc; Math. Ass.
- Ruth, Dr. Edward S.**, Children's Hospital Los Angeles, Calif. *Anatomy*. Moundridge, Kans, Sept. 2, 83. M.D, Kansas, 10. Special worker, Rockefeller Inst, 10-11; prof. anat, Wake Forest, 12-13; Southern Methodist, 13-14; Univ. Philippines, 14-20; mem. staff, Children's Hospital, Los Angeles, Calif, 20- Ass. Anat.
- Ruthven, Dr. Alexander G(rant)**, University Museum, Ann Arbor, Mich. **Zoology*. Hull, Iowa, April 1, 82. B.S, Morningside, 03; Ph.D, Michigan, 06. Instr. zool. and curator, museum, Michigan, 06-10, instr. zool. and head curator, museum, 10-12, prof. zool. and director of museum, 12- Chief field naturalist, Mich. Geol. and Biol. Surv, 08- A.A; Soc. Nat; Soc. Zool; Ecol. Soc; Mus. Ass; Ass. Geog; Mich. Acad. (pres, 13). Herpetology and geographic distribution; variations and relationships in Reptilia.
- Rutledge, Dr. John J(oseph)**, U. S. Bureau of Mines, McAlester, Okla. *Geology*. Alton, Ill, March 10, 70. B.S, Illinois, 94; Ph.D, Hopkins, 04. Mine supt, 94-00; geologist, Md. Geol. Surv, 00-04; consulting engineer and geologist, 04-09; dist. mining engineer, U. S. Bur. Mines, 09- Geol. Soc; Min. Eng. Economic geology; coal, iron, lead and zinc mining; mine accidents; origin of iron ores.
- Rutstein, Leo**, Milburn, N. J. *Chemistry*. Yonkers, N. Y, April 13, 96. Newark Tech. Sch; N. Y. Univ. Asst. chemist, Clark Thread Co. and J. and P. Coats, 11-13; assoc, Edward C. Worden, 11-; consulting chemist, 13- Assoc. ed, 'Technology Cellulose Esters.' Analytical chemistry; nitrocellulose industry; technology cellulose esters; carbohydrate carboxylates.
- Ruttan, Prof. R(obert) F(ulford)**, McGill University, Montreal, Can. *Chemistry*. Newburg, Ont, July 15, 56. B.A, Toronto, 81; M.D, C.M, McGill, 84; Berlin, 85-86; D.Sc. Toronto, 14. Prof. practical chem, med. faculty, McGill, 94-02, chem, 02-08, org. and biol. chem, 08-12, director, dept. chem, 12- Fellow of corporation, McGill, registrar of faculty, 91-02. A.A; Chem. Soc; Soc. Biol. Chem; Soc. Chem. Indust. (v. pres, 14-); Royal Soc. Can. (pres, 20); Ont. Col Physicians and Surg; British Ass. Organic bases; artificial alkaloids; medical chemistry; artificial fats; products of distillation of pine and spruce; margaric acid and glycol fats; constants of fat acids.
- Butter, Dr. Frank R(oy)**, U. S. Department of Commerce, Washington, D. C. *Economics*. Baltimore, Md, March 15, 74. A.B, Hopkins, 94, fellow, 96-97, Ph.D, 97. Proof-reader, U. S. Geol. Surv, 98-99; asst. chief, div. for. markets, U. S. Dept. Agr, 99-07, special European agent, 07-09, statistician, 09-10; tariff expert, U. S. Dept. Commerce, 10-14, asst. chief, bur. for. and domestic commerce, 14-17; commercial attaché, Am. Embassy, Tokyo, Japan, 19, statistical adviser, 19, trade commissioner, 20- Lecturer econ, Columbian, 02; Iowa, 04. Econ. Ass; Statist. Ass; Royal Statist. Soc. Custom tariffs and commercial statistics; sugar production and trade; grain production and trade; tariff sys-
- tems of South America, Japan, Cuba and Canada.
- Ryan, Dr. A(ndrew) H(oward)**, Tufts Medical School, Boston, Mass. *Physiology, Pharmacology*. Silex, Mo, Dec. 30, 85. M.D, Washington (St. Louis), 10. Asst. physiol. and pharmacol, Washington (St. Louis), 08-10; instr, Pittsburgh, 10-13; prof, Alabama, 13-16; physiol, med. sch, Tufts, 16- Physiologist, U. S. Pub. Health Service, 18-; mem. committee on fatigue in indust. pursuits, Nat. Research Council; director indust. hygiene, Scoville Mfg. Co, 19- A.A; Physiol. Soc; Soc. Pharmacol; Am. Med. Ass. Physiological effects of anesthetics; goiter; site of action of strychnin in the spinal cord; absorption of drugs from gastric mucous membranes; muscular power, tonus and fatigue; rhythm in industry.
- Ryan, Prof. Harris J(oseph)**, Stanford University, Calif. **Electrical engineering*. Powells Valley, Pa, Jan. 8, 66. Baltimore City Col, 79-80; Lebanon Valley, 80-82; M.E, Cornell, 87. Instr. physics, Cornell, 88-89, prof. elec. eng, 89-05; Stanford, 05- Judge, board of awards, elec. dept, Columbian Expos, 93; delegate of U. S. Govt, Int. Elec. Cong, St. Louis, 04; mem. jury awards, Panama-Pacific Expos, 15; consulting engineer, Los Angeles Aqueduct Power Project, 09- Nat. Acad; A.A; Elec. Eng; Physical Soc; Illum. Eng. Soc; Electrochem. Soc; Radio Eng. Methods for electrical engineering tests and measurements; laws governing relation of size and separation of conductors and electric pressure at which corona and power waste appears in high pressure power transmission lines; dielectric strength, etc, of insulators for practical requirements at high voltage in electrical engineering apparatus; durability of high voltage line insulators; development of supersonic source projectors.
- Ryan, Dr. L(eon) A(lonzo)**, 3607 Sansom St, Philadelphia, Pa. *Chemistry*. La Grange, Ohio, 69. Ph.B, Oberlin, 93; Ph.D, Pennsylvania, 97. Asst. demonstrator chem. and later asst. prof. chem. and toxicol, med. dept, Pennsylvania, 97- Copper in the human liver; volumetric testing for glucose; volume of nitrogen evolved from uric acid by the action of alkaline sodium hypobromite solution; influence of oxygen, nitrogen and sunlight on olive oil; Goldner's test for cocaine; arsenic in liver tissues in cases of poisoning; retention of arsenic by animal charcoal.
- Rydborg, Dr. P(er) A(xel)**, New York Botanical Garden, New York, N. Y. **Botany*. Odh Parish, Sweden, July 6, 60. Grad, Royal Gymnasium, Skara, Sweden, 81; B.S, Nebraska, 91, A.M, 95; fellow, Columbia, 96-97, Ph.D, 98. Instr. math. and nat. science, Luther Acad, Wahoo, Nebr, 84-90, 91-93; Upsala Col, Kenilworth, N. J, 95-96, 97-99; asst. curator, N. Y. Bot. Garden, 99-06, curator, 07- Field agent, div. of bot. and agrost, U. S. Dept. Agr, summers, 91-96; N. Y. Bot. Garden, summers. A.A; Bot. Soc; Torrey Bot. Club. Flora of the Rocky Mountain region; Saxifragaceae; Rosaceae; Fabaceae; Compositae.
- Ryerson, William Newton**, P. O. Box 779, Duluth, Minn. *Electrical engineering*. New York, N.

Y, Dec. 7, 74. E.E, Columbia, 96. Asst. supt. motive power, Interborough Rapid Transit Co, 00-05; gen. supt. Ont. Power Co, 05-09; *gen. manager and chief engineer, Great North. Power Co, 09- Eleec. Eng; Mech. Eng; Can. Inst. Eng. Applications of electrical power.*

Rykenboer, Dr. Edward A(ugust), 19 Mentz Apartments, Niagara Falls, N. Y. *Chemistry.* Rochester, N. Y, July 19, 89. B.S, Rochester, 12, M.S, 13; Ph.D, Michigan. *Teaching asst. chem, Michigan, 13-17; research chemist, Roessler and Hasslacher Chem. Co, 17- A.A; Chem. Soc. Physical chemistry; capillarity; supercooling.*

Ryland, Prof. Garnett, University of Richmond, Richmond, Va. *Chemistry.* King and Queen Co, Va, Dec. 17, 70. A.M, Richmond, 92; Ph.D, Hopkins, 98. *Instr. chem, Maine, 98-99, asst. prof, 99-01; prof, Converse, 01-03; Georgetown (Ky), 03-17, Richmond, 17- Chem. Soc. Boiling-points of mixtures of liquids.*

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Sabin, A(lvah) H(orton), 432 Sanford Ave, Flushing, N. Y. **Chemistry.* Norfolk, N. Y, April 9, 51. B.S, Bowdoin, 76, M.S, 79, Sc.D, 17. *Prof. chem. and physics, Ripon, 76-80; chem, Vermont, 80-86; chemist, Edward Smith and Co, N. Y, 88-05; Nat. Lead Co, 10- State chemist, Vt, 82-86; lecturer paints and varnishes, N. Y. Univ, 97-; Mass. Inst. Tech, 98-06; Michigan, 98-02; lecturer, Purdue, 99, 02; Wisconsin, 01-02. A.A; Chem. Soc. (chairman, N. Y. sect, 92, ed. resins and pigments, 'Abstract Jour,' 07-); Soc. Chem. Indust; Mech. Eng; Civil Eng; Naval Archit. and Marine Eng; Soc. Test. Mat; Am. Geog. Soc; London Paint and Varnish Soc; London Soc. Arts. Process by which all sugar of milk is produced; corrosion of iron and steel; drying oils; technology of paints and varnishes.*

Sabin, Dr. Florence R(ena), Johns Hopkins Medical School, Baltimore, Md. **Anatomy.* Central City, Colo, Nov. 9, 71. B.S, Smith, 93; M.D, Hopkins, 00, fellow, 02; Sc.D, Smith, 10. *Teacher math, Wolfe Hall, Denver, Colo, 94-95; asst. zool, Smith, 96; intern, Hopkins Hosp, 01, asst. anat, Hopkins, 03, assoc, 03-05, assoc. prof, 05-17, prof. histol, 17- Naples Table Ass. prize, 03. A.A; Ass. Anat. (v. pres, 09, co-editor, 'Record'). Tracts in the medulla oblongata; lymphatic system; blood vascular system.*

Sabine, Dr. Paul E(rls), Riverbank Laboratories, Geneva, Ill. *Physics.* Albion, Ill, Jan. 22, 79. A.B, McKendree, 99; Harvard, 03, A.M, 11, Ph.D, 15. *Master science, Worcester Acad, 03-11; asst. physics, Harvard, 15-16; asst. prof, Case, 16-18; director, Wallace Clement Sabine Lab. of Acoustics, 19- Physical Soc. Architectural acoustics; photo-electricity.*

Sachs, Dr. B(ernard), 116 W. 59th St, New York, N. Y. *Nervous and mental diseases.* Baltimore, Md, Jan. 2, 58. A.B, Harvard, 78; M.D, Strasbourg, 82; Berlin, Vienna, Paris and London, 81-04. *Prof. nervous and mental diseases, N. Y. Polyclinic until 04; neurologist, Mt. Sinai Hosp; alienist and neurologist, Bellevue Hosp; consulting physician, Manhattan State Hosp.*

A.A; Am. Physicians; Neur. Ass; N. Y. Neur. Soc; N. Y. Acad. Med; hon. mem. Moscow Neur. Soc. *Nervous diseases of children; infantile palsies; amaurotic family idiocy; epilepsy; syphilis of central nervous system; vasomotor disorders; cerebellar tumors; spinal cord tumors; the Wassermann reaction; lethargic encephalitis.*

Sachs, Prof. Ernest, Washington University Medical School, St. Louis, Mo. *Surgery.* New York, N. Y, 79. A.B, Harvard, 00; M.D, Hopkins, 04. *Neurol. surgeon, Montefiore Home and Hosp, N. Y. City, 09-11; Beth Israel Hosp, 09-11; assoc. surg, Washington (St. Louis), 11-14, assoc. prof, 14-19, prof. clin. neur. surg, 19- Adj. asst. surgeon, Bellevue Hosp, N. Y. City, 09-11; surgeon, Barnes and St. Louis Children's Hospitals; assoc. surgeon in charge neurol. surg, Jewish Hosp, 20- Am. Med. Ass; Physiol. Soc; Ass. Anat; Neur. Ass. *Neurological surgery; optic thalamus; cerebral temperature centers.**

Sachs, Dr. John H(arrison), 707 Coverdale Road, Wilmington, Del. *Chemistry.* Gettysburg, Pa, April 14, 89. B.S, Pennsylvania Col, 10; Ph.D, Hopkins, 16, Carnegie fellow, 16-17. *Research chemist, E. I. duPont de Nemours and Co, 17- Chem. Soc. Dyes and intermediates.*

Sackett, Dean R(obert) L(emuel), State College, Pa. *Engineering.* Mt. Clemens, Mich, Dec. 2, 67. B.S.(C.E), Michigan, 91, C.E, 96. *Asst. prof. math, Earlham, 91-96, prof. applied math. and astron, 96-07; sanit. and hydraul. eng, Purdue, 07-15; dean eng, Pa. State, 15- Consulting engineer to various state commissions and boards. A.A; Water Works Ass; Civil Eng; Mech Eng; New Eng. Water Works Ass; Ind. Eng. Soc. (pres, 07). Sanitary and hydraulic engineering.*

Sackett, Prof. Walter G(eorge), Fort Collins, Colo. *Bacteriology.* Sterling, Ill, July 5, 80. Ohio State, 98-99; B.S, Chicago, 02, Ph.D, 18. *Prof. nat. sciences, Baptist Univ. for Women, Raleigh, N. C, 02-04; asst. prof. bacter. and hygiene, Mich. Agr. Col, and asst. bacteriologist, Exp. Sta, 04-08; bacteriologist, Colo. Exp. Sta, 08- Water analyst, Chicago, 99-00; special agent plant breeding, bur. plant indust, U. S. Dept. Agr, summer, 04. A.A; Soc. Baet. Soil bacteriology; bacterial diseases of plants; a bacterial disease of alfalfa; bacteriology of alkali soils.*

Saderra, Rev. M(ichael) Maso, S.J, Manila Observatory, Manila, P. I. *Geology.* Olot, Spain, Dec. 13, 65. Tarazona, Spain, 82-87; Tortosa, 96-00; D.D, Paris, 01. *Asst. director, Manila Observatory, 90-96, Weather Bur, 02- A.A; Seismol. Soc; Zelanti Acad, Italy; Plata Seismol. Soc. Philippine seismology and vulcanology; magnetic force lines.*

Sadtler, Prof. Sam(ue)l P(hilip), 210 S. 13th St, Philadelphia, Pa. **Chemistry.* Pinegrove, Pa, July 18, 47. A.B, Pennsylvania Col, 67, A.M, 70, LL.D, 02; B.S, Harvard, 70; Ph.D, Göttingen, 71. *Prof. chem, Pennsylvania Col, 71-74; org. and indust. chem, Pennsylvania, 74-91; chem, Phila. Col. Pharmacy, 78-16. Mem. committee of revision, U. S. Pharmacopoeia, 00-20. A.A; Chem. Soc; Soc. Chem. Indust; Electrochem. Soc; Chem. Eng. (pres, 08); Philos. Soc.*

- (sec'y, 98-02); fel. London Chem. Soc; Chem. Gesell. Industrial and applied organic chemistry.
- Sadtler, S(amuel) S(chmucker)**, 210 S. 13th St, Philadelphia, Pa. *Chemistry*. Gettysburg, Pa, Nov. 15, 73. B.S. Mass. Inst. Tech, 95. Chemist, U. S. Customs Service, 95-00; *consulting chemist*, 00- Pres, Samuel P. Sadtler and Son, Inc; sec'y, Meigs, Bassett and Slaughter; ed, 'Allen's Commercial Org. Chem.' Chem. Soc; Soc. Chem. Indust; Electrochem. Soc. (sec'y, 04-07, v. pres, 10-); Ass. Leather Chemists; Chem. Eng; Franklin Inst. Industrial and technical chemistry; organic chemistry.
- Saegmüller, Frederick B**, 1100 St. Paul St, Rochester, N. Y. *Optical science*. Va, 78. B.S., Virginia, 02. Mem. scientific bur, *Bausch and Lomb Optical Co*, 05-07, *supt*, *precision optical div*, 07- Optical Soc.
- Safford, Dr. F(rederick) H(ollister)**, University of Pennsylvania, Philadelphia, Pa. *Mathematics*. Lawrence, Mass, June 20, 66. B.S., Mass. Inst. Tech, 88; A.M., Harvard, 94, Ph.D, 97; hon. fellow, Clark, 01-02. Instr. math. and science, Brewster Acad, 88-93; *math*, Harvard, 95-99; asst. prof, Cincinnati, 99-01; instr, *Pennsylvania*, 02-07, asst. prof, 07-20, *prof*, 20-A.A.; Math. Soc. Cyclids of revolution; orthogonal surfaces; Weierstrass P-function curves.
- Safford, William E(dwin)**, U. S. Department of Agriculture, Washington, D. C. *Botany, Ethnology*. Chillicothe, Ohio, Dec. 14, 59. Grad, U. S. Naval Acad, 80; Yale, 82-84; Ph.D, George Washington, 20. Naval officer and collector in ethnobot. for U. S. Nat. Museum, 80-82; asst. botanist and later *econ. botanist*, U. S. Dept. Agr, 02- Commissioner to Peru and Bolivia for Columbian Expos, 91-93; v. governor, Guam, 99-00; asst, revision, 'Century Diet.' Medal, Columbian Expos, 93. Bot. Soc; Wash. Acad; Wash. Anthropol. Soc; Wash. Biol. Soc; Wash. Bot. Soc. (sec'y, 08, 09, cor. sec'y, 16). Ethnobotany; philology; grammar of Chamorro language of Guam; useful plants of Guam; Cactaceae of northeastern and central Mexico; useful plants of Mexico.
- Safro, V(ictor) I**, Kentucky Tobacco Products Company, Louisville, Ky. *Entomology*. New York, N. Y., Aug. 26, 88. B.S.A., Cornell, 09. Agent and expert, bur. entom. U. S. Dept. Agr, 09-10; research asst. entomologist, Oregon Exp. Sta, 10-14; asst. prof. entom. Oregon Col, 11-14; *entomologist*, Ky. Tobacco Products Co, 14- Entomologist, Oregon Exp. Sta, Hood River, 14. Entom. Soc; Ass. Econ. Entom. Sprays; spray injury; forest entomology; nicotine as an insecticide.
- Sage, Jno. (John) H(all)**, Portland, Conn. *Ornithology*. Portland, April 20, 47. Pub. schools; hon. M.S., Trinity (Conn), 01. *Banker*, 73- Curator nat. hist, Wadsworth Athenaeum, Hartford. A.A.; fel. Ornith. Union (sec'y, 89-); N. Y. Acad; N. Y. Linnaean Soc; Wash. Biol. Soc; Conn. Hist. Soc. Birds of Connecticut.
- Sailer, Dr. Joseph**, 1718 Spruce St, Philadelphia, Pa. *Medicine*. Philadelphia, Oct. 1, 67. Ph.B., Pennsylvania, 86, M.D, 91; Paris, Zürich and Vienna, 93-95. Asst. demonstrator path, *Pennsylvania*, 98-99, *assoc. clin. med*, 99-08, asst. prof, 08-14, *prof*, 14- Prof. diseases of stomach and intestines, Phila. Polyclinic, 02-08; asst. ed, 'Phila. Med. Jour'; physician, Phila. and Presb. Hospitals. A.A.; Am. Physicians; Soc. Clin. Invest. (v. pres); Gastro-Enterol. Ass. (v. pres, pres); Phila. Acad; Phila. Col. Physicians. Clinical medicine; experimental medicine.
- St. John, Dr. Ancel**, National Carbon Co, Cleveland, Ohio. *Physics*. Plainfield, N. J., June 20, 82. Ph.B., Rochester, 06; Ph.D., Clark, 17. Instr. physics, Syrian Protestant Col, 06-09; asst, Columbia, 09-10; acting prof, Emory and Henry, 10-12; instr, Worcester, 12-17; prof, Lake Forest, 17-18; *research physicist*, Nat. Carbon Co, 18- Assoc. Physical Soc. X-ray crystal analysis.
- St. John, Prof. Cha(rlie)s E(dward)**, Mt. Wilson Observatory, Pasadena, Calif. **Physics, Astrophysics*. Allen, Mich, March 15, 57. B.S., Mich. Agr. Col, 88; Michigan, 90-92; Harvard, 92-94; A.M., 93, Ph.D, 96; Berlin, 94-95. Instr. physics, Mich. Nor. Col, 86-92; Michigan, 96-97; assoc. prof, Oberlin, 97-99, prof, 99-08, dean, col. arts and sciences, 06-08; *astronomer*, Mt. Wilson Observatory, Carnegie Institution, 08- Mem. Int. Astron. Union; chairman, west. sect, spectrographic committee; int. committee on standards of wave length and tables of the solar spectrum. A.A.; Astron. Soc; Physical Soc; Pacific Astron. Soc; assoc. Royal Astron. Soc. Oxygen in the sun; pole-effect in the arc; spectrum of Venus; solar rotation; the sun's atmosphere; displacement of solar lines required by the Einstein theory of gravitation.
- St. John, Prof. Harold**, State College of Washington, Pullman, Wash. *Botany*. Pittsburgh, Pa, July 25, 92. A.B., Harvard, 14, A.M., 15, Ph.D, 17. Asst. bot, Harvard, 13-15; Radcliffe, 13-15; asst. bot, Can. Geol. Surv, 15-17; asst, Gray Herbarium, Harvard, 13-17, 19-20; *asst. prof. bot*, Wash. State, 20- Bot. Soc; New Eng. Bot. Club. Taxonomy and phytogeography of vascular plants.
- Sajous, Prof. C(harles) E(ucharist) de M(édicis)**, 2043 Walnut St, Philadelphia, Pa. *Medicine, Biology*. At sea, under American flag, Dec. 13, 52. California, 61-76; M.D., Jefferson Med. Col, 78; A.B., France, 92; LL.D., St. Joseph's Col, 09; Sc.D., Temple, 15. Prof. anat. and physiol, Wagner Free Inst, 81; lecturer, Jefferson Med. Col, 83-91; prof. and dean, Medico-Chirurg. Col, 97; *prof. therapeut*, Temple, 10- Ed, 'Annual of Universal Med. Sciences,' 88-96; 'Cyclop. of Practical Med,' 97-20. Officier d'Acad, 89; Order of Leopold, Belgium, 90; Chevalier Légion d'honneur, 92. A.A.; Philos. Soc; Laryngol. Ass (v. pres, 88); Ass. Study Int. Secretions (pres, 17); Therapeut. Soc. (pres, 19); Col. Physicians; Am. Med. Editors' Ass. (pres, 03); Phila. Acad; Phila. Col. Physicians; Phila. Laryngol. Soc. (pres, 85); hon. mem. various American and foreign societies. Applied therapeutics; physiology and pathology of the internal secretions; endocrinology.
- Saklatwalla, Dr. B(eram) D**, 14 Creighton Ave, Crafton, Pa. *Metallurgy*. Bombay, India, July 20, 81. B.S., Bombay, 02; Dr. Ing., Royal Polytech, Berlin, 09; Carnegie research scholar,

- British Iron and Steel Inst, 08-09. Research chemist and metallurgist, *Am. Vanadium Co.*, 10-11, *gen. supt.*, 11- A.A.; Chem. Soc; Electrochem. Soc; Soc. Test. Mat; Int. Ass. Test. Mat; British Iron and Steel Inst; British Inst. Metals. Metallography of iron and steel; production and measurement of high temperatures electrically.
- Salant, Dr. William**, University of Georgia, Augusta, Ga. *Pharmacology, Physiology*. Born, Feb. 2, 70. B.S., Cornell, 94; M.D., Columbia, 99. Asst. physiol. med. col., Cornell, 02-03; physiol. chem., Columbia, 05-07; adj. prof., Alabama, 07-08; chief pharmacologist, bur. chem., U. S. Dept. Agr., 08-18; acting prof., *physiol. and pharmacol.*, Wisconsin, 19-20; *prof. Georgia*, 20- Fellow, Rockefeller Inst., 01-07. A.A.; Physiol. Soc; Soc. Exp. Biol; Soc. Biol. Chem; Soc. Pharmacol. Effect of alcohol on muscle, on the secretion of bile, on metabolism and hepatic glycogen and on the composition of urine; effects of strychnin on nephrectomized rabbits; influence of nephrectomy on absorption and on coagulation of the blood; toxicity of bile; pharmacology of caffeine and of the alcohols.
- Sales, Reno H(aber)**, P. O. Box 457, Butte, Mont. *Geology*. Storm Lake, Iowa, Sept. 10, 76. B.S., Mont. Col., 98; E.M., Columbia, 00. Asst. geologist, *Anaconda Copper Mining Co.*, 01-06, *chief geologist*, 06- A.A.; Geol. Soc; Min. Eng; Min. and Metal. Soc. Ore deposits of Butte, Mont.
- Salisbury, Prof. R(ollin) D**, University of Chicago, Chicago, Ill. **Geology*. Spring Prairie, Wis., Aug. 17, 58. Ph.B., Beloit, 81, A.M., 84, LL.D., 04. *Prof. geol.*, Beloit, 84-91; Wisconsin, 91-92; *geog. geol.*, Chicago, 92-18, *dean, Ogden Sch. of Sci.*, 97-, *head, dept. geog.*, 02-18, *geol.*, 18- Asst. U. S. Geol. Surv., 83-94, *geologist*, 94; *geologist*, N. J. Geol. Surv., 91-; ed., 'Jour. of Geol.', 92- A.A. (sec'y, E, 92); Geol. Soc; Ass. Geog. Geographic and glacial geology; glacial studies in western mountains; glacial and coastal plain work in New Jersey; continental evolution.
- Salmon, Dr. Thomas W(illiam)**, 50 Union Square, New York, N. Y. *Psychiatry*. Lansingburg, N. Y., Jan. 6, 76. M.D., Union, 99. With state hospitals, N. Y., 01-03; asst. surgeon, U. S. Pub. Health Service, 03-08, *passed asst. surgeon*, 08-15; director special studies, *Nat. Committee for Mental Hygiene*, 12-15, *med. director*, 15- Chemist, N. Y. State Board of Alienists, 11. A.A.; Am. Med. Ass; Medico-Psychol. Ass; Psychopath. Ass; Ass. Mil. Surg; N. Y. Psychiat. Soc; Int. Committee for Sci. Study of Alcohol (Am. sect). Statistics of insanity and mental defects; preventable causes of insanity; administrative and legislative aspects of care of the insane; insanity and mental defects in immigrant races; incidence and distribution of general paralysis of the insane.
- Sammis, Dr. J(ohn) L(angley)**, 234 Breeze Terrace, Madison, Wis. *Chemistry*. Winona, Minn., Jan. 1, 73. B.S., Illinois, 97, M.S., 99; fellow, Wisconsin, 05-06, Ph.D., 06. Asst. chem., Illinois, 97-99, *instr.*, 99-05; expert in dairying, U. S. Dept. Agr., 06-07; asst. prof., *dairy husbandry*, Wisconsin, 07-17, *assoc. prof.*, 17- A.A.; Chem. Soc. Action of mercaptids on quinones; dietetics; chemistry of milk curdling; chemistry and physics of the cheese-making process.
- Sampson, Dr. Arthur W(illiam)**, U. S. Forest Service, Washington, D. C. *Forestry*. Oakland, Nebr., March 27, 84. B.S., Nebraska, 06, A.M., 07; Hopkins, 13-14; Ph.D., George Washington, 17. U. S. Forest Service, *plant ecologist and director, Great Basin Forest Exp. Sta.*, Ephraim, Utah, 14- Lecturer range and forest ecol., Nebraska and Syracuse. A.A.; Soc. Foresters; Ecol. Soc; Wash. Bot. Soc; Wash. Acad. Botany; plant ecology and physiology of range lands.
- Sampson, Prof. Homer C(leveland)**, Ohio State University, Columbus, Ohio. *Botany*. Wheeler, Ill., Jan. 21, 85. B.S., Chicago, 14, Ph.D., 17. Asst. biol., E. Ill. State Nor. Sch., 09-12; nat. science, Chicago, 12-17; *instr. bot.*, Ohio State, 17-19, *asst. prof.*, 19- Research asst. plant physiol., desert lab., Carnegie Institution, summer, 14. A.A.; Bot. Soc; Ecol. Soc; Soc. Agron; Ill. Acad; Ohio Acad. Plant physiology and ecology.
- Sampson, Prof. John Albertson**, Albany Medical College, Albany, N. Y. *Gynecology*. Troy, N. Y., Aug. 17, 73. A.B., Williams, 95, hon. A.M.; M.D., Hopkins, 99. Res. gynecologist, Hopkins Hosp., 04; *prof. gynec.*, Albany Med. Col., 09- Gynec. Soc. Anatomy and pathology of the female pelvic organs; ovarian cysts.
- Sanborn, Prof. Charles Emerson**, 423 Luck St., Stillwater, Okla. *Entomology*. LaPlata, Mo., April 16, 17. A.B., Kansas, 03, A.M., 04. Entom. expert, bur. entom., U. S. Dept. Agr., 05-09; cooperative entomologist, Tex. Col., 06-08; acting state entomologist, Tex., 08; Ill. State Entom. Dept., 09; *prof. entom.*, Okla. Col., and *entomologist, Exp. Sta.*, 09- A.A.; Ass. Econ. Entom.; Okla. Acad; Wash. Entom. Soc. Field crop and horticultural insects; apiculture; Aphididae.
- Sanborn, Prof. Frank B(erry)**, 79 Sudbury St., Boston, Mass. *Engineering*. Hampton Falls, N. H., Jan. 15, 65. B.S., Dartmouth, 87, C.E., 89; M.S., Harvard, 98. Inspector, Forestry Ass. East. States and Can., 90-99; asst. prof. civil eng., Tufts, 99-01, prof., 01-18; *proprietor, Sanborn Co.*, 18- Substitute prof. civil eng., Illinois, 08-09; lecturer, Dartmouth, 06- Civil Eng; Boston Soc. Civil Eng. Mechanics; hydraulics; fire protection; pitometer measurement of water; low pressure gage; marine speedometer; blood pressure testing.
- Sanders, Prof. J(ames) G(lossbrenner)**, Bureau of Plant Industry, Harrisburg, Pa. *Entomology*. Louisville, Ohio, July 17, 80. Ph.B., Otterbein, 01; fellow, Ohio State, 01-04, A.M., 03. Asst. lake lab., Ohio State, 04; expert, bur. entom., U. S. Dept. Agr., 05-09; asst. prof. in charge, dept. econ. entom., and chief nursery inspector, Wisconsin, 09-10, prof., 10-15; state entomologist, Wis., 15-16; econ. zoologist, Pa. Dept. Agr., 16-19, *director, bur. plant indust.*, 19- Collaborator, fed. hort. board, U. S. Dept. Agr., 19. A.A.; Entom. Soc; Ass. Econ. Entom. (v. pres, 20); Ass. Hort. Inspectors (sec'y, 13-19); Ohio Acad; Wash. Entom. Soc. (cor. sec'y, 06-09). Homoptera; Coccidae; poison bait control of onion and cabbage maggot; nicotine solutions for

leaf mining insects; European potato wart disease.

- Sanderson, Prof. E(zra) Dwight**, 117 Parkway, Cayuga Heights, Ithaca, N. Y. *Entomology*. Clio, Mich, Sept. 25, 78. B.S., Mich. Agr. Col, 97; B.S.A., Cornell, 98. Asst. state entomologist, Md, 98; asst. div. entom. U. S. Dept. Agr, summer, 99; entomologist, Del. Exp. Sta, 99-03; assoc. prof. zool. Delaware, 01-02; state entomologist, Tex, and prof. entom. Tex. Col, 03-04; prof. zool. and entom. N.H. Col, 04-10, director, Exp. Sta, 07-10; dean, col. agr. West Virginia, and director, Exp. Sta, 10-15; *prof. rural social organization, Cornell, 18-* A.A.; Ass. Econ. Entom. (pres, 10). Economic entomology; rural sociology.
- Sanderson, Dr. J(ames) C(ox)**, 813 S. E. Fifth St, Minneapolis, Minn. *Physics*. A.B., Yale, 07, Ph.D, 11. Instr. physics, Minnesota, 11-15; teacher science and math, Blake Sch, Minneapolis, 15-18; *instr. math, sch. mines, Minnesota, 18-* Radioactivity of soils.
- Sando, Dr. Cha(rle)s E(arl)**, U. S. Department of Agriculture, Washington, D. C. *Biological chemistry*. Bernville, Pa, Feb. 18, 94. B.S., Md. Col, 16, Ph.D, 20; fellow, Michigan, 17-18, M.S., 20. *Junior biol. chemist, office hort. and pomol, bur. plant indust, U. S. Dept. Agr, 17-18, office physiol. and fermentation investigations, 18-* Bot. Soc; Chem. Soc. Plant pigmentation; ripening of fruits and vegetables.
- Sandsten, Prof. E(mil) P(eter)**, Agricultural College, Fort Collins, Colo. *Horticulture, Entomology*. Nybro, Sweden, Sept. 15, 68. Sch. of agr. Minnesota, 88-91, B.S., Minnesota, 95, M.S., 98; Ph.D., Cornell, 03. Botanist, Am. Grass Twine Co, 99-00; assoc. prof. hort, Md. Col, 01-02; prof. hort. and econ. entom. Wisconsin, 02-13; prof. hort. Alabama, and state horticulturist, Ala, 13; *prof. hort, Colo. Agr. Col. and state horticulturist, Colo. A.A.; Soc. Hort. Sci; Pomol. Soc.* Physiological botany; pollination; self-sterility; conditions which affect the production and fertility of pollen.
- Sanford, Dr. A(rthur) H(awley)**, Mayo Clinic, Rochester, Minn. *Bacteriology*. New Albin, Iowa, Jan. 12, 82. A.B., Northwestern, 04, A.M., M.D, 07. Assoc. prof. physiol. Marquette, 07-09, prof, 09-11; *head, sect. clin. laboratories, Mayo Clinic, 11-*; assoc. prof. clin. bacter. and parasitol, Mayo Foundation, Minnesota. Ass. Path. and Bact. Clinical bacteriology, parasitology and serology; diagnostic methods.
- Sanford, Prof. Edmund C(lark)**, Clark University, Worcester, Mass. **Psychology*. Oakland, Calif, Nov. 10, 59. A.B., California, 83, LL.D, 12; fellow, Hopkins, 87-88, Ph.D, 88; Sc.D, Hobart, 09. Teacher, Oahu Col, Hawaii, 83-85; instr. psychol, Hopkins, 88; *Clark, 89-92, asst. prof, 92-01, prof. exp. and comp. psychol, 01-09, lecturer college administration, 09-20, pres, Clark Col, 09-20, prof. psychol. and educ, 20-* Joint ed, 'Am. Jour. Psychol,' 95- A.A.; Psychol. Ass. (pres, 02). Education.
- Sanford, Prof. Fernando**, Stanford University, Calif. **Physics*. Taylor, Ill, Feb. 12, 54. B.S., M.S., Carthage, 79, hon. Sc.D, 20; Berlin, 86-88. Prof. science, Mt. Morris, 79-82; supt. schools, Ogle Co, Ill, 82-86; instr. physics and chem, high sch, Englewood, Ill, 88-90; prof. physical science, Lake Forest, 90-91; *physics, Stanford, 91-19, emer. prof, 19-* Engineer, railroad construction, 79, 80. A.A.; Physical Soc. The electrical conductivity of wires in different dielectrics; electric photography in alternating condenser field; an acoustic pyrometer; an undescribed form of radiation; a possible change of weight in chemical reactions; physical lines of force in electrical theory; contact E.M.F. and cohesion; the emission of ultra-violet radiation in an alternating condenser; electrical charges of atoms and ions; characteristic charges of metals; orbital motion of radiating electrons; a physical theory of electrification.
- Sanford, Dr. R(oscoe) F(rank)**, 1255 E. Villa St, Pasadena, Calif. *Astronomy*. Faribault, Minn, Oct. 6, 83. A.B., Minnesota, 05; fellow at Lick Observatory, California, 15-17, Ph.D, 17. Instr, high sch, Marshall, Minn, 05-06; asst, Lick Observatory, 06-08; observer, South. Observatory, Carnegie Institution, 08-11; asst. astronomer, D. O. Mills exped. of the Lick Observatory to Santiago, Chile, 11-15; *astronomer, Mt. Wilson Solar Observatory, 18-* Astron. Soc; Pacific Astron. Soc. Astrophysics; astronomical photography.
- Santayana, Prof. George**, 123 Pall Mall, Brown Shipley and Co, London, England. **Philosophy*. Madrid, Spain, Dec. 16, 63. A.B., Harvard, 86, A.M., Ph.D, 89. Instr. philos. Harvard, 89-98, asst. prof, 98-07, prof, 07-12. A.A.; Philos. Ass; Psychol. Ass. History of philosophy.
- Santee, Dr. H(arris) E(lett)**, 2806 Warren Ave, Chicago, Ill. *Anatomy*. Snodes, Ohio, Oct. 15, 64. A.B., N. E. Ohio Nor. Col, 89, A.M., 00; Ph.D, Taylor, 01, hon. A.M, 07; M.D, Pennsylvania, 92. *Prof. anat, Harvey Med. Col, 96-05; Col. Physicians and Surg, Illinois, 00-10; Jenner Med. Col, 05-19; Chicago Col. Med. and Surg, 10-17; neurol, Chicago Med. Sch, 19-* Ass. Anat; Am. Med. Ass. Anatomy of brain and spinal cord.
- Sapir, Dr. Edward**, Geological Survey of Canada, Ottawa, Can. *Anthropology*. Lauenburg, Germany, Jan. 26, 84. A.B., Columbia, 04, A.M., 05, Ph.D, 09; fellow, Pennsylvania, 08-09. Research asst. anthrop, California, 07-08; instr, Pennsylvania, 09-10; *chief, div. anthrop, Can. Geol. Surv, 10-* Field work among American Indians, Bur. Am. Ethnol, summers, 05, 06; California, 07; Pennsylvania, summer, 09; Can. Geol. Surv, summers, 10, 11, 13-14. Anthropol. Ass; Ethnol. Soc; Folk-lore Soc; Paris Soc. des Américanistes. American Indian ethnology, mythology and linguistics; Nootka ethnology and linguistics.
- Sardeson, Dr. F(rederick) W(illiam)**, 414 Harvard St, Minneapolis, Minn. *Paleontology*. Owego Mills, Wis, Feb. 22, 66. B.L., Minnesota, 91, M.S., 92; Ph.D, Freiburg, 95. Instr. paleont, Minnesota, 92-94, 98-05, asst. prof, 05-14; *expert geologist, Minn. State Securities Commission, 18-* With U. S. Geol. Surv, 89, 91, geologist, 11- Mem. Int. Geol. Cong, Zürich, 94. A.A.; Paleont. Soc; Geol. Soc; Minn. Acad. Stratigraphic geology of Minnesota; fauna of Saint Peter sandstone; fossil corals; fossil Gas-

- tropoda; Crinoidea; glacial deposits; loess; relation of paleontologic evidence to the theory of evolution; oilfields; road materials; drainage.
- Sargent, C(harles) E(lliott)**, 843 College Ave, Racine, Wis. *Mechanical engineering*. Carlinville, Ill, Sept. 12, 62. B.S., Blackburn, 82, M.S., 86; B.S., Illinois, 86. Consulting engineer, 86-95; chief engineer, Chas. F. Elmes Eng. Works, 95-00; gen. manager, Sargent Eng. Co., 00-07; *engineer, gas engine dept, Wis. Engine Co.*, 07- Octave Chanute medal, West. Soc. Eng., 05; John Scott medal premium, Franklin Inst., 07. Mech. Eng.; Franklin Inst.; West. Soc. Eng. Complete expansion internal combustion engine; calorimetry of gases; metering of gas and steam.
- Sargent, Prof. Charles Sprague**, Jamaica Plain, Boston, Mass. **Botany, Dendrology*. Boston, April 24, 41. A.B., Harvard, 62, LL.D., 01. *Director, Arnold Arboretum*, 72-, *Arnold prof. arboriculture, Harvard*, 79- Mem. Park Commission, Brookline; ed., 'Garden and Forest,' 87-97. Nat. Acad.; Soc. Nat.; Philos. Soc.; Am. Acad.; Mass. Soc. Prom. Agr. (pres); Phila. Acad.; St. Louis Acad.; hon. for. mem. Royal Hort. Soc.; for. mem. London Linnean Soc.; hon. mem. British Arbor. Soc.; hon. mem. Scottish Arbor. Soc.; hon. mem. Dendrol. Gesell.; Soc. bot. de France; for. mem. Soc. nat. d'Agr. de France; hon. mem. Soc. nat. d'Aclimation de France; hon. mem. Royal Irish Acad.
- Sargent, Dr. D(udley) A(llen)**, Harvard University, Cambridge, Mass. *Physical education*. Belfast, Maine, Sept. 23, 49. A.B., Bowdoin, 75, A.M., 87, hon. Sc.D., 94; M.D., Yale, 78. Instr. gymnastics, Bowdoin, 69-75; Yale, 72-78, prof. physical training, 79-90; director, Hemenway Gym, Harvard, and dept. of physical edue, 90-19; *pres, Sargent Sch. Physical Educ.*, 04-Chairman, commission on sch. hygiene, Pub. Health Ass., 83-84; commission dept. health, Social Science Ass., 83-85; commission on physical edue, Columbian Expos, 93; mem. observation committee, N. Am. Gym. Union, 93, 97, 00. A.A.; Physical Educ. Ass. (pres, 90, 92-94, 01); Am. Acad. Med.; Acad. Polit. and Social Sci.; Statist. Ass.; Boston Soc. Med. Sci.; Boston Nat. Hist. Soc.; Boston Health Educ. League (pres, 05-). Anthropometry; applied anatomy; the philosophy of exercise and the general theory and practise of physical training; invention of new apparatus; effects of different physical exercises upon American youth of both sexes.
- Sargent, F(rederick) L(eRoy)**, 27 Everett St, Cambridge, Mass. *Botany*. Boston, Mass, Dec. 25, 63. Col. City of N. Y., 79-82; Lawrence Sci. Sch., Harvard, 83-86. Head, dept. bot., Wisconsin, 86-87; instr. bot., med. sch., Boston, 94-95; asst. bot. museum, Harvard, 02-04. Instr. bot., Harvard, summer, 86; pres, Nat. Flower Convention, Asheville, N. C., 96. A.A.; Bot. Soc.; Nat. Inst. Inventors. Ecological botany; color notation.
- Sarton, Dr. George (Alfred Leon)**, 24 Agassiz St, Cambridge, Mass. *History and philosophy of science*. Ghent, Belgium, Aug. 31, 84. B.Sc., Ghent, 06, Sc.D., 11. *Lecturer hist. science*, George Washington, 15-16; *Harvard*, 16-18, 20-; *research assoc, Carnegie Inst.*, 18- Ed., 'Isis,
- 13- Gold medallist in chem, four Belgian universities, 07; Prix Binoux, Académie des Sciences, Paris, 15. Lecturer, Lowell Inst., Boston, 16. History of physics; Leonardo da Vinci.
- Sarvis, J(ohnson) T(hatcher)**, U. S. Field Station, Mandan, N. Dak. *Agriculture*. Highmore, S. Dak., June 1, 86. B.S., S. Dak. Col., 09, M.S., 11. Instr. bot., S. Dak. Col., 09-13; *asst. dry land agr, bur. plant indust, U. S. Dept. Agr.*, 13-A.A.; Bot. Soc.; Soc. Agron.; Ecol. Soc. Grazing.
- Sasscer, E(rnest) R(alph)**, 1225 Decatur St, N. W., Washington, D. C. *Entomology*. Waldorf, Md., Oct. 25, 83. B.S., Md. Col., 04, M.S., 13. Scientific aid, bur. entom., U. S. Dept. Agr., 04-06, scientific asst., 06-12, *chief inspector, federal hort board*, 12-, *entomologist in charge port inspection*, 20- A.A.; Entom. Soc.; Ass. Econ. Entom.; Wash. Acad.; Wash. Biol. Soc.; Wash. Entom. Soc. (rec. sec'y, 12, second v. pres, 14, pres, 18). Coccidae; fumigation methods.
- Satterfield, Prof. H(oward) E(rnest)**, West Raleigh, N. C. *Mechanical engineering*. Fairmont, W. Va., May 11, 77. B.S. (M.E.), Purdue, 04, M.E., 09. Supt. exp. factory, Am. Window Glass Co., 05-06; Standard Sanit. Mfg. Co., 06-07; director, sch. applied science, Winona Tech. Inst., 07-08; *prof. mech. eng, N. C. Col.*, 08-Mech. Eng.
- Satterlee, Dr. G(eorge) Reese**, 125 W. 58th St, New York, N. Y. *Medicine*. Dobbs Ferry, N. Y., 73. A.B., Columbia, 94, A.M., M.D., 98. Instr. histol. and embryol., *Univ. and Bellevue Hosp. Med. Col.*, 03-10, *med. and gastro-enterol.*, 10- Asst. pathologist, St. Vincent's Hosp., 05-08; pathologist, Gouverneur Hosp., 06-08; attending physician and pathologist, Washington Heights Hosp., 06-13; attending physician, Fordham Hosp., 13-; St. Bartholomew's Hosp., 20-; consulting gastro-enterologist, N. J. State Hosp., 20-Therapeut. Soc.; Gastro-Enterol. Ass.; N. Y. Acad. Med.; N. Y. Path. Soc. Internal medicine; gastro-enterology.
- Satterly, Dr. John**, University of Toronto, Toronto, Can. *Physics*. Ashburton, Devon, England, Nov. 29, 79. B.Sc., London, 01, D.Sc., 10; B.A., Cambridge, 08, M.A., 12. Demonstrator, Royal Col. Science, London, 01-03; tutor, univ. correspondence col., Cambridge, 03-12, asst. demonstrator, Cavendish lab., 10-12; lecturer *physics, Toronto*, 12-16, *asst. prof.*, 16- Tyndall prize, Royal Col. Science, 99. Physical Soc.; Royal Astron. Soc. Can.; London Physical Soc. Thermomagnetic analysis of iron alloys; radioactivity of the air, water, soils, radium and thorium; helium.
- Satterthwait, A(lfred) F(ellenberg)**, Webster Groves, Mo. *Entomology*. Fairville, Pa., April 9, 79. Jessup scholar, Phila. Acad., 98-00. Clerk, div. zool., Pa. Dept. Agr., 05-07, asst. econ. zoologist, 07-10. A.A.; Ass. Econ. Entom.; Entom. Soc.; Ecol. Soc.; Nature Study Soc.
- Satterthwaite, Dr. Thomas E(dward)**, 7 E. 80th St, New York, N. Y. *Medicine*. New York, March 26, 43. A.B., Yale, 64; Harvard, 64-65; M.D., Columbia, 67; Vienna, 69-70; LL.D., Maryland, 08; Sc.D., St. John's (Md.), 12. Intern, N. Y. Hosp., 67-69; pathologist, St.

- Luke's Hosp, 72-82; Presbyterian Hosp, 73-88; prof. path. anat. N. Y. Post-Grad. Med. Sch, 82-83, med, 04-08; pres, Babies' Hosp, 94-99; *consulting physician, Post-Grad, Babies', Orthopedic and Manhattan Hospitals.* Lecturer, vet. col, Columbia, 81-82; surgeon, Prussian army, Franco-Prussian War, 70-71, iron cross, 73. Lieut, M.R.C., 11-17. Therapeut. Soc. (pres, 02); Col. Physicians; N. Y. Acad. Med; N. Y. Path. Soc. (pres, 80); Greater N. Y. Med. Ass. (pres, 04-08). Comparative histology and pathology; bacteriology; diseases of heart and aorta; cardiovascular diseases.
- Sauer, Prof. Carl O (rtwin)**, 1312 Forest Ave, Ann Arbor, Mich. *Geography.* Warrenton, Mo, Dec. 24, 89. A.B, Cent. Wesleyan, 08; Northwestern, 08-09; Ph.D, Chicago, 15. Ed. worker, Rand McNally and Co, 12-13; instr, State Nor. Sch, Salem, Mass, 13-14; *geog, Michigan*, 15-18, asst. prof, 18-20, *assoc. prof. and director field courses*, 20- Asst. geologist, Ill. Geol. Surv, 10-12; with office farm management, U. S. Dept. Agr, 19. Ass. Geog. Land economics; classification and valuation; regional geography.
- Saunders, Dr. A (rthur) P (ercy)**, Clinton, N. Y. **Chemistry.* London, Can, March 22, 69. B.A., Toronto, 90; Ph.D, Hopkins, 94; Göttingen, 96; Berlin, 97; hon. fellow, Cornell, 99. Instr. *chem*, Wisconsin, 94-96; asst. prof, *Hamilton*, 00, *prof*, 00-, *dean*, 09- Research asst, McGill, 98. A.A.; Chem. Soc; Electrochem. Soc. Chlorides of orthosulphobenzoic acid; double salts; allotropic forms of selenium; reaction velocities.
- Saunders, Dr. Cha (rle)s E (dward)**, Experimental Farm, Ottawa, Can. *Chemistry, Agriculture.* London, Can, Feb. 2, 67. B.A, Toronto, 88; fellow, Hopkins, 90-91, Ph.D, 91. Prof. chem. and geol, Cent. Univ. of Ky, 92-93; *Dominion cerealist, Can*, 03- A.A. Double halids; hybridization in the Pyrus, Berberis and Triticum families; cereal breeding; breeding improved varieties of wheat, oats, barley and peas.
- Saunders, Prof. D (e) A (lton)**, Greenville, Tex. *Botany.* Alfred, N. Y, June 13, 70. Alfred, 86-91; A.B, Nebraska, 93, A.M, 94. Teacher, high sch, Lincoln, Nebr, 93-95, instr. biol, 95-96; prof. bot. S. Dak. Col, 96; *plant breeder, U. S. Dept. Agr; manager, Saunders Lone Star Seed and Gin Co.* Bot. Cent. States. Algae; varieties of cotton to resist boll weevil depredations.
- Saunders, Prof. E (dwin) J (ames)**, University of Washington, Seattle, Wash. *Geology, Geography.* Petrolea, Ont, Jan. 30, 72. B.A, Toronto, 97; Ont. Nor. Col, 98; A.M, Harvard, 07. Teacher physical science and geog, State Nor. Sch, Ellensburg, Wash, 98-05, 07-09; *asst. prof. geog. and geol, Washington (Seattle)*, 09- Meteorol. Soc; Am. Geog. Soc. Climatology; coal fields.
- Saunders, Prof. F (rederick) A (lbert)**, Harvard University, Cambridge, Mass. **Physics.* London, Can, Aug. 18, 75. B.A, Toronto, 95; fellow, Hopkins, 98-99, Ph.D, 99; Cambridge, England, 13; Tübingen, 13-14. Instr. *physics*, Haverford, 99-01; Syracuse, 01-02, *assoc. prof*, 02-05, *prof*, 05-14; Vassar, 14-19; *assoc. prof, Harvard*, 19- War work, Nat. Research Council, 17-18. A.A.; Physical Soc; Am. Acad. Radiation; spectroscopy.
- Saunders, Prof. Samuel J.**, Clinton, N. Y. *Physics, Astronomy.* Nanticoke, Ont, Aug. 3, 62. B.A., Toronto, 88, M.A, 94; fellow, Cornell, 88-89, Sc.D, 94. Instr. *physics*, Cornell, 89-92; *prof. physics and astron, Hamilton*, 92- Prof. *physics*, summer sch, Wisconsin, 91; Cornell, 92. Physical Soc. Electrical waves; penetration by X-rays; the relative value of Holtz machine and induction coil in X-ray work.
- Saunders, William Edwin**, Ridley Park, Pa. *Ornithology, Botany.* London, Can, Aug. 16, 61. Phila. Col. Pharmacy, 80-83. Chairman, Civic Committee on Hort, London, Can, 02-03. A.A.; fel. Ornith. Union; Ont. Entom. Soc. (see'y, 93-05); McIlwraith Ornith. Club (see'y, 99-05).
- Saunders, W (illiam) L (awrence)**, 11 Broadway, New York, N. Y. *Mining engineering.* Columbus, Ga, Nov. 1, 56. B.S, Pennsylvania, 76. In charge hydrographic work, Nat. Storage Co, 78-81; *pres, Ingersoll-Sargeant Drill Co; N. Y. chairman, board of directors, Ingersoll-Rand Co.* Mayor, Plainfield, N. J, 92-93; mem. Chamber of Commerce; director, many industrial concerns and mem. domestic and foreign financial and social organizations. Ed, 'Compressed Air Magazine.' Civil Eng; Mech. Eng; Min. and Metal. Eng. (past pres); Min. and Metal. Soc; Am. Iron and Steel Inst; Eng. Soc. (trustee); Acad. Polit. and Social Sci; Am. Geog. Soc; N. Y. Eng. Club. Compressed air; technology of quarrying and drilling.
- Saurel, Dr. Paul (Louis)**, College of the City of New York, New York, N. Y. **Mathematics.* New York, May 10, 71. B.S, Col. City of N. Y, 90; Cornell, 90-92; Sc.D, Bordeaux, 00. Instr. *math*, Cornell, 92-96; tutor, *Col. City of N. Y*, 96-98, instr, 00-05, *asst. prof*, 05-06, *assoc. prof*, 06-14, *prof*, 14-, *head of dept*, 19- A.A.; Math. Soc; Physical Soc. Mathematical theory of the equilibrium of chemical systems; theory of radiation; classification of crystals; types of crystal symmetry.
- Sauveur, Prof. Albert**, 20 Elmwood Ave, Cambridge, Mass. *Metallurgy.* Louvain, Belgium, June 21, 63. Sch. of mines, Liège, 81-86; B.S, Mass. Inst. Tech, 89. Chemist and metallurgist, various steel companies, 89-97; instr. metal, *Harvard*, 99-00, *asst. prof. metal. and metallog*, 01-06, *prof*, 06- Manager, Boston Test Laboratories, 97-05; ed, 'Metallographist,' 98-03; lecturer metallog, Mass. Inst. Tech, 98-; Water-town Arsenal, 20; ed, 'Iron and Steel Mag,' 04-06; director, div. metal, Air Service, A.E.F, 17-18. Elliott Cresson gold medal; Officier d'Acad. A.A.; Min. Eng. (v. pres, 10-12, chairman, Boston sect, 19); Philos. Soc; Soc. Test. Mat; Am. Iron and Steel Inst; Am. Acad; British Iron and Steel Inst. The metallography and heat treatment of iron and steel; chemical properties and structure of steel.
- Savage, Prof. E (lmer) S (eth)**, Cornell University, Ithaca, N. Y. *Animal husbandry.* Lancaster, N. H, June 15, 84. B.S.A, N. H. Col, 05; M.S.A, Cornell, 09, Ph.D, 11. Instr, Baron DeHirsch Sch, Woodbine, N. J, 05-06; *asst. animal husbandry, Cornell*, 07-08, instr, 09-10, *asst. prof*, 11-12, *prof*, 13- A.A. Animal nutrition.
- Savage, Dr. H (iram) N (ewton)**, San Diego, Calif. *Civil engineering.* Lancaster, N. H, Oct. 6, 61.

- B.S., N. H. Col., 87, C.E., 92, Sc.D., 01. Practising engineer, 91-03; engineer, S. Calif. Mt. Water Co., 95-03; U. S. Reclamation Service, 03-15; Sweetwater Water Co., 16; *hydraulic engineer, City of San Diego, 17-* Civil Eng.
- Savage, Prof. Thomas E(dmund)**, University of Illinois, Urbana, Ill. *Geology*. Salem, Iowa, Jan. 8, 66. A.B., Iowa Wesleyan, 95; B.S., Iowa, 97, M.S., 98; Ph.D., Yale, 09. Prof. biol. and geol., Western, and asst. geologist, Iowa Geol. Surv., 99-03; asst. state geologist, Iowa, 03-06; asst. prof. stratigraphic geol., *Illinois*, 06-19, *prof. geol.*, 19-; *geologist, Ill. Geol. Surv.*, 06-A.A.; Geol. Soc.; Paleont. Soc.; Ill. Acad.; Iowa Acad. Geology, areal and stratigraphic; the Devonian paleontology and stratigraphy in Illinois; the Alexandrian series; the geology and paleontology of the Paleozoic rocks in the Hudson and James Bay region.
- Savage, Dr. Watson L(ewis)**, 56 W. 45th St., New York, N. Y. *Physical education*. Cromwell, Conn., Nov. 26, 59. A.B., Amherst, 82, A.M., 85; M.D., L. I. Col. Hosp., 85. Intern., St. Peter's Hosp., 85-87; med. director, Berkeley Sch. and Club, 87-90; *pres. and physician, Dr. Savage's Physical Development Inst.*, 90-; director, gym, Columbia, 97-03; *pres.*, N. Y. Nor. Sch. of Physical Educ., 99-14; supervisor of athletics and director, dept. health, Carnegie Tech. Schools, 10-13; *pres.*, *The Savage Sch. for Physical Educ.*, 14- Ed. therapy of exercise, 'Jour. of Adv. Therapeut'; director athletics, Pittsburgh Athletic Ass; director physical training, Pittsburgh Pub. Schools, 12-13. A.A.; fel. Am. Med. Ass; Physical Educ. Ass. (*pres.*, 01-03); Soc. Col. Gym. Directors (*sec'y.*, 98-02, *pres.*, 03). Effect of marathon running.
- Saville, C(aleb) M(ills)**, Pilgord Building, Hartford, Conn. *Hydraulic engineering*. Melrose, Mass., May 27, 65. A.B., Harvard, 89. Div. engineer, Metropolitan Water Board, Mass., 95-05; engineer in charge, third div, Isthmian Canal Commission, 07-12; *manager and chief engineer, Hartford Water Works*, 12- Norman medal, Civil Eng., 14; Brackett medal, New Eng. Water Works Ass., 15. Civil Eng. (*pres.*, Conn. sect., 19); Am. Water Works Ass.; New Eng. Water Works Ass. (*pres.*, 16); Boston Soc. Civil Eng. Water supply; dam construction; foundation of Gatun Dam; hydrology of Chagras River; geology of water supply and foundations.
- Saville, Prof. Marshall H(oward)**, Columbia University, New York, N. Y. *American archeology*. Rockport, Mass., June 24, 67. Special student, Peabody Museum, Harvard, 89-94, fellow, 91-93. Asst., Peabody Museum, Harvard, 89-94; asst. curator anthrop., Am. Museum Nat. Hist., 94-02, curator Mex. and Cent. Am. archeol., 02-05, hon. curator, 07-10; *prof. Am. archeol., Columbia*, 03- Officier d'Acad., 01. Int. Cong. Americanists, 02 (*gen. sec'y.*, committee of organization). A.A. (*sec'y.*, H., 98, v. *pres.*, 04); fel. Ethnol. Soc. (*cor. sec'y.*, 99, v. *pres.*, 03, *rec. sec'y.*, 05-10, v. *pres.*, 10-); Anthropol. Ass; Antiq. Soc.; Explorers Club (v. *pres.*, 07-); Boston Soc. Nat. Hist.; Wash. Anthropol. Soc.; *cor. mem. Soc. Cient. Ant. Alz.*; Soc. d'Anthrop. de Paris; Soc. des Amer. de Paris; Swedish Soc. Anthropol. and Geog. Archeology of Mexico, Central America and South America; exploration of the ruins of southern Mexico; the antiquities of Mexico, Central America, Ecuador, Colombia and South America.
- Sawtelle, Prof. William O(tis)**, Haverford College, Haverford, Pa. *Physics*. Bangor, Maine, July 7, 74. Maine, 92-93; B.S., Mass. Inst. Tech., 99; A.M., Harvard, 07. Instr. science, high sch., Bangor, 99-00, director math., 00-03; instr. physics, Mass. Inst. Tech., 03-05; asst., Harvard, 12-13; instr., Haverford, 13-15, asst. prof., 15-18. Mem. exam. board for U. S. Naval Acad., Third Cong. Dist. Maine, 02. Acting prof. physics, Swarthmore, 17-18; Haverford, 18-19; asst. physicist, Bur. Standards, 18. A.A.; Physical Soc.; Franklin Inst.; Soc. de Physique. Electrolysis of certain cyanid solutions; electrical resistance of thin films; electrical oscillations; spark discharge; ultraviolet light; spectrum of oscillatory sparks.
- Sawyer, Prof. Mary Louise**, Knox College, Galesburg, Ill. *Botany*. Lake Geneva, Wis., Sept. 1, 76. B.S., Beloit, 02; M.S., Chicago, 15. Teacher, high sch., Elgin, Ill., 05-12; instr. bot., Beloit, 13-17; Grinnell, 17-19; *asst. prof., Knox*, 19- A.A.; Bot. Soc.; Cent. Ass. Sci. and Math. Teachers. Morphological botany; spermatogenesis; hybridization.
- Sawyer, Dr. William A(ugustus)**, International Health Board, Rockefeller Foundation, 61 Broadway, New York, N. Y. *Public health*. Appleton, Wis., Aug. 7, 79. A.B., Harvard, 02, M.D., 06. Intern., Mass. Gen. Hosp., 06-08; med. examiner, California, 08-11; director, hygienic lab, Calif. State Board of Health, 10-15; lecturer hygiene and prev. med., California, 14-16, clin. prof. med. and hygiene, 16-19; major, M.C., 18-19; *senior state director, Int. Health Board*, 19- Public Health Ass. Public health administration; tropical hygiene.
- Sawyer, William H(ayes), Jr.**, 6 Frye St., Lewiston, Maine. *Botany*. Limington, Maine, Feb. 4, 92. A.B., Bates, 13; A.M., Cornell, 16. Instr. biol., Bates, 13-15, 16- Bacteriologist and clin. pathologist, base lab, A.E.F., Marseilles, 18-19. A.A.; Bot. Soc.; Micros. Soc. Mycology; embryology of Basidiomycetes.
- Sax, Karl**, Maine Agricultural Experiment Station, Orono, Maine. *Botany*. Spokane, Wash., Nov. 2, 92. B.S., Wash. State, 16; M.S., Harvard, 17. Instr. genetics, California, 19; plant breeder, Geneva, Ill., 19-20; *biologist in charge plant breeding, Maine Exp. Sta.*, 20- Bot. Soc. Genetics; cytology.
- Sax, Mrs. Karl (Dr. Hally Jolivet)**, Bussey Institution, Forest Hills, Boston, Mass. *Botany*. La Crosse, Wis. A.B., Wisconsin, 06, A.M., 09; Ph.D., Stanford, 12. Asst. bot., Wisconsin, 07-10; Stanford, 10-12; instr., Wash. State, 12-14; scientific asst. plant path., U. S. Dept. Agr., 14-15; *instr. bot., Wellesley*, 16- A.A.; Wis. Acad. Cytology and physiology of fungi.
- Saxer, Prof. Arthur H(erbert)**, Logan, Utah. *Physics*. Wausau, Wis., Aug. 20, 80. B.S., Utah Col., 10; M.S., California, 12, Whiting fellow, 12-13, Ph.D., 15. Instr. physics, *Utah Col.*, 10-11, *prof. math.*, 13- Director, sch. home econ., *Utah Col.* Math. Ass. The constitution of matter.

- Saxton, Prof. Blair**, 24 W. Elm St, New Haven, Conn. *Physical chemistry*. Huron, S. Dak, Nov. 4, 90. A.B, Wabash, 12; Ph.D, Yale, 15. Instr. chem, Yale, 15-18, asst. prof, 19- Chemist, U. S. Bur. Mines and C.W.S, 18-19. Chem. Soc. Inorganic and organic hydrogels; solid solutions; solubility.
- Saxton, Dr. Lynn M(ateer)**, College of the City of New York, New York, N. Y. *Mathematics*. Mechanicsburg, Pa, Dec. 4, 74. B.S, Lafayette, 97, M.S, 00; Pd.M, N. Y. Univ, 08, Pd.D, 09. Instr. math, Blees Mil. Acad, 00-02; principal, Commercial High Sch, Chester, Pa, 02-03; instr. math, Col. City of N. Y, 03-12, asst. prof. accounting and business finance, 12- Accounting and auditing.
- Sayles, R(obert) W(ilcox)**, University Museum, Cambridge, Mass. *Geology*. Pawtucket, R. I, Jan. 29, 78. A.B, Harvard, 01. Curator of exhib. collections, geol. sect, museum, Harvard, 07-, trustee, Children's Museum; v. pres. and sec'y, Baltic Mills Co. A.A; fel. Geol. Soc; Seismol. Soc. (director); Meteorol. Soc; Am. Geog. Soc; Acad. Polit. and Social Sci; Am. Acad; Boston Soc. Nat. Hist. General and Pleistocene geology; seasonal deposition in glacial and other deposits; Permian tillite in the Boston basin and seasonal banding in the associated glacial slates.
- Scales, F(reeman) M(ontague)**, 2813 Quarry Road, Washington, D. C. *Bacteriology*. Hoboken, N. J, June 20, 85. Mass. Inst. Tech; George Washington. Chemist and bacteriologist, Louisville Water Co; bacteriologist and mycologist, bur. plant industry, U. S. Dept. Agr. A.A; Chem. Soc; Soc. Bact; Soc. Agron. Cellulose destroying bacteria and fungi; dissolving and precipitation of cellulose; determination of reducing sugars and nitric nitrogen; larvacides.
- Scammell, H(arold) B(esnard)**, Toms River, N. J. *Entomology*. Brooklyn, N. Y, Oct. 7, 85. B.S, Colo. Agr. Col, 10. Asst. to state entomologist, Minnesota, 11-12; asst. bur. entom, U. S. Dept. Agr, 12-18. A.A; Ass. Econ. Entom. Deciduous fruit insects; cranberry industry.
- Scammon, Prof. Richard E(veringham)**, University of Minnesota, Minneapolis, Minn. *Anatomy*. Kansas City, Mo, July 9, 83. A.B, Kansas, 04, A.M, 06; Ph.D, Harvard, 09. Asst. zool, Kansas, 05-06, instr, 06-07; Austin teaching fellow comp. anat, Harvard Med. Sch, 07-09, instr. histol. and embryol, 09-10; asst. prof. anat, Kansas, 10-11; Minnesota, 11-13, assoc. prof, 13-14, prof, 14- Embryology of selachians; development of liver and pancreas; anatomy of fetus and child; growth of man.
- Scarborough, J(ames) B(laine)**, Annapolis, Md. *Mathematics*. Mt. Gilead, N. C, June 22, 85. A.B, North Carolina, 13, fellow, 13-14, A.M, 14. Asst. physics, North Carolina, 12-13; instr. math, N. C. Col, 14-18; U. S. Naval Acad, 18-A.A; Math. Soc; Eng. Educ.
- Scarbrough, Dr. Marvin McRae**, Yale University, New Haven, Conn. *Pathology*. Creswell, Oregon, Sept. 10, 78. A.B, Oregon, 02; A.M, Yale, 05, M.D, 07. Instr. biol, Oregon, 02-03; pharmacol, Yale, 08-12, therapist, 12-19, lecturer med. juris, 14- Pathologist, Grace Hosp, New Haven, 16-, attending physician, 17- A.A. Internal medicine.
- Scarlett, Prof. A(ndrew) J(ackson), Jr**, Balch St, Hanover, N. H. *Physical chemistry*. West Boylston, Mass, March 17, 89. A.B, Dartmouth, 10; A.M, Columbia, 14, Ph.D, 17. Instr. chem, Dartmouth, 11-13; asst, Columbia, 14-17; instr, Dartmouth, 17-18, asst. prof, 18- Chem. Soc. Surface tension of mixed liquids.
- Scatchard, Prof. George**, Amherst, Mass. *Chemistry*. Oneonta, N. Y, March 19, 92. A.B, Amherst, 13; fellow, Columbia, 15-16, Ph.D, 17. Asst. chem, Columbia, 14-15, research asst, 16-17; assoc. prof, Amherst, 19- Lieut. Sanit. C, 17-19. A.A; Chem. Soc. Organic chemistry; synthesis of quinazolins; war gases; physical properties of mixtures of optically active components.
- Schaeberle, Dr. J(ohn) M(artin)**, 502 Second St, Ann Arbor, Mich. *Astronomy*. Württemberg, Germany, Jan. 10, 53. C.E, Michigan, 76, hon. M.S, 93; LL.D, California, 98. Asst. to Prof. Watson, 76-78; asst, observatory, and instr, Michigan, 78-88; astronomer, Lick Observatory, 88-98. On eclipse exped. to Cayenne, 89; chief, exped. to observe solar eclipse, Chile, 93; Japan, 96; acting director, Lick Observatory, 97-98. A.A. Orbits of various comets; astronomical instruments; astronomical photography; meridian circle work; theory of parabolic reflectors; the origin and physical structure of our sidereal and solar systems.
- Schaefer, Prof. Michael A(loysius), S.J**, Creighton University, Omaha, Nebr. *Biology*. St. Louis, Mo, May 5, 93. A.M, St. Louis, 18. Prof. biol, Creighton, 18-
- Schaeffer, Prof. Asa A(rthur)**, University of Tennessee, Knoxville, Tenn. *Zoology, Physiology*. Kunkletown, Pa, May 9, 83. A.B, Franklin and Marshall, 04; fellow, Hopkins, 08-09, Ph.D, 09. Instr. zool, Tennessee, 09-10, asst. prof, 10-13, assoc. prof, 13-17, prof, 17- Instr, marine biol. lab, Brooklyn Inst. summers, 08-12. A.A; Soc. Zool; Tenn. Acad. Feeding habits of Stentor, Paramecium and ameba.
- Schaeffer, Charles (Frederic August)**, Museum of the Brooklyn Institute of Arts and Sciences, Eastern Parkway, Brooklyn, N. Y. *Entomology*. London, England, July 12, 60. Germany, 76. Asst, dept. entom, Am. Museum Nat. Hist, 98-02; asst. curator, dept. entom, Brooklyn Inst. Museum, 02-05, assoc. curator, 05- N. Y. Entom. Soc; Brooklyn Entom. Soc. Coleoptera of the United States.
- Schaeffer, Elmer Raymond**, Jefferson Physical Laboratory, Cambridge, Mass. *Physics*. Greenville, Ohio, 85. A.B, Harvard, 13, Bayard Cutting fellow, 19-20. Asst. physics, Jefferson Physical Lab, Harvard, 17-18, instr, 18-19, asst. director, 17-19, instr. physics, Harvard, 20- Ultra-violet region of spectrum; energy measurements.
- Schaeffer, Prof. J(acob) Parsons**, Jefferson Medical College, Philadelphia, Pa. *Anatomy, Embryology*. Shamokin Dam, Pa, Aug. 20, 78. Cent. Pa. Col, 97; B.E, Keystone Nor, 01, M.E, 03; M.D, Pennsylvania, 07; A.M, Cornell, 09, Ph.D, 10; hon. A.M, Yale, 13. Principal, pub.

schools, East Greenville, Pa, 01-03; demonstrator med. anat, Cornell, 07-08, instr, 08-10, asst. prof, 10-11; Yale, 11-12, prof, 12-14; *prof. anat. and director, Daniel Baugh Inst, Jefferson Med. Col, 14-* A.A.; Ass. Anat.; Phila. Col. Physicians; Phila. Acad. The human nose; the olfactory organ; paranasal sinuses and nasolacrimal passageways in man; nasofrontal region; elastic tissue; ductus arteriosus; obliteration of bloodvessels; lacrimal apparatus.

Schaffner, Prof. John H(enry), Botanical Department, Ohio State University, Columbus, Ohio. **Botany*. Agosta, Ohio, July 8, 66. A.B, Baker, 93, M.S, 96; A.M, Michigan, 94; Chicago, 96-97; Zürich, 07-08. Asst. bot, Michigan, 94-95; prof. nat. science, South Dakota, 95-96; asst. bot, Ohio State, 97-99, asst. prof, 99-02, assoc. prof, 02-11, *prof, 11-*, in charge, bot. dept, 08-18. Ed, 'Ohio Naturalist,' and 'Ohio Jour. Science,' 00-18. A.A.; Ohio Acad. (v. pres, 08, pres, 09); Kans. Acad. Plant cytology; life histories of various angiosperms; flora and ecology of Ohio and Kansas; taxonomy; nature of sex; phylogeny of plants; environmental control of sex; reduction division; flora of Ohio.

Schaller, Dr. Waldemar T(heodore), U. S. Geological Survey, Washington, D. C. **Mineralogy*. Oakland, Calif, Aug. 3, 82. B.S, California, 03; Ph.D, Munich, 12. *Chemist, div. chem. and physical research, U. S. Geol. Surv, 03-* A.A.; Chem. Soc.; Geol. Soc.; Am. Acad.; Wash. Geol. Soc.; Wash. Acad.; Miner. Soc. Gt. Britain and Ireland; Soc. miner. de France. Chemical, crystallographical and optical mineralogy.

Schaus, William, 1737 H St, Washington, D. C. *Entomology*. New York, N. Y., Jan. 11, 59. Hon. asst. curator, div. insects, U. S. Nat. Museum; *specialist in Lepidoptera, bur. entom, U. S. Dept. Agr. Lepidoptera of the world.*

Schear, Prof. E(dward) W(aldo) E(merson), 107 W. Park St, Westerville, Ohio. *Biology*. Near New Philadelphia, Ohio, Oct. 31, '80. A.B, Otterbein, 07; A.M, Columbia, 15. Prof. nat. science, Westfield, 07-11, pres, 11-12; *prof. biol, Otterbein, 12-* A.A.; Micros. Soc.; Ohio Acad. Hereditary relations of reaction time; influence of cocaine and temperature changes on blood sugar; self- and cross-pollination.

Scheidenhelm, F(rederick) W(illiam), 120 Broadway, New York, N. Y. *Civil engineering*. Mendota, Ill, June 16, 84. A.B, Cornell, 05, C.E, 06. Structural and hydraulic engineer, private companies, 06-14; *consulting engineer, 14-16; Daniel W. Mead and F. W. Scheidenhelm, 16-* Col, U.S.A., 17-19. Rowland prize, Soc. Civil Eng, 18. Civil Eng. Hydraulic construction; dams; foundations for dams.

Scherago, Dr. Morris, University of Kentucky, Lexington, Ky. *Pathology*. Roman, Roumania, Dec. 25, 95. B.S, Cornell, 17, D.V.M, 19. Asst. path. and bacter, N. Y. State Vet. Col, Cornell, 18-19; instr. bacter, Kentucky, 19-20, *asst. prof. and acting head of dept, 20-* Lab. asst, U. S. Pub. Health Service, 18. Soc. Bact; Vet. Med. Ass. Bacteriology.

Schereschewsky, Dr. Joseph William, 3463 Macomb St, Washington, D. C. *Medicine*. Peking, China, March 6, 73. A.B, Harvard, 95; M.D,

Dartmouth, 99. Asst. surgeon, *Pub. Health Service*, 99-04, passed asst. surgeon, 04-12, surgeon, 12-15, *asst. surgeon gen, 18-* Mem. div. govt. relations, Nat. Research Council; assoc. ed, 'Jour. Indust. Hygiene'; mem. exec. committee, 15th Int. Cong. Hygiene and Demog. Am. Med. Ass; Pub. Health Ass. (chairman, sect. indust. hygiene, 19); Ass. Indust. Physicians and Surg. (pres, 16); Child Hygiene Ass. Industrial hygiene and medicine; infant mortality; occupational diseases; hygiene of illumination.

Schertz, Dr. F(rank) M(ilton), Bureau of Plant Industry, Washington, D. C. *Biochemistry*. Stanford, Ill, Jan. 8, 89. B.S, Nebr. Wesleyan, 14; fellow, Northwestern, 14-15, A.M, 15; Ph.D, Chicago, 18. Asst. bot, Nebr. Wesleyan, 11-14; instr, Northwestern, 15-17; *soil biochemist, bur. plant indust, U. S. Dept. Agr, 19-* With C.W.S., 18-19. A.A.; Chem. Soc. Soil fertility; plant morphology and chemistry.

Schiedt, Prof. R(ichard) C(onrad Francis), 1043 Wheatland Ave, Lancaster, Pa. *Biology, Geology*. Weissenfels, Germany, Sept. 21, 59. Erlangen, 78-80; Berlin, 81; Ph.D, Pennsylvania, 99; hon. Sc.D, Franklin and Marshall, 10. Instr. sciences, Calvin Col, Cleveland, Ohio, 81-82; principal, Int. Acad, Portland, Oregon, 82-85; prof. nat. sciences and chem, Franklin and Marshall, 87-00, biol. and geol, 00-18; temporary prof. comp. anat, Tennessee, 19; retired, 19. Entomologist, State Board of Agr, Pa, 93-00. A.A.; Soc. Zool. Pigmentation in animal tissue; regeneration and sex of Ostrea; causes of pigmentation.

Schieffelin, Dr. William Jay, 5 E. 66th St, New York, N. Y. *Chemistry*. New York, April 14, 66. Ph.B, Columbia, 87; Ph.D, Munich, 89. V. pres, *Schieffelin and Co, 03-06, pres, 06-* V. pres, N. Y. Col. Pharmacy. Int. Cong. Applied Chem, London, 09. A.A.; Chem. Soc.; Soc. Chem. Indust. (v. pres); life mem. London Chem. Soc. Chemicals used in medicine and their manufacture.

Schimpf, Prof. Henry W(illiam), 443 W. 34th St, New York, N. Y. *Chemistry*. New York, Feb. 14, 68. Ph.G, N. Y. Col. Pharmacy, 87; M.D, L. I. Med. Col, 97. *Prof. inorg. chem, Brooklyn Col. Pharmacy, 92-02, anal. chem, 02-* Delegate, Convention for Revision of U. S. Pharmacopœia, 00, 10. A.A.; Chem. Soc; Pharmaceut. Ass. Volumetric methods for alkaloids and galenicals; chemistry of drugs; qualitative analysis.

Schlapp, Dr. M(ax) G(ustave), 40 E. 41st St, New York, N. Y. *Pathology*. Fort Madison, Iowa, Nov. 4, 69. Bellevue Med. Col, 89-90; Cornell, 91-92; Heidelberg, 93-94; M.D, Berlin, 96. Instr. histol. and path. of nervous system, med. col, Cornell, 00-10; *prof. neuropath, N. Y. Post-Grad. Med. Sch. Ass. Path. and Bact; Neur. Ass; N. Y. Acad. Med; N. Y. Path. Soc.* Histology and pathology of nervous system; syringomyelia; microscopic structure of cortical areas in man and some mammals; ascending myelomalocia; neuroepithelioma with syringomyelia; theoretical considerations of mental deficiency; mental deficiency and criminality.

- Schlesinger, Dr. Frank**, Yale Observatory, New Haven, Conn. **Astronomy*. New York, N. Y., May 11, 71. B.S. Col. City of N. Y., 90; A.M. Columbia, 97, Ph.D., 98. Observer in charge, Int. Lat. Observatory, Ukiah, Calif., 99-03; astronomer, Yerkes Observatory, 03-05; director, Allegheny Observatory, and prof. astron., Pittsburgh, 05-20; director, *Yale Observatory*, 20- Collaborating ed., 'Astrophys. Jour.' Nat. Acad.; A.A. (past v. pres., A.); Astron. Soc. (pres.); Philos. Soc.; Physical Soc.; Royal Astron. Soc. Can.; Royal Astron. Soc.; Soc. degli Spettroscop. Ital.; Astron. Gesell. Stellar parallax; reduction of astronomical photographs; variation of latitude; motion in the line of sight; solar rotation; spectroscopic binaries; determination of star places by photography.
- Schlesinger, Prof. Hermann I(rving)**, University of Chicago, Chicago, Ill. *Chemistry*. Minneapolis, Minn., Oct. 11, 82. B.S., Chicago, 03, Ph.D., 05; Berlin and Strasbourg, 05-07. Asst. physiol. chem., Hopkins, 07; assoc. chem., Chicago, 07-10, instr., 10-11, asst. prof., 11-17, assoc. prof., 17- A.A.; Chem. Soc. (asst. ed., 'Chem. Abstracts'). Inorganic and physical chemistry; catalysis of hydrogen peroxid by alkalies; non-aqueous solutions; behavior of electrolytes in anhydrous formic acid solution; agreement of some strong electrolytes with the mass law; manganese and permanganates; inorganic sulphur compounds.
- Schlomovitz, Dr. B(enjamin) H(erman)**, Marquette School of Medicine, Milwaukee, Wis. *Physiology, Pharmacology*. Milwaukee, Wis., May 18, 89. B.S., Wisconsin, 14; M.S., Iowa, 16; M.D., Rush, 17. Instr. pharmacol., Iowa, 14-16; asst. Illinois, 16-17; instr. physiol., Marquette, 17; Wisconsin, 18-19, asst. prof. pharmacol., 19-20; prof. physiol. and director of dept., Marquette, 20- Physiol. Soc.; Soc. Pharmacol. Physiology and pharmacology of specialized tissue of the heart; gas poisoning; experimental lung edema.
- Schloss, Prof. O(scar) M**, 39 E. 61st St., New York, N. Y. *Medicine*. Cincinnati, Ohio, June 20, 82. B.S., Ala. Polytech., 01; M.D., Hopkins, 05. Asst. diseases of children, Univ. and Bellevue Hosp. Med. Col., 08-12; instr. pediat., Columbia, 12-18; prof. diseases of children, med. col., Cornell. Pediat. Soc. (ed. and recorder, 15); Soc. Clin. Invest. Clinical medicine; diseases of children; intestinal diseases of children; allergy; acidosis.
- Schlundt, Dr. Herman**, Columbia, Mo. **Physical chemistry*. Two Rivers, Wis., July 16, 69. B.S., Wisconsin, 94, M.S., 96, fellow, 00-01, Ph.D., 01; Leipzig, 99-00. Asst. chem., Wisconsin, 94-96; teacher physics and chem., West Div. High Sch., Milwaukee, Wis., 96-99; instr. chem., Wisconsin, 01-02; physical chem., Missouri, 03-05, asst. prof., 05-07, prof., 07- A.A.; Chem. Soc.; Electrochem. Soc.; Wis. Acad. Dielectric constants of solvents; non-aqueous solutions; radio-activity of mineral waters; radio-activity.
- Schmeckebier, Dr. L(aurence) F(rederick)**, 1444 Belmont St., Washington, D. C. *History, Economics, Geography*. Baltimore, Md., Jan. 24, 77. A.B., Hopkins, 96, Ph.D., 99. Ed. asst., U. S. Geol. Surv., 99-07; ed. and chief, publications, U. S. Dept. of the Interior, 07-17, chief of div. bur. foreign and domestic commerce, 17- A.A.; Polit. Sci. Ass. History of the 'Know-nothing' party in Maryland; taxation in Georgia.
- Schmidt, Prof. Carl L(ouis) A(ugust)**, University of California, Berkeley, Calif. *Biochemistry*. S. Dak., 85. B.S., California, 08, M.S., 10, Ph.D., 15. Chemist, Metropolitan Light and Power Co., San Francisco, 08-09; expert chemist, referee board, U. S. Dept. Agr., 09-12; bacteriologist and chemist, Berkeley Board of Health, 13-14; asst. path., California, 15-18, asst. prof., chem. path., 18, biochem., 18- Chem. Soc.; Soc. Exp. Biol.; Soc. Biol. Chem. Metabolism; proteins; immuno-chemistry.
- Schmidt, Prof. Edward C(harles)**, 5726 McPherson Ave., St. Louis, Mo. *Mechanical engineering*. Jersey City, N. J., May 14, 74. M.E., Stevens, 95. With Kalbfleisch Chem. Co., Brooklyn Edison Elec. Co. and Am. Stoker Co., 95-98; instr. mech. eng., Illinois, 98-01, asst. prof. eng., 01-03; asst. engineer, Am. Hoist and Derrick Co., 03-05; engineer of tests, Kerr Turbine Co., 05-06; assoc. prof. eng., Illinois, 06-10, prof. railway eng., 10-17; major, ordnance dept., and on detached service to U. S. Fuel Ad. and U. S. R. R. Ad., 17-19; mech. engineer, The North Am. Co., 19- Mech. Eng.; Eng. Educ.; Master Mech. Ass.; R. R. Eng.; Master Car Builders Ass.; West. Ry. Club. Locomotive performance; train resistance.
- Schmidt, Karl Patterson**, American Museum of Natural History, New York, N. Y. *Zoology*. Lake Forest, Ill., June 19, 90. A.B., Cornell, 16. Research asst., Am. Museum Nat. Hist., 16-18, asst. curator, 19- Cornell geol. exped. to Santo Domingo, 16; N. Y. Acad. Sci. herp. surv. of P. R., 19. Soc. Ichthyol. and Herp. Systematic zoology; systematic herpetology of Africa and the West Indies.
- Schmidt, Dr. M(aurice) R(oland)**, 1131 Lake Ave., Whiting, Ind. *Chemistry*. Baltimore, Md., Dec. 3, 85. A.B., Hopkins, 06, fellow, 08-09, Ph.D., 09. Research chemist, Sharp and Dohme, 09-11; ed. worker, 11-14; anal. and research chemist, Chas. Pfizer and Co., 14-17; research chemist, Standard Oil Co. of Ind., 17- Chem. Soc. Pharmaceutical chemistry; petroleum.
- Schmiedel, Prof. Oscar (Robert Paul)**, University Place, Nebr. *Mathematics*. Gölzow, Germany, Dec. 1, 61. B.S., Bethany (W. Va.), 86, A.M., 88. Prof. math., Bethany (W. Va.), 86-02; Bellevue (Nebr.), 05-19; Parsons, 19-20; Nebr. Wesleyan, 20- Math. Soc.
- Schmitt, Dr. Clara**, 806 Tribune Building, Chicago, Ill. *Psychology*. Elderville, Ill., Aug. 3, 78. A.B., B.S., Missouri, 05; fellow, Chicago, 11, Ph.D., 14. Teacher, pub. schools, 95-02; high schools, 05-08; psychologist, juvenile court, Chicago, 10-13; asst. director, dept. child study, Board of Educ., Chicago, Ill., 12- Instr. psychol., Chicago, 18- Psychol. Ass. Child study; mental tests.
- Schmitt, Waldo L(asalle)**, U. S. National Museum, Washington, D.C. *Zoology*. Washington, June 25, 87. B.S., George Washington, 13; A.M., California, 16. Aid econ. bot., U. S. Dept. Agr., 07-10; div. marine invertebrates, U. S. Nat. Mu-

- seum, 10; scientific asst, 'Albatross,' 10-13, naturalist, 14-15; *instr. zool.*, *George Washington*, 15-; asst. curator, *div. marine invertebrates*, *U. S. Nat. Museum*, 15-20, curator, 20- A.A.; Soc. Mammal; West. Soc. Nat; Wash. Biol. Soc. Fisheries; taxonomy and life history of Crustacea.
- Schmitter, Major Ferdinand**, U.S.A., 458 Delaware Ave, Albany, N. Y. *Anatomy*. Albany, Feb. 20, 76. A.B, Union, 99; M.D, Hopkins, 03; Army Med. Sch, 05-06. *Instr. anat.*, Wisconsin, 03-05; first lieut, *M.C.*, 06-09, capt, 09-16, major, 16- Temporary lieut. col, *M.C.*, 18-19, col, 19. A.A.; Cytology of the kidney; syphilography; medical mycology.
- Schmitz, Henry**, Moscow, Idaho. *Forestry*. Seattle, Wash, March 25, 92. B.S, Washington (Seattle), 15, M.S, 16; Ph.D, Washington (St. Louis), 19. *Asst. prof. forestry*, *Idaho*, 19- A.A.; Phytopath. Soc; Soc. Foresters. Physiology of fungi; wood decay; forest products.
- Schmucker, Prof. S(amu)el C(hristian)**, Rosedale Ave, West Chester, Pa. *Biology*. Allentown, Pa, Dec. 18, 60. A.B, Muhlenberg, 82, A.M, 85, M.S, 91, Sc.D, 13; Ph.D, Pennsylvania, 93, hon. fellow, 99-00. *Prof. sciences*, Carthage, 83-84; nat. science, Boys' High Sch, Reading, Pa, 84-89; State Nor. Sch, Indiana, Pa, 89-95; *State Nor. Sch. West Chester*, Pa, 95-; *prof. bot.*, *Wagner Inst.*, 08- A.A.; Pa. Bot. Soc; Phila. Acad. Anthropology; constitution of American people.
- Schnable, George L.**, 3507 Home Ave, Berwyn, Ill. *Chemistry, Physics*. Horton, Kans, March 20, 89. B.S, Northwestern, 11, M.S, 12. *Instr. physics*, Northwestern, 13-18; *research chemist*, *West. Elec. Co.*, 18- Insulating paper; telephone cable insulation.
- Schneeberger, Lieut. Philip**, Balloon and Airship Division, Air Service, Washington, D. C. *Chemistry*. Baltimore, Md, Nov. 22, 87. A.B, Hopkins, 09, Ph.D, 13. *Research chemist*, Barber Asphalt Co, 13-17; *expert*, *Sig. C. and Air Service*, 17- Chem. Soc. Petroleum; asphalt; ceramics; colloids.
- Schneider, Dr. Albert**, University of Nebraska, Lincoln, Nebr. *Botany, Bacteriology*. Granville, Ill, April 13, 63. M.D, Col. Physicians and Surg, Chicago, 87; B.S, Illinois, 94; M.S, Minnesota, 94; fellow, Columbia, 94-96, Ph.D, 97. *Instr. crypt. bot.*, Minnesota, 93, 94; lecturer bot, Brooklyn Inst, 96; *prof. bot.*, pharmacog. and bacter. sch. of pharmacy, Northwestern, 97-03; Col. Pharmacy, San Francisco, 03-19; pharmacognosist, Port of San Francisco, 09-19, *prof. pharmacog. and pharmacol.*, *Nebraska*, 19- Head teacher and res. physician, Spencer's Acad, I. T, 89; asst. state zoologist, Minn, 92; asst. bacteriologist, Ill. Exp. Sta; microanalyst, Calif. Food and Drug Lab; dean, Berkeley Sch. Police Officers, 17; mem. int. jury awards, Panama-Pacific Expos. A.A; Soc. Nat; Pharmaceut. Ass; Soc. Baet; Soc. Microanal; Int. Ass. Bot. Biology; sanitary science; free nitrogen assimilating bacteria (Rhizobia) and their significance in agriculture; vegetable drugs; drug plant culture.
- Schneider, Prof. Edward C(hristian)**, 97 Broad St, Middletown, Conn. **Physiology*. Wapello, Iowa, Aug. 21, 74. B.S, Tabor, 97; Ph.D, Yale, 01; Sc.D, Denver, 14. *Instr. chem.*, Tabor, 97-99, *prof. biol. and physiol. chem.*, 01-03; *biol.*, Colo. Col, 03-07, head prof, 07-19; *Ayres prof.*, *Wesleyan*, 19- Mem. Anglo-Am. exped. to Pike's Peak, 11; capt. and major, Sanit. C, A.E.F; physiologist, med. research lab, Air Service, Mitchel Field, 19- A.A; Physiol. Soc; Soc. Biol. Chem; Pub. Health Ass; Ecol. Soc; Ass. Prof. Influence of high altitudes and low oxygen on man; physical staleness; aviation physiology.
- Schober, Prof. William B(ush)**, Coconut Grove, Fla. *Chemistry*. Cumberland, Md, Nov. 28, 64. B.S, St. John's (Md), 86, A.M, 90; Ph.D, Hopkins, 92. *Instr. sciences*, Allegany Acad, Cumberland, 86-88; asst. chem. lab, Hopkins, 90-92; *instr. org. chem.*, Lehigh, 92-04, asst. prof. chem, 04-06, acting prof, 06-07, prof, 07-14; retired, 14. Diazo-compounds; sulphonic acids.
- Schoch, Dr. Eugene P(aul)**, 2212 Nueces St, Austin, Tex. *Physical chemistry*. Berlin, Germany, Oct. 16, 71. C.E, Texas, 94, A.M, 96; fellow, Chicago, 99-00, Ph.D, 02. *Instr. chem.*, *Texas*, 97-06, adj. prof, 06-11, *chairman, schools chem. and chem. eng. and head, div. chem.*, *bur. econ. geol. and technol.*, 14- A.A; Tex. Acad. (pres, 08). Oxids of mercury; oxidation reactions that lead to equilibrium; behavior of the nickel anode and its bearing on passivity; E.M.F. of nickel and the effect of occluded hydrogen; electric deposition of nickel-zinc alloys; iron and nickel anodes in various electrolytes; the potential of the oxygen electrode; kinetics of reactions in heterogeneous systems.
- Schoder, Dr. E(mest) W(illiam)**, Willard Way, Ithaca, N. Y. *Hydraulic engineering*. Fidalgo Island, Wash, Aug. 17, 79. B.S, Washington (Seattle), 00; Ph.D, Cornell, 03. Station asst, U. S. Geol. Surv, 00; engineer on construction, Ithaca Water Works Pumping Sta. and Cornell Water Purification Plant, 03-04; *engineer in charge, hydraulic lab.*, Cornell, 04-, asst. prof. *exp. hydraulics*, 05-19, prof, 19- A.A; assoc. Civil Eng. Flow of water in pipes; effects of curvature, size, roughness, temperature; critical velocity; effects of abnormal flow on piezometric indications; hydraulics of Panama sea-level canal without locks; the Pitot tube; flow of water over weirs; flow of air.
- Schoemaker, Prof. D(aniel) M(artin)**, 1402 S. Grand Ave, St. Louis, Mo. *Anatomy*. Muscatine, Iowa, Oct. 7, 67. B.S, Chicago, 98, fellow, 99-00, M.D, Rush Med. Col, 04; Rockefeller Inst, 02-03. Asst. anat, Chicago, 98-99; asst. prof. bacter, St. Louis, 04-05; asst. city bacteriologist, St. Louis, 06-07; assoc. prof. anat, St. Louis, 07-11, prof, 11- A.A. A cross-section anatomy.
- Schoenberg, Dr. Mark Joseph**, 103 E. 81st St, New York, N. Y. *Medicine*. Pitesci, Roumania, Dec. 23, 74. A.B, Lyceum, Bucharest; M.D, Bucharest. *Surgeon*, *Knapp's Ophthalmic and Aural Inst*; adj. consultant ophthalmologist, *Presb. Hosp.* Lucien Howe prize, N. Y. State Med. Soc, 14. Asst. Ophthalmologist, Red Cross Hosp, 11- Am. Med. Ass; fel. N. Y. Acad. Med. Glaucoma; intra-ocular pressure; ocular anaphylaxis and ocular tuberculosis; ciliary body.

- Schoene, William Jay**, Blacksburg, Va. *Entomology*. Henderson, Ky, July 27, 79. B.S., Kentucky, 05; M.S., Chicago, 10. *Entomologist*, N. Y. Exp. Sta, 05-13; *state entomologist*, Va, and *entomologist*, Va. *Exp. Sta*, 13- Entom. Soc; Ass. Econ. Entom. Insect pests; life history of insects.
- Schoepfle, Prof. C(hester) S(eitz)**, 1704 Geddes Ave, Ann Arbor, Mich. *Chemistry*. Sandusky, Ohio, March 13, 92. Sc.D., Michigan, 18. *Instr. org. chem*, Michigan, 16-18, *asst. prof*, 19- Organic chemistry; trivalent carbon.
- Schoewe, Dr. Walter Henry**, University of Kansas, Lawrence, Kans. *Geology*. Milwaukee, Wis, Jan. 15, 91. A.B., Wisconsin, 14, M.S., 15; Ph.D., Iowa, 20. *Instr. geol*, Iowa, 18-19; *geol. and miner*, Colo. Sch. Mines, 19-20; *asst. prof. geol*, Kansas, 20- A.A.; Iowa Acad. Pleistocene geology.
- Schofield, Dr. Stuart J(ames)**, University of British Columbia, Vancouver, B. C. *Geology*. Gravesend, England, Sept. 3, 83. M.A., Queen's (Can), 05, B.Sc., 08; Ph.D., Mass. Inst. Tech, 12. *Geologist*, Can. Geol. Surv, 11-20; *prof. geol*, British Columbia, 20- Geol. Soc; Can. Min. Inst. Economic geology; petrology.
- Scholes, Dr. S(amuel) R(ay)**, Lonaconing, Md. *Chemistry*. Marquette, Wis, Jan. 22, 84. A.B., Ripon, 05; Loomis fellow, Yale, 10-11, Ph.D., 11. *Instr. high sch*, Wausau, Wis, 05-08; *asst. chem*, Yale, 08-10; fellow, Pittsburgh, 11-13; *chemist*, H. C. Fry Glass Co, 13-20; *manager*, *Utility Glass Works*, 20- *Asst. director*, Mellon Inst, 14-17. A.A.; Chem. Soc; Chem. Eng; Ceramic Soc; British Soc. Glass Tech. Inorganic colloids; vapor pressure of hydrates; glass; potash from feldspar.
- Scholl, Prof. Ernest E(mmett)**, State Department of Agriculture, Austin, Tex. *Entomology*. Hunter, Tex, Oct. 14, 81. B.S., Tex. Col, 07. *Instr. invert. zool*, Tex. Col, 08, *apicult. inspector*, Exp. Sta, 08-09, *assoc. prof. entom*, 09-11; *entomologist*, *Tex. Dept. Agr*, 11-15, *chief entomologist*, 16- Expeditions to Calif, Colo. and Utah, 15; Kans, Okla, Iowa, Pa. and Ill, 16. A.A.; Ass. Econ. Entom; Nat. Farmers' Inst; Tex. Farmers' Inst. Control of grasshoppers; destructive mammals; injurious insects; fungous diseases; honey plants; agate snail.
- Schoonhoven, J(ohn) J(ames)**, 773 Eastern Parkway, Brooklyn, N. Y. *Biology*. McIntyre, N. Y., July 3, 64. A.B., St. Francis Xavier, 93, A.M., 94; N. Y. Univ, 00-01. *Mem. council*, *Brooklyn Inst*, 04- *Lecturer*, Brooklyn Inst; Boards of Educ, N. Y. City, Jersey City and Newark. A.A.; Brooklyn Entom. Soc; fel. Brooklyn Inst. (pres, dept. zool). Parasitism; entomogenous fungi; marine biology; insects as carriers of disease.
- Schoppe, Prof. William F(reeman)**, Bozeman, Mont. *Poultry husbandry*. Pittsfield, N. H., Sept. 14, 83. B.S., Maine, 07, M.S., 13. *Asst. poultry husbandry*, 07-08; Mont. Exp. Sta, 08-11; *asst. prof*, Maine, 11-13; *prof*, Mont. Col. and *Exp. Sta*, 13- A.A.
- Schorer, Dr. E(dwin), H(enry)**, 825 Lathrop Building, Kansas City, Mo. *Bacteriology*, *Pathology*. Plymouth, Wis, Dec. 13, 81. B.S., Wisconsin, 02; M.D., Hopkins, 06; D.P.H., Harvard, 12. *Asst*, Rockefeller Inst, 06-07; *asst. prof. parasitol. and hygiene*, Missouri, 07-09; *bacter. and path*, Kansas, 09-10; *dept. prev. med*, Harvard, 10-12; *pediat*, Kansas, 12- Investigator, Rockefeller Inst, summer, 03; *pathologist and bacteriologist*, Thomas Wilson Sanitarium, Md, summers, 04-06; *serum lab*, Harvard Med. Sch, summer, 09; *lieut. col*, M.C., and *director of lab. div*, port of embarkation, Hoboken, N. J., 17-19. Ass. Path. and Bact; Pub. Health Ass; Am. Med. Ass; Milk and Baby Hygiene Ass. Pediatrics; hygiene; children's dysentery; milk investigation; rhabdomyoma of the heart; immunity to tuberculosis.
- Schorger, Dr. A(rlie) W(illiam)**, 2021 Kendall Ave, Madison, Wis. *Chemistry*. Republic, Ohio, Sept. 6, 84. Ph.B., Wooster, 06; A.M., Ohio State, 08; Ph.D., Wisconsin, 16. *Lab. asst*, Bur. Standards, 08; *asst. chemist*, Bur. Internal Revenue, 09; *chemist*, U. S. Forest Service, 09-17; *C. F. Burgess Laboratories*, 17- Chem. Soc; Ornith. Union; Wis. Acad; Wis. Archeol. Soc. Terpenes; carbohydrates; chemistry of wood; action of aluminum chlorid on cymene; synthetic aromatics.
- Schrader, F(rank) C(harles)**, U. S. Geological Survey, Washington, D. C. *Geology*. Sterling, Ill, Oct. 6, 60. M.S., Kansas, 91; A.M., Harvard, 93. *Asst. entom*, Kansas, 89, 91; Mass. Board of Agr, 93, 94; *teacher geol*, Harvard, 95-96; *asst. geol. and geologist*, U. S. Geol. Surv, 96- A.A.; Geol. Soc; Min. Eng; Min. and Metal. Soc; Forestry Ass; Wash. Geol. Soc; Wash. Acad. Mining geology; geography; entomology; the geology, physiography and mineral resources of Alaska and western United States.
- Schrader, Dr. Franz**, Bryn Mawr College, Bryn Mawr, Pa. *Zoology*. Magdeburg, Germany, March 11, 91. B.S., Columbia, 14, Ph.D., 19. *Asst*, U. S. Bur. Fisheries, 15-16; *zool*, Columbia, 17-19; *pathologist*, U. S. Bur. Fisheries, 20; *assoc. biol*, Bryn Mawr, 20- Fisheries Soc. Cytology; sex determination.
- Schramm, Dr. Edward**, 120 Colony St, Bridgeport, Conn. *Chemistry*. New York, N. Y., Dec. 22, 86. B.S., Col. City of N. Y., 06; Chem.E., Columbia, 09, Ph.D., 13. *Asst. chemist*, Bur. Standards, 13-17; *research chemist*, Am. Zinc, L. and S. Co, 17-19; *Bridgeport Brass Co*, 19- Chem. Soc. Physical and inorganic chemistry; metallurgy; electrochemistry; zinc; sulphuric acid; ferrous and non-ferrous metals.
- Schramm, Dr. J(acob) R(ichard)**, Cornell University, Ithaca, N. Y. **Botany*. Hancock Co, Ind, Feb. 6, 85. A.B., Wabash, 10; Lackland fellow, Washington (St. Louis), 10-12, Ph.D., 13. *Asst. to director*, Mo. Bot. Garden, 12-15; *instr*, Shaw Sch. of Bot, Washington (St. Louis), 13-15; *asst. prof. bot*, Cornell, 15-17, *prof*, 17- A.A.; Soc. Nat; Bot. Soc. (sec'y, 18-); St. Louis Acad. Physiology of algae.
- Schreiner, Dr. Oswald**, U. S. Department of Agriculture, Washington, D. C. **Chemistry*. Nassau, Germany, May 29, 75. Baltimore Polytech, 92; Ph.G., Md. Col. Pharmacy, 94; Hopkins, 94-95; U.S.P. research fellow, 95-96; B.S., Wis-

- consin, 97, M.S., 99, Ph.D., 02. Asst. pharmacist. technique, Wisconsin, 96, instr., 97-02, physical chem., 02-03; chemist, *U. S. Dept. Agr.*, 03-06, *chief, soil fertility investigations*, 06-Expert physical chem., U. S. Dept. Agr., summer, 02. Ebert prize, 00; Longstreth medal, Franklin Inst., 12. A.A.; Chem. Soc.; Soc. Biol. Chem.; Pharmaceut. Ass.; Soc. Agron. Chemistry of volatile oils; characterization and classification of sesquiterpenes; complex nitroso-compounds of unsaturated hydro-carbons; photochemical action; complex boric acids and borates; soap solutions; colorimetric methods; soil fertility; organic compounds in soils; oxidizing powers of roots; toxic effects of organic compounds on plants; action of fertilizers; biochemical relationships of soils and plants.
- von Schrenk, Dr. H(ermann)** Missouri Botanical Garden, St. Louis, Mo. **Vegetable pathology*. College Point, N. Y., March 12, 73. B.S., Cornell, 93; A.M., Harvard, 94; Ph.D., Washington (St. Louis), 97. Asst. bot., Harvard, 93-94; instr., St. Louis Manual Training Sch., 94-96; Shaw Sch. of Bot., 96-03; in charge, Miss. Valley lab, bur. plant indust., U. S. Dept. Agr., 01-07; *consulting timber engineer*, 07-; *pathologist*, Mo. Bot. Garden, 07- In charge, div. forest products, Bur. Forestry, 03-05; special agent, div. veg. physiol. and path., U. S. Dept. Agr., 98-01; lecturer timber diseases, Yale Forest Sch., 02-09; ed. *veg. path. for U. S.*, and see'y, Am. board of editors, 'Bot. Centralblatt,' 07-13; tech. expert, South. Cypress Mfg. Ass.; lecturer plant path., Wisconsin, 09; chairman, Mo. Forest Commission, 08-16. A.A. (see'y, G., 02); Soc. Nat. (treas., 04-12); Bot. Soc.; Soc. Prom. Agr. Sci.; Civil Eng.; R. R. Eng.; Soc. Test. Mat.; St. Louis Acad.; Bot. Gesell. Diseases of plants, chiefly of trees and timber; preservation of timber.
- Schriever, Prof. William**, University of Oklahoma, Norman, Okla. *Physics*. Dakota City, Nebr., Jan. 16, 94. A.B., Morningside, 16; M.S., Iowa, 17, fellow, 17-18. *Asst. prof. physics, Oklahoma*, 19- Assoc. mem. Physical Soc.; Iowa Acad. Elastic properties of metals at high temperatures.
- Schroeder, Dr. E(rnest) C(harles Henry)**, U. S. Experiment Station, Bethesda, Md. *Medicine, Animal breeding*. Baltimore, Md., April 3, 65. Baltimore Col., 80; Md. Col., 83; M.D.V., Harvard, 87. Inspector, *bur. animal indust., U. S. Dept. Agr.*, 87-90, asst. and field agent, div. path., 90-95, *supt, Exp. Sta.*, 95- Delegate, Int. Cong. Tuber, Rome, 12. A.A.; Soc. Baet; Vet. Med. Ass.; Ass. Tuber; Int. Commission Tuberculosis. Texas fever; life history of cattle ticks; production of antitoxic sera; etiology of tuberculosis; elimination of tubercle bacilli from the bodies of tuberculous subjects; susceptibility to tuberculosis and its causes; relation between human and bovine tuberculosis; heredity; bacillus of infectious abortion in the milk of cattle; food value and bacteriology of milk; standardization of tuberculin.
- Schuchert, Prof. Charles**, Yale University Museum, New Haven, Conn. **Paleontology*. Cincinnati, Ohio, July 3, 58. Pub. schools; hon. A.M., Yale, 04; LL.D., N. Y. Univ., 14. Asst. to E. O. Ulrich, Newport, Ky., 85-89; to Prof. James Hall, Albany, N. Y., 89-91; Minn. Geol. Surv., 91-92; to Prof. C. E. Beecher, Yale, 92-93; asst. paleontologist, U. S. Geol. Surv., 93-94; asst. curator, U. S. Nat. Museum, 94-04; *prof. paleont., Yale, hist. geol., Sheffield Sci. Sch., and curator geol. collections, Peabody Museum*, 04- Nat. Acad.; A.A.; Soc. Nat.; Geol. Soc. (v. pres, 10); Paleont. Soc. (pres, 10); Am. Acad.; Conn. Acad.; Wash. Geol., Biol. and Geog. Societies. Invertebrate paleontology; stratigraphy; American paleogeography; historical geology.
- Schuerman, Prof. W(illiam) H(enry)**, Vanderbilt University, Nashville, Tenn. *Mechanics*. Cincinnati, Ohio, Nov. 8, 59. C.E., Cincinnati, 81; Hopkins, 82-83. Instr. physics, Missouri, 83-85, asst. prof. physics and eng., 85-88; construction of water works, Covington, Ky., 88-90; irrigation canal work near Bakersfield, Calif., 90-93; *prof. civil eng., Vanderbilt*, 94-, *dean, eng. dept.*, 95- Preliminary railroad surv., southeast. Ky., summer, 80; drafting on ry. construction work, 81-82; calculation of ry. bridges, 82; in charge designing and construction of sewerage systems, Monroe, La., and Oxford, Mass., 00-02. Eng. Educ.; Eng. Ass. of the South (pres, 02). Estimation of probable volume of local traffic on railways; greatest bending moments and shears produced by a system of concentrated loads on railway bridges; ideal and practical columns; greatest stresses in railway bridge members due to a system of concentrated wheel loads; hydraulic diagrams; reinforced concrete beams.
- Schuette, Prof. H(enry) A(ugust)**, 401 Wisconsin Ave., Madison, Wis. *Chemistry*. Green Bay, Wis., Jan. 11, 85. B.S., Wisconsin, 10; M.S., 12, Ph.D., 16. Asst. chem., Wisconsin, 10-14, instr., 14-18, *asst. prof.*, 18- A.A.; Chem. Soc.; Wis. Acad. Sanitary chemistry; organic analysis; plankton of the Madison lakes.
- Schulte, Prof. H(ermann) von W(echlinger)**, Creighton Medical College, Omaha, Nebr. *Anatomy*. Utica, N. Y., Aug. 9, 76. A.B., Trinity (Conn.), 97; M.D., Columbia, 02. Demonstrator *anat.*, Columbia, 04-07, adj. prof., 07-10, assoc. prof., 10-17; *prof., Creighton*, 17-, junior dean, 17-18, *dean*, 18- Alumni Ass. fellow in anat., Columbia, 06-10; pres. Nebr. State Anat. Board, 17-; chief-of-staff, St. Joseph's Hosp., Omaha, 18- A.A.; Ass. Anat.; Neur. Ass.; Pub. Health Ass.; Ass. Study Int. Secretions; Soc. Mammal; Nebr. Acad.; Harvey Soc.; fel. N. Y. Acad. (v. pres, 16, 17); fel. N. Y. Zool. Soc. Vascular and nervous systems; salivary glands; Cetacea; Ungulata.
- Schulte, Rev. Theo(dore) J(ohn), S.J.**, St. Louis University, St. Louis, Mo. *Chemistry*. St. Louis, Oct. 5, 80. A.B., St. Louis, 00, A.M., 06, M.S., 10. Prof. chem., St. Louis, 10-11; Loyola, 11-12; *prof. and dean, science dept., St. Louis*, 18- St. Louis Univ. exped. to south. Colo., 10; Glacier and Yellowstone Parks, 13. A.A.; Chem. Soc. Education.
- Schultz, Dr. Adolph H(ans)**, Johns Hopkins Medical School, Baltimore, Md. *Anthropology*. Zürich, Switzerland, Nov. 14, 91. Bern, 11; Ph.D., Zürich, 16. Asst. Zootech. Inst., Bern, 11; *research assoc. dept. embryol., Carnegie Institu-*

- tion, 16- A.A.; Ass. Anat.; Soc. Mammal; Schweiz. Naturforsch. Gesell. Physical anthropology; human craniology; anthropometry of fetuses.
- Schultz, Dr. Alfred R(eginald)**, 800 Vine St, Hudson, Wis. *Geology*. Tomah, Wis, March 26, 76. B.S. Wisconsin, 00; fellow, Chicago, 04-05, Ph.D, 05. Teacher math. and physics, high sch, Wausau, Wis, 00-02; res. hydrologist, Wis, 03; geologist in charge Leith explor. party, Ont, Can, 04; field asst, U. S. Geol. Surv, 05, hydrologic aid, 05-06, geol. aid, 06-07, asst. geologist, 07-10, chairman, phosphate and metalliferous boards land classification, 12-16, geologist, miner. div, 16-18; oil div, U. S. Fuel Ad, 18; *manager, Burkhardt Milling and Elec. Power Co*, 18- A.A.; Geol. Soc; Min. and Metal. Eng; Wash. Acad; Wash. Geol. Soc. Physics; stratigraphic and economic geology; gold; soda; oil; coals; leucite flows; classification and valuation of public coal lands.
- Schultz, Eugene S**, U. S. Department of Agriculture, Washington, D. C. *Plant pathology*. Pa, May 14, 84. B.S. Wisconsin, 13, M.S, 15; Columbia, 15-17. *Plant pathologist, bur. plant indust, U. S. Dept. Agr*, 17- Bot. Soc; Phytopath. Soc; Torrey Bot. Club. Physiological diseases of plants; mosaic diseases; relation of plant diseases to diseases of animals.
- Schultz, L(ouis) G(ustavus)**, Viamont 640, Oficina Meteorológica Argentina, Buenos Aires, Argentina. *Terrestrial magnetism*. Phillipsburg, N. J, Sept. 2, 62. Ph.B, Lafayette, 82; Mass. Inst. Tech, 86-87; Cornell, 87-88. With U. S. Weather Bur, 82-90; in charge, San Antonio Magnetic Observatory, U. S. Coast and Geod. Surv, 90-95; with U. S. Weather Bur, 98-01; in charge, Cheltenham Magnetic Observatory, U. S. Coast and Geod. Surv, 01-03; established observatory for meteorological and solar physical research, and began magnetic surv, Argentine Govt, 03-05; research director, U. S. Weather Bur, 05-06; *chief, magnetic sect, Oficina Meteorológica Argentina*, 06- A.A.; Physical Soc; Astron. Soc. Meteorology.
- Schultz, Dr. Oscar (John) T(heodore)**, Nelson Morris Institute, Michael Reese Hospital, Chicago, Ill. *Pathology, Protozoology*. Mount Vernon, Ind, Sept. 28, 77. A.B, Indiana, 93; M.D, Hopkins, 03; Brooklyn Inst. and Columbia, 04. Res. pathologist, Charity Hosp, Cleveland, Ohio, 03-04; demonstrator path. and protozool, Western Reserve, 04-05, instr, 05-06, lecturer, 07-10, asst. prof. path, 10-13; prof. path. and bacter, Nebraska, 13-16; *director, Nelson Morris Mem. Inst. and laboratories, Michael Reese Hosp*. 16- Capt, M.C, 18-19. A.A; Ass. Path. and Baet; Am. Med. Ass; Chicago Path. Soc. Etiology and pathology of syphilis; dermatopathology; protozoology; biology of tumor cells; histopathology of syphilis; pathogenesis of tuberculosis.
- Schultz, Prof. W(illiam) H(enry)**, Green Spring Ave. and Tarry Road, Mt. Washington, Baltimore, Md. *Pharmacology*. Canal Fulton, Ohio, Sept. 28, 73. Ph.B, Baldwin, 99; Chicago, summers, 00, 01, 05; fellow, Hopkins, 05, Ph.D, 07. In charge science, Shorter Col, 99-03; dept. biol, Southwestern Baptist, 04; instr. physiol. and pharmacol, Missouri, 07-08; assoc. pharmacol, hygienic lab, U. S. Pub. Health and Marine Hosp. Service, 08-13; *prof. pharmacol. and mat. med*, West Virginia, 13-18; George Washington, 19-20; *Maryland*, 20- A.A; Pharmacut. Ass; Physiol. Soc; Soc. Exp. Biol; Soc. Pharmacol. Physiology of heart; pharmacology of chloralhydrate; biological assaying of drugs; the atropin group; pharmacodynamics of anaphylactic shock; anthelmintics; hook worm larvæ; toxic action of certain chemicals for rhabditic larvæ.
- Schultze, Dr. Otto H(enry)**, Cornell Medical College, 28th St. and First Ave, New York, N. Y. *Pathology*. New York, March 10, 67. A.B, Col. City of N. Y, 86; M.D, Columbia, 89. Coroner's physician, County of New York, N. Y, 96-98; *instr. path, med. col, Cornell*, 98-, *prof. med. juris*, 15-; prof. path, Vermont, 00-03. Curator, Bellevue Hosp, 99-04; coroner's physician, Borough of Manhattan, N. Y, 02-15; med. asst. to district attorney, County of N. Y, 15- Ass. Path. and Baet; Soc. Med. Juris; N. Y. Path. Soc. Causes of sudden death; medicolegal relations of autopsies.
- Schulz, Dr. William F(rederick)**, University of Illinois, Urbana, Ill. *Physics*. Baltimore, Md, Jan. 11, 72. Proficient in elec. eng, Hopkins, 93, Ph.D, 08; E.E, Illinois, 00. *Instr. physics, Illinois*, 01-06, *asst. prof*, 08- A.A; Physical Soc. Effect of magnetic field upon absorption spectra of rare earths; the photo-electric cell in stellar photometry.
- Schumann, Dr. Carl Louis**, Pratt and Lambert Varnish Co, Buffalo, N. Y. *Chemistry*. Morris, Minn, Oct. 11, 88. B.S, N. Dak. Col, 13; M.S, Michigan, 14, fellow, Ph.D, 16. *Instr. chem*, Minnesota, 15-16, org. chem, 16-19; *chief chemist, Pratt and Lambert Varnish Co*, 19- Vegetable oils; China-wood oils.
- Schurman, Pres. J(acob) G(ould)**, 41 East Ave, Ithaca, N. Y. **Philosophy, Education*. Free-town, Prince Edward Island, May 22, 54. B.A, London, 77, M.A, 78; D.Sc, Edinburgh, 78, Hibbert fellow (Heidelberg, Berlin, Göttingen and Italy), 78-80, LL.D, 02; Columbia, 92; Yale, 01; Williams, 08; Dartmouth, 09; Harvard, 09; Brown, 14; Pennsylvania, 17. Prof. English lit, polit. econ. and psychol, Acadia, 80-82; metaphysics and English lit, Dalhousie, 82-86; Sage prof. philos, Cornell, 86-92, pres, 92-20. Senior ed, 'Philos. Rev,' 92-02; ed, 'Sch. Rev,' 93-95; chairman, first U. S. Philippine Commission, 99; U. S. Minister to Greece and Montenegro, 12-13; first v. pres, N. Y. State Constitutional Convention, 15. A.A.
- Schwab, Dr. Charles M(ichael)**, 111 Broadway, New York, N. Y. *Mechanical engineering*. Williamsburg, Pa, Feb. 18, 62. St. Francis (Pa); hon. D.Eng, Lehigh, 14; LL.D, Lincoln Mem. Univ, 17; D.Com. Sci, N. Y. Univ, 18. Supt, Edgar Thomson Steel Works and Homestead Steel Works, 92-96; mem. board of managers, Carnegie Steel Co, 96-97, pres, 97-01; U. S. Steel Corp, 01; *chairman, Bethlehem Steel Corp*. Director-gen, Emergency Fleet Corp. Trustee, Cornell; Lehigh; Pa. State. Légion d'honneur. Mech. Eng; Min. Eng;

- Naval Archit; Am. Iron and Steel Inst. (director); British Iron and Steel Inst.
- Schwab, Dr. Sidney I(saac)**, 608 Humboldt Building, St. Louis, Mo. *Neurology*. M.D, Harvard, 96; Berlin, Paris, Vienna, 96-99. Prof. nervous and mental diseases, St. Louis, 04-12; *prof. clin. neur., Washington (St. Louis)*, 13- A.A.; Neur. Ass; Psychopath. Ass.
- Schwartz, Prof. Frederick W(illiam)**, 439 Hamilton St, Albany, N. Y. *Chemistry*. Albany, Sept. 2, 83. B.S, Rensselaer, 05; Ph.D, Columbia, 11. Asst. chem, Rensselaer, 05-10; physical chem, Columbia, 10-11; instr. chem, *Rensselaer*, 11-13, asst. prof. *anal. chem.*, 13-19, *prof.*, 19- A.A.; Chem. Soc; Water Works Ass; Pub. Health Ass; New Eng. Water Works Ass. Drop weights and surface tension of esters; nitroso compounds; chlorin in potable water; terpenes.
- Schwarze, Carl Alois**, 8610 Ferriss St, Woodhaven, L. I, N. Y. *Plant pathology*. Brooklyn, N. Y, Sept. 27, 86. B.S, Missouri; A.M, Columbia. Asst. bot, Columbia, 11-12; asst. state plant pathologist, N. J. Exp. Sta, 12-18; with M.C, U.S.A, 18-19; *asst. bot, Columbia*, 19- Bot. Soc; Phytopath. Soc; Torrey Bot. Club. Parasitic fungi of New Jersey.
- Schwatt, Prof. I(saac) J(oachim)**, University of Pennsylvania, Philadelphia, Pa. *Mathematics*. Mitau, Russia, June 18, 67. Ph.D, Pennsylvania, 93. Instr. *math, Pennsylvania*, 93-97, asst. prof, 97-09, *prof.*, 09- A.A.; Math. Soc; Math. Verein.
- Schweinitz, Prof. George Edmund de**, 1705 Walnut St, Philadelphia, Pa. *Ophthalmology*. Philadelphia, Oct. 26, 58. A.B, Moravian Col, 76, A.M, 82, L.H.D, 20; M.D, Pennsylvania, 81, LL.D, 14. *Prof. ophthal.*, Phila. Polyclinic, 91-94; Jefferson Med. Col, 92-02; *Pennsylvania*, 02- Consulting ophthal. surgeon, Phila. Gen. Hosp; Orthop. Hosp; prosector anat, Pennsylvania, 83-88, lecturer med. ophthalmoscopy, 91-92; first lieut, M.R.C, 08, major, 17-18, lieut. col, 18-19; col, M.C, 19. Alvarenga prize, Phila. Col. Physicians, 94. A.A; Am. Med. Ass. (pres, ophthal. sect, 97); Ophthal. Soc. (pres, 15); Philos. Soc; Phila. Acad; Phila. Med. Neur. and Path. Societies; Phila. Col. Physicians (pres, 10-13); Int. Cong. Ophthal. Toxic amblyopias; the relation of auto-intoxication to ocular disorders; pathology of various ocular diseases; relation of cerebral decompression to cure of choked disc; ocular angio-sclerosis; pathogenesis of choked disc; relation of focal infection to ocular diseases; keratitis.
- Schwyzer, Dr. Fritz**, Kastanienbaum bei Lucerne, Switzerland. *Medicine*. Zürich, Switzerland, Aug. 19, 64. M.D, Würzburg, 87; Staatsexamen, Zürich, 88. Asst. path. anat, Zürich, 88-89; pathologist, German Hosp, N. Y, 94-03, *consulting physician*, 09- Physician, St. Francis Hosp, 00, consulting physician, 07- Ass. Path. and Bact. Pathological anatomy; permeability of kidneys for microbes; adenoma hepatis; electrotropism; carcinoma glandulae Bartholdi; fistula penis congenita; stenosis pylori congenita; chronic fluorin poisoning in man and in animals; significance of the elastic tissue of the aorta; angiospasm in malaria; coagulability of the blood and its management; heart diseases.
- Scoates, Prof. D(aniels)**, College Station, Tex. *Agricultural engineering*. Crown Point, Ind, Jan. 27, 82. B.S, Iowa State, 10, A.E, 15. Asst. *agr. eng.*, Mont. Col, 10; prof, Miss. Agr. Col, 10-19; *Tex. Col.*, 19- Agr. Eng. (pres, 18). Farm buildings; farm mechanics; home conveniences.
- Scofield, C(arl) S(churz)**, Lanham, Md. *Botany, Agriculture*. Bloomington, Minn, Feb. 5, 75. B.S.A, Minnesota, 00. Asst, *bur. plant indust.*, U. S. Dept. Agr, 00-05, *agriculturist in charge west. irrig. agr.*, 05- A.A; Ass. Geog; Wash. Bot. Soc. Wild rice; varieties of wheat; commercial grading of corn; dry farming in the Great Basin; problems of irrigation farming.
- Scott, Dr. Arthur Curtis**, 321-2 Slaughter Building, Dallas, Tex. *Electrical engineering*. Belmont, N. Y, Aug. 31, 73. B.S, R. I. Col, 95; Ph.D, Wisconsin, 02. Instr. chem, R. I. Col, 94-95, physics, 95-97, prof, 97-03; elec. eng, Texas, 03-11; *consulting engineer*, 11- Valuation, construction and designing engineering for various industrial concerns. Elec. Eng; Mech. Eng; Eng. Educ. Rotations produced by current from a single-phase alternator; summary of glacier work; lignite producer gas and gas engines; hydroelectric plants; Texas fuel properties; refrigeration; water works; irrigation; steam and gas engineering.
- Scott, Prof. C(harles) C(arrington)**, Austin College, Sherman, Tex. *Chemistry*. Lexington, Va, Dec. 7, 66. A.B, Hampden-Sidney, 88; Virginia, 89; hon. Sc.D, Austin, 96; Hopkins, 96-98; Chicago, 04; Heidelberg, 07-08. *Prof. chem.*, Austin, 89-96, 00- A.A; Chem. Soc. Hydro-nitric acid.
- Scott, Prof. Charles F(elton)**, 19 Trumbull St, New Haven, Conn. **Electrical engineering*. Athens, Ohio, Sept. 19, 64. A.B, Ohio State, 85; Hopkins, 86-87; D.Eng, Stevens, 12; Sc.D, Pittsburgh, 12. With Westinghouse Elec. and Mfg. Co, 88, asst. electrician, 91-93, electrician, 93-96, chief electrician, 96-04, consulting engineer, 04-11, *prof. elec. eng.*, Yale, 11- A.A; Elec. Eng. (pres, 02); Philos. Soc; West. Pa. Eng. Soc. (pres, 02); British Inst. Elec. Eng. Electricity, particularly alternating current in the transmission and utilization of power.
- Scott, Prof. C(harlotte) A(ngas)**, Bryn Mawr, Pa. **Mathematics*. Lincoln, England, June 8, 58. Girton, 76-80; B.Sc, London, 82, Sc.D, 85. Lecturer *math*, Girton, 80-84; assoc. prof, *Bryn Mawr*, 85-88, *prof.*, 88- Head examiner math, Col. Entrance Exam. Board, 02, 03; on staff, 'Am. Jour. Math.' U. S. delegate, Int. Cong. Math, Paris, 00. Math. Soc; London Math. Soc; Edinburgh Math. Soc; Math. Verein; hon. mem. Amsterdam Math. Soc; Circolo Mat. di Palermo. Theory of plane algebraic curves (singularities, intersections, systems of curves, transformation, nature of circuits).
- Scott, Dr. Colin A(lexander)**, Mt. Holyoke College, South Hadley, Mass. *Psychology*. Ottawa, Can, Feb. 11, 61. B.A, Queen's (Can), 85; Ph.D, Clark, 96. Teacher chem, Ottawa Col. Inst, 84-93; psychol, Chicago Nor. Sch, 96-01; Colo. Nor. Sch, 01-02; Boston Nor. Sch, 02-10;

- prof. psychol. and educ.*, Tufts, 10-11; Boston Nor. Sch., 11-15; *educ.*, Mt. Holyoke, 15-Teacher psychol., Wis. Nor. Sch.; lecturer, Chicago and Chautauqua; ed., 'Child-study Quarterly'; 'Social Educ. Quarterly.' Psychol. Ass. Psychology of leadership; social groups in schools as a condition of education; social education.
- Scott, Prof. Ernest**, Ohio State University, Columbus, Ohio. *Pathology*. Athens, Ohio, July 30, 75. B.S., Ohio State, 97; M.D., Ohio Med. Univ., 00. Asst. physician, Columbus State Hosp., 00-01; bacteriologist, Columbus Board of Health, 04-08; *prof. path.*, Starling Ohio Med. Col., 07-13; *asst. prof. vet. path.*, Ohio State, 10-14, *prof. path.*, 14- Pathologist, Protestant and St. Francis Hospitals, 08- A.A.; Am. Med. Ass.; Pub. Health Ass.; Int. Ass. Med. Mus. Botulism; cancer; lymphoblastoma.
- Scott, Dr. Ernest L(yman)**, 437 W. 59th St, New York, N. Y. *Physiology*. Kinsman, Ohio, Aug. 18, 77. B.S., Ohio Wesleyan, 02; fellow, Chicago, 09-11, M.S., 11; Ph.D., Columbia, 14. Teacher, high sch., Bay City, Mich., 03-09; *asst. physiol.*, Chicago, 09-11; *asst. prof.*, Kansas, 11-12; *instr.* and *assoc.*, Columbia, 12-19, *asst. prof.*, 19- Aid, U. S. Coast and Geod. Surv., 02; *instr.*, Columbia, summers, 11, 14; *capt.* and *major*, U.S.A., 17-19. A.A.; Chem. Soc.; Physiol. Soc.; Soc. Exp. Biol.; Soc. Biol. Chem. Carbohydrate metabolism.
- Scott, E(ugene) W(iley)**, U. S. Insecticide Laboratory, Vienna, Va. *Entomology*. Sugar Grove, Va., March 17, 86. B.S., Va. Polytech., 09; Cornell, 01-11. *Asst. bur. entom.*, U. S. Dept. Agr., 09- A.A.; Entom. Soc.; Ass. Econ. Entom.; Wash. Entom. Soc. The lesser bud-moth; lime-sulphur concentrate.
- Scott, Prof. F(rederick) H(ughes)**, University of Minnesota, Minneapolis, Minn. *Physiology*. Toronto, Can., Feb. 19, 76. B.A., Toronto, 97, Ph.D., 00, M.B., 04; MacKinnon student, Royal Soc. London, 06-07; Sc.D., London, 08. Demonstrator *physiol.*, Toronto, 00-04; Sharpey student and *asst.*, Univ. Col., London, 07-08; *asst. prof. physiol.*, Minnesota, 08-12, *assoc. prof.*, 12-18, *prof.*, 18- A.A.; Physiol. Soc.; Soc. Biol. Chem.; London Physiol. Soc. Microchemistry; chemistry of phosphorus bodies; respiration and nervous activity; phosphorus compounds of tissues and their metabolism; interchange of tissue fluids and blood.
- Scott, Prof. George G(ilmore)**, College of the City of New York, New York, N. Y. *Biology*. Geneseo, N. Y., May 3, 73. A.B., Williams, 98, A.M., 99; Ph.D., Columbia, 13. *Assoc. prof. biol. and chairman of dept.*, Col. City of N. Y. Investigator, U. S. Bur. Fisheries, 13-14. A.A.; Soc. Nat.; Soc. Zool.; Soc. Exp. Biol.; hon. mem. N. Y. Zool. Soc. Regeneration in fishes; osmotic relations and oxygen utilization of aquatic animals; conservation of fish food.
- Scott, I(rving) D(ay)**, University of Michigan, Ann Arbor, Mich. *Geology, Physiography*. Omaha, Nebr., Sept. 16, 77. A.B., Oberlin, 00; A.M., Michigan, 07, Ph.D., 12. Teacher, high sch., Syracuse, N. Y., 01-06; *asst. miner.* and *geol.*, Michigan, 06-07, *instr. physiog. geol.*, 07-13, *asst. prof.*, 13-20, *assoc. prof.*, 20- A.A.; Mich. Acad. American minerals; physical geology.
- Scott, Prof. John W(illiam)**, University of Wyoming, Laramie, Wyo. *Zoology*. Lewis Co., Mo., July 1, 71. A.B., Missouri, 96, A.M., 97; fellow, Chicago, 02-04, Ph.D., 04. Teacher *zool.*, high sch., Mexico, Mo., 97-01; *head, dept. biol.*, Westport High Sch., Kansas City, Mo., 04-11; *instr. zool.*, Kansas State, 11-12, *asst. prof.*, 12-13; *prof. zool. and research parasitologist*, Wyoming, 13- Instr. biol., Woods Hole, 08-11. Mem. ed. board, 'Jour. of Parasitol.', 14- A.A.; Soc. Nat.; Soc. Zool.; Ass. Anat.; Micros. Soc. Economic zoology; parasitology; embryology; parthenogenesis and egg-laying habits of Amphitrite; insect transmission of swamp fever; Sarcosporidia.
- Scott, Dr. Katharine J(ulia)**, Pittsfield, N. H. *Anatomy*. New York, N. Y., June 23, 89. A.B., Wellesley, 10; M.D., Hopkins, 15. *Asst. anat.*, California, 15-16, *instr.*, 16- A.A.; Ass. Anat.; West. Soc. Nat. Histology.
- Scott, Pres. Walter Dill**, 819 Lincoln St, Evanston, Ill. **Psychology*. Cooksville, Ill., May 1, 69. A.B., Northwestern, 95; McCormick Theol. Sem., 95-98; Ph.D., Leipzig, 00. Instr. psychol. and pedag., Northwestern, 00-01, *asst. prof. psychol.*, 01-08, *prof.*, 08-20, *director, psychol. lab.*, 01-20, *pres.*, 20-; *pres.*, The Scott Co., 19- Cooperating ed., 'Psychol. Bul'; *director, bur. salesmanship research*, Carnegie Inst. Tech., 16-17; *director, committee on classification of personnel*, U.S.A., 17-19; *col.*, 18-19; *mem. div. psychol. and anthrop.*, Nat. Research Council, 19-20. D. S. medal, 19. A.A.; Psychol. Ass. (pres, 19); Taylor Soc.; Indust. Relations Ass.; Nat. Ass. Adv. Teachers (pres, 15). Theory of advertising; psychology of public speaking; efficiency; influencing men in business; individual differences; motivation; vocational selection; occupational descriptions; personnel administration.
- Scott, Dr. Walter M(oody)**, 23 Edgerton St, South Manchester, Conn. *Chemistry*. Pequabuck, Conn., June 13, 92. Ph.B., Yale, 12, Ph.D., 15. *Chief chemist*, Cheney Bros., 15- Chem. Soc. Organic chemistry; chemical composition of silk; dyestuffs.
- Scott, Wilfred W(elday)**, Coytesville, N. J. *Chemistry*. Zanesville, Ohio, Aug. 13, 76. A.B., Ohio Wesleyan, 97, A.M., 02; Cornell, 03-05; Chicago, summer, 09; Harvard, 10-11. Instr., Philander Smith, 98-01; Claflin, 02-03, *prof. chem.*, Morningside, 05-09; *chief chemist*, Baldwin Locomotive Works, 09-10; *engineer and research chemist*, Gen. Chem. Co., 10- A.A.; Chem. Soc.; Sioux City Acad. Sioux City by-products; combustion pipettes for determination of hydrogen and methane in illuminating gas; fertilizers; land plaster action on manures in retaining ammonia; ferrous sulphate method for volumetric determination of nitrates; standard methods of chemical analysis.
- Scott, Prof. Will**, Indiana University, Bloomington, Ind. *Zoology*. Houston, Ind., April 20, 77. Fellow, Indiana, 07-08, A.B., A.M., 08, Ph.D., 11. Instr. *zool.*, Indiana, 08-11, *asst. prof.*, 11-19, *assoc. prof.*, 19- Director, biol. sta., Indiana. A.A.; fel. Soc. Zool.; Ecol. Soc.; Ind. Acad. Cave plankton; ecology of ponds; limnology.

- Scott, Prof. W(illiam) B(erryman)**, 56 Bayard Lane, Princeton, N. J. **Paleontology*. Cincinnati, Ohio, Feb. 12, 58. A.B., Princeton, 77; Ph.D., Heidelberg, 80; LL.D., Pennsylvania, 06; Sc.D., Harvard, 09; Oxford, 12. Asst. geol., Princeton, 80, *Blair prof. geol. and paleont.*, 84—Wollaston medal, London Geol. Soc., 10. Nat. Acad.; Soc. Nat.; Paleont. Soc. (pres., 11); Geol. Soc.; Philos. Soc. (v. pres., 10); Am. Acad.; Wash. Acad.; British Ass.; London Geol. Zool. and Linnean Societies. Vertebrate paleontology; the extinct mammalian fauna of Patagonia.
- Scott, W(illiam) M(oore)**, 2551 17th St., N. W., Washington, D. C. *Horticulture*. Sugar Grove, Va., May 30, 73. B.S., Va. Polytech., 96, M.S., 98. Asst. horticulturist, Va. Polytech., 96–98; state entomologist, Ga., 98–03; pathologist, bur. plant indust., U. S. Dept. Agr., 04–12; Gen. Chem. Co., 12–16; grades and standards specialist, bur. markets, U. S. Dept. Agr., 16–19; *horticulturist*, *Am. Fruit Growers, Inc.*, 19—A.A.; Phytopath. Soc.; Bot. Soc.; Ass. Econ. Entom.; Wash. Biol. Soc. Orchard diseases; fruit industries.
- Scoville, Wilbur L(incoln)**, Parke, Davis and Co., Detroit, Mich. *Chemistry, Pharmacy*. Bridgeport, Conn., Jan. 22, 65. Ph.G., Mass. Col. Pharmacy, 89. Prof. pharmacy, Mass. Col. Pharmacy, 91–04; anal. chemist, Boston, Mass., 04–07; *research chemist*, *Parke, Davis and Co., Detroit, Mich.*, 07—Mem. committee of revision, U. S. Pharmacopeia, 00–10, v. chairman, 20—; Nat. Formulary, 3d and 4th editions, chairman, 4th revision and 5th edition. A.A.; Pharmaceut. Ass.; Chem. Soc.; Soc. Chem. Indust. Drug assays; pharmaceutical manufacturing and practice.
- Scribner, C(harles) E(zra)**, 463 West St., New York, N. Y. *Electrical engineering*. Mt. Vernon, Ohio, Feb. 16, 58. Toledo High School. Engineer, *West. Elec. Co.*, 76–08, *chief engineer*, 08—Gold medal, Paris Expos., 00. Fel. Elec. Eng. (manager, 12, v. pres., 13–15, director). Telephone switchboards.
- Scripture, Dr. E(dward) W(heeler)**, London, England. **Psychology*. Mason, N. H., May 21, 64. A.B., Col. City of N. Y., 84, A.M., 90; Ph.D., Leipzig, 91; M.D., Munich, 06. Instr. exp. psychol., Yale, 92–01, director, psychol. lab., 98–03, asst. prof., 01–03; assoc. in psychiatry, Columbia, 09–14. Asst. ed., 'Am. Jour. Psychol.', 91–92; ed., 'Studies from the Yale Psychol. Lab.', 92–03. Gold medal, Paris, 00; Longstreth medal, Franklin Inst., 02. Association of ideas; applications of psychology to education; gramophone and phonograph curves of various languages and dialects; instruments for detecting color-blindness; production of anesthesia by electricity; experimental psychology of nervous and mental diseases.
- Scudder, Dr. Charles L(ocke)**, 144 Commonwealth Ave., Boston, Mass. *Surgery*. Kent, Conn., Aug. 7, 60. A.B., Yale, 82, Ph.B., 83; M.D., Harvard, 88. *Consulting surgeon*, *Mass. Gen. Hosp., Boston*. Consulting surgeon, Melrose, Fitchburg, Natick, Gloucester and Milford Hospitals; asst. prof. surg., Harvard Med. Sch. Am. Med. Ass.; Soc. Thoracic Surg.; Surg. Ass.; Soc. Clin. Surg.; Boston Soc. Med. Improv.
- Seagrave, F(rank) E(vans)**, Observatory, North Scituate, R. I. *Astronomy*. Providence, R. I., March 29, 60. Harvard Col. Observatory, 75–77; A.M., Brown, 10. Solar eclipse expeditions, Tex., 78, Germany, 87, N. C., 00. A.A.; Soc. Astron. de Mex.; British Astron. Ass.; Soc. astron. de France. Theoretical astrophysics; orbits; Ephemerides of various comets; asteroids; variable stars of third type; ring system of Saturn.
- Seale, Alvin**, Santa Cruz, Calif. *Ichthyology*. Fairmount, Ind., July 8, 73. A.B., Stanford, 05. Curator fishes, Bishop Museum, Honolulu, 01–04; asst., Smithsonian Inst., 05; chief, Div. of Fisheries, P. I., 07–16; *with museum comp. zool.*, *Harvard*, 16—Stanford exped. to Point Barrow, Alaska; chief, Bishop Museum exped. to South. Pacific, New Zealand and Australia, 01–03; chief, California Alexander exped. to Alaska, 06. West. Soc. Nat.; Wash. Biol. Soc.; Far East. Med. Soc. Systematic ichthyology; ichthyology of the Philippine Islands; clupeoid fishes.
- Seaman, Prof. A(rthur) E(dmund)**, Houghton, Mich. *Geology, Mineralogy*. Casnovia, Mich., Dec. 29, 58. B.S., Mich. Col. Mines, 95, E.M., 18. Asst. miner. and geol., *Mich. Col. Mines*, 90–93, instr., 93–95, asst. prof., 95–97, *prof.*, 97—With Mich. Geol. Surv., 85–93. A.A.; Geol. Soc.; Am. Geog. Soc.; Mich. Acad.; Lake Superior Min. Inst. Stratigraphy of Lake Superior region.
- Seares, Prof. F(rederick) H(anley)**, Observatory Office, Pasadena, Calif. **Astronomy*. Cassopolis, Mich., May 17, 73. B.S., California, 95, fellow, 95–96, 98–99; Berlin, 99–00; Paris, 00–01. Instr. astron., California, 96–98; prof. and director, Laws Observatory, Missouri, 01–09; *supt.*, *computing div.*, and *ed.*, *publications*, *Mt. Wilson Observatory, Carnegie Institution*, 09—Nat. Acad.; A.A.; Astron. Soc.; Philos. Soc.; Pacific Astron. Soc. (mem. pub. committee, 97, second v. pres., 97, third v. pres., 98); Wash. Acad.; for. assoc. Royal Astron. Soc.; Soc. astron. de France. Theory of orbits and perturbations; practical astronomy; stellar photometry; distribution of stars; general magnetic field.
- Searle, Dr. Harriet Richardson**, 1810 Wyoming Ave., Washington, D. C. *Zoology*. Washington. A.B., Vassar, 96, A.M., 01; Ph.D., George Washington, 03. *Collaborator*, *Smithsonian Inst.*, 01—A.A.; Wash. Acad.; Wash. Biol. Soc.; Wash. Soc. Fine Arts. Isopod Crustacea; systematic work on the Isopoda.
- Sears, Dr. Geo(rge) G(ray)**, 426 Beacon St., Boston, Mass. *Medicine*. Boston, Oct. 22, 59. A.B., Amherst, 80; M.D., Harvard, 85. Instr. *clin. med.*, *Harvard Med. Sch.*, 97–01, asst. prof., 01–11; prof., 11–19. *emer. prof.*, 19—Visiting physician, Boston City Hosp., 02–19, consulting physician, 19—Emer. mem. Am. Physicians; Am. Med. Ass.; Boston Soc. Med. Improv. Clinical manifestations of disease.
- Sears, Prof. George Wallace**, 917 N. Virginia St., Reno, Nev. *Chemistry*. Kidder, Mo., July 9, 78. B.S., Drury, 08; M.S., Illinois, 11, Ph.D., 14. Instr. *chem.*, Illinois, 14–17; *Nevada*, 17–18, *assoc. prof.*, 18—Chem. Soc. Rarer metals; qualitative analysis.
- Sears, Prof. H(arry) J(ohnson)**, 347 E. 51st St., Portland, Oregon. *Bacteriology*. Daviess Co.,

- Mo, Feb. 13, 85. A.B, Stanford, 11, A.M, 12, Ph.D, 16. Instr. chem, Stanford, 11-12, bacter, 13-16; city bacteriologist and chemist, Berkeley, Calif, 16-18; *prof. bacter, med. sch, Oregon, 18-* Soc. Bact; Chem. Soc. Chemistry; nitrogen metabolism of bacteria.
- Sears, Dr. Julian D(ucker)**, U. S. Geological Survey, Washington, D. C. *Geology*. Baltimore, Md, June 3, 91. A.B, Hopkins, 13, fellow, 15-16, Ph.D, 19. Geol. aid, U. S. Geol. Surv, 15-16; geologist, Sinclair Cent. Am. Oil Co, 17-18; asst. geologist, U. S. Geol. Surv, 18, assoc. geologist, 18-20, *geologist, 20-* Stratigraphic and structural geology; coal; manganese.
- Sears, Prof. Paul B(igelow)**, University of Nebraska, Lincoln, Nebr. *Botany*. Bucyrus, Ohio, Dec. 17, 91. A.B, B.S, Ohio Wesleyan, 13; A.M, Nebraska, 15. Instr. bot, Ohio State, 15-19, *asst. prof, Nebraska, 19-* A.A; Bot. Soc; Ohio Acad; Nebr. Acad. Insect galls; vegetation of glaciated Ohio; parthenogenesis.
- Sease, Dr. V(irgil) B(ernard)**, 103 Second Ave, Newark, N. J. *Chemistry*. Leesville, S. C, Sept. 13, 88. A.B, Newberry, 08; fellow, Hopkins, 16-17, Ph.D, 17. Instr. chem, Newberry, 11-13; *research chemist, E. I. duPont de Nemours and Co, 17-* Chem. Soc. Vapor pressure of aqueous solutions.
- Seashore, Prof. C(arl) E(mil)**, Iowa City, Iowa. **Psychology*. Mörlunda, Sweden, Jan. 28, 66. A.B, Gustavus Adolphus, 91; Ph.D, Yale, 95. Asst. psychol. lab, Yale, 95-97; asst. prof. philos, Iowa, 97-02, *prof. psychol, 02-*, head, dept. philos. and psychol, 05-, dean, grad. col, 08- Mem. div. psychol. and anthropol, Nat. Research Council. A.A; Psychol. Ass. (pres, 11); West. Philos. Ass; Iowa Acad. Psychology of music; basic motor capacities; work and fatigue; the periodicity of mental work; normal illusions; localization of sound; voluntary control of the pitch of the voice; pitch discrimination.
- Seaver, Dr. Fred J(ay)**, New York Botanical Garden, Bronx Park, New York, N. Y. *Botany*. Webster Co, Iowa, March 14, 77. B.S, Morning-side, 02; fellow, Iowa, 03-04, M.S, 04, Ph.D, 12; fellow, Columbia, 06-07. Asst. bot, Iowa, 04-05; prof. biol, Iowa Wesleyan, 05-06; asst. prof. bot, N. Dak. Col. and mycologist, Exp. Sta, 07-08; director, laboratories, N. Y. Bot. Garden, 08-11, *curator, 12-* Assoc. ed, 'Mycologia.' Bot. Soc; Torrey Bot. Club; Iowa Acad. Mycology; the cup fungi of North America.
- Sedgwick, Prof. J(ulius) P(arker)**, University of Minnesota, Minneapolis, Minn. *Pediatrics*. Wrightstown, Wis, May 27, 76. B.S, Nebraska, 96; M.D, Rush Med. Col, 99. Asst. prof. physiol. chem, Minnesota, 10-11, *prof. pediat. and chief of dept, 15-* Pediat. Soc; Soc. Clin. Invest; Am. Med. Ass. (chairman, sect. diseases of children, 17). Physiology of the newborn; breast feeding; splitting of fat in the infant stomach.
- Sedgwick, Prof. W(illiam) T(hompson)**, Massachusetts Institute of Technology, Cambridge, Mass. **Biology, Public health*. West Hartford, Conn, Dec. 29, 55. Ph.B, Yale, 77, hon. Sc.D, 09; fellow, Hopkins, 79-80, Ph.D,
- 81; LL.D, Cincinnati, 20. Instr. physiol. chem, Yale, 78-79; *biol*, Hopkins, 80-81, assoc, 81-83; asst. prof, Mass. Inst. Tech, 83-87, assoc. prof, 87-91, *prof, 91-* Biologist, Mass. State Board of Health, 88-96; curator, Lowell Inst, Boston, 97-; chairman, Pauper Inst. trustees, Boston, 97-99; trustee, Simmons, 99-; pres, Mass. Civil Service Reform Ass, 00-02; mem. advisory board, U. S. Pub. Health and Marine Hosp. Service, 02-; pres, board of trustees, Sharon Sanatorium; mem. Typhoid Fever Commission, Pittsburgh, 08; exchange prof, Cambridge and Leeds, 20- A.A. (v. pres, 06); Soc. Nat. (pres, 01); Soc. Bact. (pres, 00); Physiol. Soc; Philos. Soc; Pub. Health Ass; Am. Acad; New Eng. Water Works Ass. (pres, 96); Int. Health Board; etc. [Died Jan. 25, 21.]
- See, Prof. T(homas) J(efferson) J(ackson)**, U. S. Naval Observatory, Mare Island, Calif. **Astronomy*. Montgomery City, Mo, Feb. 19, 66. A.B, B.L, B.S, Missouri, 89, A.M, L.M, M.S, 92; Ph.D, Berlin, 92. Instr. in charge, dept. astron, Chicago, 93-96; astronomer, Lowell Observatory, 96-98; *prof. math, U.S.N, 99-* Lecturer sidereal astron, Lowell Inst, Boston, 99. A.A; Math. Soc; Physical Soc; Philos. Soc; Seismol. Soc. (v. pres, 07); Pacific Astron. Soc; Calif. Acad; St. Louis Acad; Wash. Acad; Wash. Philos. Soc; fel. British Ass; fel. Royal Astron. Soc; British Astron. Ass; London Math. Soc; Edinburgh Math. Soc; Astron. Gesell; Math. Verein; Soc. astron. de France; Soc. math. de France; Soc. de Physique; Circolo Mat. di Palermo; Sicilian Acad. Double stars; planets and satellites; earthquakes and mountain formation, including tides; secular effects of resisting medium; porosity under pressure; nebulae and cosmical evolution; electrodynamic wave theory of physical forces; fluctuation of moon's mean motion; motion of Mercury's perihelion and lunar perigee; gravitation; ether; theory of relativity; molecular forces.
- Seelig, Prof. M(ajor) G(abriel)**, University Club Building, St. Louis, Mo. *Surgery*. Helena, Ark, Feb. 19, 74. A.B, Harvard, 96; M.D, Columbia, 00; Berlin, 03-04. Prof. surg, St. Louis, 08-19; *clin. prof, Washington, (St. Louis), 19-* Col. M.R.C. A.A; Col. Surg; Surg. Ass; Am. Med. Ass. Surgical pathology and technique; pathology of sarcomata; pathology of the thyroglossal duct; physiology of shock; pathology of carcinoma of the esophagus; history of medicine.
- Seely, Prof. Fred B**, University of Illinois, Urbana, Ill. *Mechanical engineering*. Chester, N. Y, April 29, 84. B.S, Worcester, 07; M.S, Illinois, 15. Draftsman and testing engineer, Carpenter Steel Co, 07-08; engineer, E. I. duPont de Nemours and Co, 08; instr. mech. eng, Villa Nova, 08-09; *theoret. and applied mech, Illinois, 09-15*, assoc, 15-17, asst. prof, 17-19, *assoc. prof, 19-* Soc. Test. Mat; Eng. Educ. Hydraulics; fatigue of metals; strength of materials; dynamics.
- Segerblom, Wilhelm**, Phillips Exeter Academy, Exeter, N. H. *Chemistry*. Gothenburg, Sweden, Jan. 11, 72. A.B, Harvard, 97. Instr. chem, Phillips Exeter Acad, 99- A.A; Chem. Soc;

- New Eng. Ass. Chem. Teachers; N. H. Acad. Educational chemistry.
- Seibert, Dr. Frank Meyers**, Gulf Pipe Line Co, Houston, Tex. *Chemistry*. Berlin, Pa, Aug. 4, 87. B.S, Pa. State, 10; fellow, Princeton, 15-16, Ph.D, 17. Research chemist, Bur. Mines, 11-14; *director of research, Gulf Pipe Line Co*, 17- Chem. Soc. (chairman, southeast Tex. sect, 18). Specific heats of salts at low temperatures; gas and oil.
- Seidell, Dr. Atherton**, 2301 Connecticut Ave, Washington, D. C. *Chemistry*. Hartwell, Ga, Dec. 31, 78. B.Agr, Georgia, 98, B.S, 99; M.S, George Washington, 01; Ph.D, Hopkins, 03. Asst. chemist, bur. soils, U. S. Dept. Agr, 00-05, bur. chem, 05-06; *chemist, hygienic lab, U. S. Pub. Health Service*, 07- A.A; Chem. Soc; Wash. Acad; Wash. Chem. Soc. (sec'y, 03-05, pres, 19). Solubility of mixtures of two or more electrolytes; composition of precipitated manganese dioxid; solubility of the calcium phosphates; solubilities of inorganic and organic compounds; chemistry of vitamins; chemistry of thyroid; solubilities and physical constants of pharmacopoeial compounds.
- Seil, Dr. Harvey A(mbrose)**, Youngstown Chemical Co, Youngstown, Ohio. *Chemistry*. Doylestown, Ohio, Feb. 5, 82. A.B, Columbia, 03, Ph.D, 06. Asst. chem, Columbia, summer, 06; chemist, G. F. Harvey Co, Saratoga, N. Y, 06-07; food and drug inspection chemist, bur. chem, U. S. Dept. Agr, Washington, D. C, 07-08, N. Y. City, 08; *with Youngstown Chem. Co*. Chem. Soc. Quinazolines; 6-nitro diketodehydroquinazoline derivatives; method for determination of morphine.
- Selby, Augustine D(awson)**, Ohio Agricultural Experiment Station, Wooster, Ohio. *Botany*. Athens Co, Ohio, Sept. 2, 59. B.S, Ohio State, 93. Supt. schools, Huntington, W. Va, 84-86; principal, high sch, Ironton, Ohio, 86-87; teacher bot, high sch, Columbus, Ohio, 90-94; botanist and chemist, *Ohio Exp. Sta*, 94-02, *botanist*, 02- A.A; Bot. Soc; Phytopath. Soc. (pres, 11); Bot. Cent. States; Ohio Hort. Soc. (chairman, committee veg. path, 95-); Ohio Acad. (pres, 01); Columbus Hort. Soc. (sec'y, 88, 91-94); St. Louis Acad. Diseases of plants.
- Selga, Prof. Miguel**, Manila Observatory, Manila, P. I. *Astronomy*. Rajadell, Spain, Nov. 25, 79. A.B, Barcelona, 04; Ph.D, Zaragoza, Spain, 08; D.D, Woodstock, 12. Prof. math, 04, 09; *with P. I. Weather Bur. and Manila Observatory*, 16- Volunteer research asst, Georgetown Observatory, summers, 11, 12; Harvard, 13; Lowell, 14; Liek, 15. A.A; Astron. Soc; Pacific Astron. Soc; Soc. astron. de France. Spectroscopy; radial velocities of stars and nebulae; double stars; climatology of the Philippine Islands.
- Sellards, Prof. A(ndrew) W(atson)**, Harvard Medical School, Boston, Mass. *Medicine*. Scranton, Kans, Nov. 9, 84. A.B, Kansas, 03, A.M, 04; M.D, Hopkins, 09. Asst, Bur. Science, P. I, 09-11; instr. med, Hopkins, 11-14; assoc. and later asst. prof. *tropical med, Harvard Med. Sch*, 14- Asst. res. physician, Hopkins Hosp, 11-14; asst. physician, Mass. Gen. Hosp, 14-; mem. Harvard Sch. Tropical Med. exped. to S. Am, 13; Red Cross sanit. exped. to Serbia, 15. Am. Physicians; Soc. Clin. Invest. Tropical medicine; cholera Asiatica; amebic dysentery; verruga Peruviana; oroya fever; nephritis; acidosis.
- Sellards, Dr. E(lias) H(oward)**, Bureau of Economic Geology, Austin, Tex. *Geology*. Carter City, Ky, May 2, 75. A.B, Kansas, 99, A.M, 00; fellow, Yale, 02-03, Ph.D, 03. Asst. paleontologist, Kans. Univ. Geol. Surv, 00-01; field asst, Carnegie Museum, 03; instr. geol. and miner, Rutgers, 03-04; prof. geol. and zool, Florida, 04-07; state geologist, Fla, 07-18; *geologist, bur. econ. geol, Texas*, 18- A.A; Geol. Soc; Paleont. Soc; Soc. Vert. Paleont. Paleozoic plants and insects; underground water supply, geology and mineral resources of Florida; geology of Texas.
- Sellers, Dean J(ames) F(reeman)**, Oglethorpe University, Ga. *Chemistry*. Starkville, Miss, June 1, 62. A.B, Mississippi, 85, A.M, 90, LL.D, 17; student, Virginia, 92; Chicago, 96-97. Teaching fellow, Chicago, 97-98; prof. chem, Mississippi Col, 88-83; Mercer, 93-18, dean, 14-18; educ. sec'y, Y.M.C.A, England, 18; *prof. chem, A.E.F. Univ, Beaune*, 19; *dean, sch. science, Oglethorpe*, 19- A.A; Chem. Soc. (pres, Ga. sect, 06). Qualitative chemical analysis; Georgia kaolins; drinking waters and clays of Georgia.
- Sellew, Prof. George T(ucker)**, Galesburg, Ill. *Mathematics*. Gowanda, N. Y, Oct. 26, 66. A.B, Rochester, 89, A.M, 92; Cornell, 93-94; Yale, 96-98, Ph.D, 98. Instr. math, Ohio Mil. Acad, 89-92; Pa. State, 92-93, 94-96; Yale, 98-99; *prof, Knox*, 99- A.A; Math. Soc.
- Selling, Dr. Laurence**, Selling Building, Portland, Oregon. *Medicine*. Portland, March 18, 82. A.B, Yale, 04; M.D, Hopkins, 08, fellow, Rockefeller Inst, 09. Instr. med, Oregon, 12- Ass. Anat; Am. Med. Ass. Action of benzol on the blood; structure of the brain cortex in tabes; nephritis; electrical reactions in myotonia congenita.
- Semmes, Dr. Douglas E(amsay)**, Tampico, Mex. *Geology*. Alexandria, Va, Nov. 24, 92. A.B, Virginia, 12, A.M, 13, fellow, 14-16; Ph.D, Columbia, 17. Geologist, P. B. Nat. Hist. Surv, 15; Tex. Co, 16-17; assoc. prof. geol, Tex. Col, 17-18; consulting geologist, 18-19; prof. geol, Alabama, 19-20; *asst. chief geologist, Cia Mex. de Pet. "El Aguila"*, 20- A.A; Min. and Metal. Eng; Ass. Petrol. Geol. Applied geology; areal geology of Porto Rico; oil and gas in Alabama.
- Simple, Miss Ellen Churchill**, 509 W. Ormsby Ave, Louisville, Ky. *Geography*. Louisville, 63. A.B, Vassar, 82, A.M, 91; Leipzig, 91-92, 95. Lecturer anthropogeography, Chicago, various years, 06-20; Oxford, England, 20. Cullom gold medal, Am. Geog. Soc, 13. Ass. Geog. (v. pres, 08, pres, 21). Anthropogeography.
- Senior, Prof. H(arold) D(ickinson)**, 129 E. 17th St, New York, N. Y. *Anatomy*. Croydon, England, Oct. 30, 70. Chatham House Col, Ramsgate, England, 79-87; Charing Cross Hosp. Med. Sch, 87-92; M.B, Durham, 94, M.D, 18. M.R.C.S, L.R.C.P, 92; F.R.C.S, 95; Sc.D, Syra-

- cuse, 10. Asst. demonstrator *anat*, Durham, 93-94; demonstrator, Charing Cross Hosp. Med. Sch., 95-96; Medico-Chirurg. Col, Phila., 01-03; junior assoc, Wistar Inst, Phila., 04-05, assoc, 05-07; assoc. prof, Syracuse, 07-08, *prof*, 08-10; *N. Y. Univ*, 10- A.A.; Soc. Nat; Soc. Exp. Biol. Conus arteriosus in adult teleosts; nature and development of the angioblast; the development and anomalies of the arteries of the extremities.
- Senior, Dr. James K(uhn)**, Fries and Fries Co, Cincinnati, Ohio. *Chemistry*. A.B, Harvard, 11, A.M, 12; Ph.D, Chicago, 17. Asst, Rockefeller Inst, 14-17; *research chemist*, Procter and Gamble, 19-20; *Fries and Fries Co*, 20- Lieut, C.W.S., 18-19. Chem. Soc. Organic chemistry.
- Sensenig, Dr. Wayne**, Conshohocken, Pa. *Mathematics*. Goodville, Pa, April 23, 79. A.B, Haverford, 01; A.M, Pennsylvania, 14, Ph.D, 19. Practising engineer, 07-12; *instr. math*, high schools, Phila., 12- Math. Ass. The invariant theory of involutions of conics.
- Senter, Dr. H(erbert) A(lmon)**, 4204 Harney St, Omaha, Nebr. *Chemistry*. Omaha, May 9, 68. B.S, Nebraska, 93; Ph.D, Heidelberg, 96. Head, dept. chem, Omaha High Sch, 97-12, librarian, 99-12; *dean, faculty, Cent. High Sch, Omaha*, 13- A.A; Chem. Soc. (pres, Nebr. sect, 10-13, councilor, 15-17, Omaha sect, 20). Pseudocumenes.
- Serviss, Garrett P(utnam)**, Tenafly, N. J. *Astronomy, Geology*. Sharon Springs, N. Y, March 24, 51. B.S, Cornell, 72; LL.B, Columbia, 74. Ed. writer on N. Y. Sun until 92; *writer and lecturer on travel, hist. and astron*, 92- A.A; Astron. Soc; Brooklyn Inst. (pres, dept. astron, 95-05).
- Setchell, Prof. W(illiam) A(lbert)**, University of California, Berkeley, Calif. **Cryptogamic botany*. Norwich, Conn, April 15, 64. A.B, Yale, 87; fellow, Harvard, 87-88, A.M, 88, Ph.D, 90. Asst. biol, Harvard, 88-91; Yale, 91-92, *instr*, 92-95, asst. *prof. bot*, 95; *prof, California*, 95- *Instr. bot*, Woods Hole, 90-95. Nat. Acad; A.A. (past v. pres, G); Soc. Nat; Bot. Soc; Am. Geog. Soc. Ass. Prof; West. Soc. Nat; Am. Acad; Calif. Acad. (bot. ed. and mem. pub. committee, 01-03); Wash. Acad. Classification and geographical distribution of the Laminariaceae of North America; regeneration among kelps; parasitism of certain red algae; thermal algae; algae of the Pacific Coast of North America; tobacco hybrids; geographic distribution of marine algae.
- Seton, Ernest Thompson**, Greenwich, Conn. *Zoology*. S. Shields, England, Aug. 14, 60. Royal Acad, London, 80-81; Paris, 90-96. *Naturalist to govt. of Manitoba*, 92- Silver medal, Soc. d'Acclimat. de France, 18. Mem. Ornith. Union; Soc. Mammal; Nat. Inst. Arts and Letters; N. Y. Zool. Soc. Ornithology and mammalogy of Manitoba; life histories of northern mammals; sign talk of Indians.
- Seulke, Dr. K(arl) J(ohn)**, 304 Bryant Ave, Ithaca, N. Y. *Animal husbandry*. Seymour, Ind, Feb. 15, 90. B.S, Purdue, 13; M.S. Pa. State, 14; Ph.D, Cornell, 16. *Instr. agr*, Indiana, summer, 13; teaching fellow, Pa. State, 13-14; asst. *prof. animal husbandry*, Cornell, 14-18; *prof*, Cornell, 18-20; *east. representative, Am. Aberdeen-Angus Breeders Ass*, 20-
- Sever, Prof. George F(rancis)**, 4 Divinity Ave, Cambridge, Mass. *Electrical engineering*. Cambridge, July 30, 66. Mass. Inst. Tech, 87; hon. M.S, Columbia, 05. *Instr.*, elec. eng, Columbia, 93-01, adj. *prof*, 01-05, *prof*, 05-11; *engineer, Jackson and Moreland*, 19- Consulting elec. engineer, Dept. of Water Supply, Gas and Elec, N. Y., 02-14; supt. elec. exhibits, Pan-Am. Expos, 01; mem. Elec. Light Commission, N. Y. City; juror, elec. div, La. Purchase Expos, 04; acting dean, faculty of applied science, Columbia, 05-07; major, corps eng, 18-19. A.A; Elec. Eng. (past manager, v. pres); Eng. Educ. Engineering projects of an electrical nature; engineering investigation to ascertain the cost of operation of electric elevators; hydroelectric projects of New England and the Pacific Coast.
- Severance, Prof. Geo(rge)**, Pullman, Wash. *Agronomy*. Walled Lake, Mich, Feb. 4, 74. B.S, Mich. Agr. Col, 01. *Instr. agr*, Mich. Agr. Col, 01-02; *Wash. State*, 03-05, asst. *prof*, 05-06, *prof, agron*, 06-, acting head, dept. agr, 08-09, supt, West. Wash. Exp. Sta, 11-13, head, dept. agr, 13-18, v. *dean, col. agr*, and head, dept. *farm management*, 18- Supt, Bohrnstedt Farms, Alberta, Can, 10. Methods of tillage for dry land farming; soil moisture; plant improvement; control of moisture in dry land and irrigation farming; soil tillage; fertility; breeding of cereals; forage crops; farm management.
- Severin, Prof. Harry C(harles)**, State College, Brookings, S. Dak. *Entomology*. Milwaukee, Wis, March 28, 85. A.B, Wisconsin, 06; A.M, Ohio State, 08; fellow, 08-09. *Prof. entom*, S. Dak. Col, and state entomologist, S. Dak, 09- Asst. state entomologist, Ill, summer, 09. A.A; Ass. Econ. Entom; Entom. Soc; S. Dak. Acad. Animal behavior; economic entomology; insect anatomy, histology and taxonomy.
- Severin, Dr. H(enry) H(erman) P(aul)**, University of California, Berkeley, Calif. *Entomology*. Milwaukee, Wis, April 18, 83. A.B, Wisconsin, 06, A.M, 07, fellow, 09-10, Ph.D, 10, hon. fellow, 12-13; fellow, Ohio State, 07-08. *Instr. zool.* and entom, Ohio State, 08-09; *prof. entom*, Col. of Hawaii, 10-12; entomologist, Wis. Exp. Sta, 12-13; *prof. biol*, Marietta, 14-15; *entomologist*, Maine Exp. Sta, 15-16; *Calif. Exp. Sta*, 16- Ass. Econ. Entom. Anatomy, histology, life histories and behavior of insects; fruit flies; sugar-beet leaf hopper.
- Severinghaus, Prof. W(illard) L(eslie)**, Columbia University, New York, N. Y. *Physics*. Terre Haute, Ind, Jan. 28, 82. A.B, Baldwin-Wallace, 04, A.M, 05; Ph.D, Columbia, 14. *Prof. physics*, Moore's Hill, 04-07; asst, *Columbia*, 07-11, *instr*. 11-19, asst. *prof*, 19- A.A; Physical Soc. Short electric waves.
- Sewall, Dr. Henry**, 1360 Vine St, Denver, Colo. **Medicine, Physiology*. Winchester, Va, May 25, 55. B.S, Wesleyan, 76; fellow, Hopkins, 78-79, Ph.D, 79; hon. M.D, Michigan, 88, Sc.D, 12; Denver, 89. Asst. and assoc. biol. Hopkins, 76-82; *prof. physiol*, Michigan, 82-89; Denver, 90-08; *med, Colorado*, 11-18, *emer. prof*, 20- Asst. health commissioner, Denver, 91-93; sec'y, Colo.

- State Board of Health, 93-99; mem. Nat. Board of Examiners, 15-19. Am. Physicians (pres, 16); Soc. Clin. Invest.; Physiol. Soc; Am. Med. Ass; Climat. Ass (pres, 15); Denver Acad. Med. (pres, 03-05); Denver City and Co. Med. Soc. (pres, 16). Internal medicine; clinical pathology.
- Sexton, Dr. Lewis A(lbert), Hartford Hospital, Hartford, Conn. *Medicine*. Laurenceburg, Tenn, March 25, 74. M.D, Vanderbilt, 06. Res. physician, Dept. of Health Hospitals, N. Y. City, 09-14; asst. supt, Hopkins Hosp, 14-17; *supt, Hartford Hosp, 17-* Scarlet fever; diphtheria.
- Seymour, A(rthur) B(liss), 26 University Museum, Cambridge, Mass. *Botany*. Moline, Ill, Jan. 3, 59. B.S. Illinois, 81, M.S. 86. Botanist, Ill. State Lab. Nat. Hist, 81-83, 84; *asst.* (privately), *crypt. herbarium*, Harvard, 83-85; *instr. bot*, Wisconsin, 85-86; *asst. crypt. herbarium*, Harvard, 86- *Ed. crypt. bot. (A-G), 'Century Dict.'* 88, chief ed. econ. fungi, 90- *Phytopath. Soc*; Am. Acad; *assoc. Torrey Bot. Club*. Parasitic fungi; bibliography of North American fungi.
- Seymour, Paul H(enry), 5747 Dorchester Ave, Chicago, Ill. *Chemistry*. La Porte, Ind, July 25, 69. B.S. Michigan, 92, M.S. 93; Heidelberg and Berlin, 95-96. *Instr. chem*, Lake Forest, 93-95; *teacher chem. and physics*, high sch, Detroit, Mich, 96-98; *consulting chemist*, assayer and mining engineer, 98-08; *head master*, Univ. Schools, Urbana, Ohio, 08-12; *chemist and assayer*, 12-17; *head chemist*, Goldsmith Bros. S. and R. Co, 17- *A.A.*
- Shaad, Prof. Geo(rge) C(arl), Engineering Building, Lawrence, Kans. *Electrical engineering*. Stratford, N. Y, May 5, 78. B.S(E.E), Pa. State, 00, E.E, 05. With Gen. Elec. Co, 00-02; *instr. elec. eng*, Wisconsin, 02-04, *asst. prof*, 04-06; *Mass. Inst. Tech*, 06-07, *assoc. prof*, 07-09; *prof. Kansas*, 09- *Fel. Elec. Eng*; *Mech. Eng*; *Illum. Eng. Soc*; *Eng. Educ*; *Nat. Elec. Light Ass.* Central electric stations.
- Shackelford, Dr. Benj(amin) E(still), Westinghouse Lamp Company, Bloomfield, N. J. *Physics*. Richmond, Mo, Aug. 12, 91. A.B, Missouri, 12, A.M, 13; Ph.D, Chicago, 16. *Asst. physics*, Missouri, 12-14; *physicist*, Westinghouse Lamp Co, 16- *Brush research fellow*, Nela Research Lab, 15. A.A.; *Physical Soc*; *Elec. Eng*; *Illum. Eng. Soc*; *Optical Soc*; *Franklin Inst.* Radiation; illumination.
- Shackell, Prof. L(eon) F(rancis), University of Utah, Salt Lake City, Utah. *Biochemistry*. Prairie Junction, Minn, Feb. 2, 87. B.S. St. Louis, 10, M.D, 14. *Asst. nutrition*, Illinois, 04-07; *agr. chem*, Missouri, 07-09; *physiol*, St. Louis, 09-10, *instr*, 10-11, *pharmacol*, 11-14, *asst. prof*, 14-16; *prof. physiol. and physiol. chem*, Utah, 16- *Investigator*, Bur. Fisheries, summers, 09-18. *Pharmacology*; *vacuum desiccation*; *fertilization of echinoderm eggs*; *protection of wood against marine borers*.
- Shadinger, Prof. Guy H(oward), Dickinson College, Carlisle, Pa. *Chemistry*. Glencoe, Minn, Aug. 24, 77. Ph.B, Hamline, 00; Ph.D, Hopkins, 07. *Teacher*, high sch, Red Wing, Minn, 00-04; *asst. chem*, Hopkins, 05-06; *prof*, Butler, 07-08; *research asst*, Tufts, 08-09; *prof*, Nebr. Wesleyan, 09-10; *Dickinson*, 10- *Chem. Soc.* Tautomerism in urozoles; *velocity constants and mechanism of the reactions of alkyl halides with urozoles*.
- Shadle, Prof. Albert R(ay), University of Buffalo, Buffalo, N. Y. *Biology*. Lockbourne, Ohio, July 18, 85. *Fellow*, Ohio State, 12-14, A.B, 13, A.M, 15. *Asst. zool*, Cornell, 15-16, *instr*, 16-18, *asst. prof*, 18-19; *biol*, Buffalo, 19-20, *prof*, 20- *A.A*; *Ohio Acad.* Ear of the armadillo.
- Shafer, Dr. Geo(rge) D(aniel), Palo Alto, Calif. *Physiology*, *Entomology*. Muncie, Ind, Dec. 25, 74. A.B, Indiana, 00; A.M, Stanford, 06; *fellow*, Cornell, 06-08, Ph.D, 08. *Research asst.* *entom. exp. sta*, Mich. Agr. Col, 08-17; *asst. prof*, 13-17; *instr. physiol*, Stanford, 18- *A.A*; *Soc. Nat*; *Entom. Soc*; *fel. Ass. Econ. Entom*; *Mich. Acad.* (sec'y, 09-12). *Pattern double and single cones of eyes of fishes*; *kidney secretion*; *action of contact insecticides*; *eyes of spiders*; *mating in honey-bee*.
- Shaffer, Dr. Elmer Leutz, 2137 N. Sixth St, Philadelphia, Pa. *Zoology*. Philadelphia, April 29, 92. A.B, Haverford, 11, B.S, 15; *fellow*, Princeton, 16-17, 18-20, Ph.D, 20. *Asst. biol*, Princeton, 15-16; *instr*, Haverford, 19-20; *asst. pathologist*, St. Francis Hosp, Trenton, N. J, 20- *Cytology*; *the physical basis of heredity*; *mitochondria*.
- Shaffer, Dr. Philip A(nderson), Washington University Medical School, St. Louis, Mo. **Biological chemistry*. Martinsburg, W. Va, Sept. 20, 81. A.B, West Virginia, 00; Ph.D, Harvard, 04. *Asst. chemist*, McLean Hosp, 00-03; *asst. exp. path*, med. col, Cornell, 04-07, *instr. path. chem*, 07-10; *prof. biol. chem*, Washington (St. Louis), 10-, *dean*, med. sch, 15-19. *Physiol. chemist*, Huntington Fund for Cancer Research, 07-10; *head*, chem. sect, lab, Bellevue Hosp, 09-10; *major*, Sanit. C, 17-19. A.A; *Physiol. Soc*; *Soc. Exp. Biol*; *Soc. Biol. Chem*; *Chem. Soc*; *Ass. Cancer Research*. *Metabolism*; *analysis of urine*; *catalase*; *enzymes of tumors*; *cystinuria*; *protein metabolism in typhoid*; *creatin and creatinin*; *origin of 'acetone bodies'* and *relation of glucose to oxidation of fatty acids*.
- Shaklee, Dr. A(lfred) O(gle), 1308 Church St, Galveston, Tex. *Pharmacology*. Middle Creek, Ohio, Oct. 3, 65. B.S, Chicago, 99, 00-01, *fellow*, 01; M.D, St. Louis, 08; *Europe*, 13-14. *Asst. chem*, Chicago, 01; *physiol*, St. Louis, 06, *instr. pharmacol*, 07; *fellow physiol. and pharmacol*, Rockefeller Inst, 08-09, *asst*, 09-10; *assoc. prof. pharmacol*, Philippine Med. Sch, 10-13; *asst. prof*, Illinois, 14-16; *prof. physiol. and biochem*, Fordham, 16-18; *assoc. prof. physiol. and pharmacodynamics*, med. dept, Texas, 18- *A.A*; *Chem. Soc*; *Soc. Exp. Biol*. *Mechanical destruction of the ferments*, *pepsin*, *rennin and trypsin*; *effect of heat on pepsin and rennin*; *recovery from fatal doses of strychnin*; *antagonism between adrenalin and strychnin*; *treatment of strychnin poisoning with chloroform*; *acid intoxication in Asiatic cholera*; *acclimatization to tropical sun*; *metabolism in man*; *cerebral ablation in pigeons*; *nutrition of decerebrate pigeon*; *brain evolution*.

- Shaler, Millard K(ing)**, 5, Montague du Parc, Brussels, Belgium. *Geology*. Ellsworth, Kans., July 26, 80. A.B., 01; B.S., 04. U. S. Geol. Surv., 04-07; *geologist, Soc. Int. Forest. et Min. du Congo*, 07- Geol. Soc; Min. Eng; Wash. Geol. Soc. Coal; oil and gas; clays; gypsum; mining conditions and geology of Congo Free State.
- Shambaugh, Prof. George E(lmer)**, 5625 University Ave, Chicago, Ill. *Anatomy, Physiology*. Clinton Co, Iowa, Nov. 15, 69. Ph.B, Iowa, 92; M.D, Pennsylvania, 95. *Prof. otol. and laryngol, Rush Med. Col. and laryngologist, Presb. Hosp.* Lernal prize, 12. Laryngol. Ass; Otol. Soc; Laryngol. Rhinol. and Otol. Soc; Am. Med. Ass. The embryology, histology and physiology of the end organs of the labyrinth; physiology of the labyrinth.
- Shamel, A(rchibald) D(ixon)**, 3 Arroyo Drive, Riverside, Calif. *Horticulture*. Taylorville, Ill., Oct. 15, 78. B.S., Illinois, 98. Instr. farm crops and in charge exp. sta. farm, Illinois, 98-02; scientific asst, U. S. Dept. Agr., 03-04, *plant physiologist*, 04- U. S. Dept. Agr. exped. to the West Indies, 04-05, Brazil, 12-13. S. Calif. Biol. Club. Improvement of plants through seed and bud selection; bud variation; storage and curing of fruits.
- Shanahan, Dr. William T.**, Craig Colony, Sonyea, N. Y. *Medicine*. Syracuse, N. Y., May 14, 78. M.D, Syracuse, 98. Med. officer, *Craig Colony for Epileptics*, 01-08, *med. supt.*, 08- Lecturer on epilepsy, Syracuse. A.A; Am. Med. Ass; Am. Acad. Med; Ass. Study Epilepsy (pres, 12); Ass. Study Feeble-Minded. Epilepsy.
- Shaner, Dr. Ralph F(aust)**, Harvard Medical School, Boston, Mass. *Embryology*. Pottstown, Pa., Dec. 30, 93. Ph.B, Lafayette, 15; Ph.D, Harvard, 20. Teaching fellow histol. and embryol, *Harvard Med. Sch.*, 15-20, *instr. histol.*, 20- Ass. Anat; Boston Soc. Nat. Hist. Rep. tilian embryology.
- Shannon, C(harles) W(illiam)**, Oklahoma Geological Survey, Norman, Okla. *Geology*. Atlanta, Ind., Aug. 3, 79. A.B., Indiana, 06, A.M., 07, 07-08. Teacher science, high sch., Brazil, Ind., 08-11; field geologist, *Okla. Geol. Surv.*, 11-14, *director*, 14- Field asst, Ind. Geol. Surv., 05-11; teacher geol., Oklahoma, 11. A.A; Geol. Soc; Ass. Petrol. Geol; Min. Eng; Ass. State Geol; Okla. Acad. (past pres); Ind. Acad. General science; geography; nature study; botany.
- Shannon, Rev. J(ames) I(gnatiu)s**, St. Louis University, St. Louis, Mo. *Physics*. Hastings, Ont., Sept. 30, 68. A.B., St. Louis, 99, A.M., 00; Hopkins, 06-08. Prof. physics and math, St. Xaviers, 00-02; asst. prof. *physics, St. Louis*, 09-12, *prof.*, 12- A.A; Physical Soc; Math. Soc; St. Louis Acad. (cor. sec'y, 18-20).
- Shantz, Dr. H(omer) LeBo(y)**, U. S. Department of Agriculture, Washington, D. C. **Botany*. Kent Co, Mich., Jan. 24, 76. B.S., Colo. Col., 01; Ph.D, Nebraska, 05. Instr. bot. and zool., Colo. Col., 01-02; bot. sch. agr., Nebraska, 03-04; Missouri, 05-06; prof. bot. and bacter., Louisiana, 07; special agent and collaborator alkali and drought-resistant plant breeding investigations, *bur. plant indust, U. S. Dept. Agr.*, summers, 06-07, expert, 08-09, plant physiologist, 10-19, *physiologist in charge plant physiol. and fermentation investigations*, 20- Instr. Colo. Teachers' Inst., Colorado Springs, 02; with 'Inquiry' to determine plant resources of portions of Africa and Latin Am. for Allied Peace Commission, 18; agr. explorer, Smithsonian Inst. exped. to Africa, 19-20. A.A; Soc. Nat; Bot. Soc; Soc. Agron; Micros. Soc; Ass. Geog; Ecol. Soc; Wash. Acad; Wash. Bot. Soc. Vegetation of the Great Plains; the indicator value of natural vegetation; physiology of drought resistance; biological study of the lakes in the Pikes Peak region; North American Branchinecta and their habitats; vegetation of mesa region east of Pikes Peak; the Bouteloua formation; vegetation of the Great Plains and the Great Basin.
- Shapley, Dr. Harlow**, 1842 N. Los Robles Ave, Pasadena, Calif. **Astronomy*. Nashville, Mo., Nov. 2, 85. A.B., Missouri, 10, A.M., 11; fellow, Princeton, 12-14, Ph.D, 13. *Astronomer, Mt. Wilson Observatory, Carnegie Institution*, 14- A.A; Astron. Soc; Ecol. Soc; Am. Acad; Pacific Astron. Soc; assoc. Royal Astron. Soc. Photometry; spectroscopy; orbital theory and computation; cosmogony.
- Shapovalov, Michael**, Bureau of Plant Industry, Washington, D. C. *Plant pathology*. Vilna, Russia, July 14, 80. Theol. Sem., Vitebsk, Russia, 96-03; Dorpat, 04-11; Wisconsin, 11-12; M.S., Maine, 13. Asst. pathologist, Maine Agr. Exp. Sta., 12-16; agent, U. S. Dept. Agr., 16-17, asst. plant pathologist, 18-19, *pathologist, bur. plant indust*, 20- Collaborator, 'Bot. Abstracts.' A.A; Phytopath. Soc; Wash. Bot. Soc.
- Share, Dr. William W(alde)mar**, 99 McDonough St., Brooklyn, N. Y. *Chemistry*. Brooklyn, March 8, 59. Ph.B., Columbia, 81, Ph.D, 84. Asst. physics, Columbia, 81-89; prof. chem. and geol., Adelphi, 89-13; v. pres, *Meurer Steel Barrel Co*, 13-; consulting chem. engineer. Supt., Columbia Chem. Works, 81; consulting elec. engineer, Brooklyn Park Dept, 89. A.A; Chem. Soc. Electrochemistry; physical chemistry.
- Sharp, Dr. Clayton H(alsey)**, White Plains, N. Y. *Physics, Electrical engineering*. Seneca Falls, N. Y., Dec. 5, 69. A.B., Hamilton, 90; Ph.D, Cornell, 95; Leipzig, 99-00. Teacher science, Union Sch., Lyons, N. Y., 90-92; instr. physics, Cornell, 94-01; test officer, *Elec. Test. Laboratories, New York*, 01-14, v. pres. and tech. director, 14- U. S. delegate, Int. Electrotech. Commission, Turin, 11; Berlin, 13; delegate and sec'y, U. S. committee, Int. Commission on Illum., Berlin, 13. A.A; Physical Soc; Elec. Eng; Illum. Eng. Soc. (past pres); Electrochem. Soc; Optical Soc; Soc. française des Elec; assoc. Elet. Italiana. Electrical and photometrical standards and measurements; engineering testing; applied physics; invention of measuring devices.
- Sharp, Donald E(llsworth)**, Optical Glass Plant, Spencer Lens Co, Hamburg, N. Y. *Physics*. Corning, N. Y., Oct. 30, 96. Wisconsin; Carnegie Inst. Tech. In physical lab, Corning Glass Works, 14; physics dept, Wisconsin, 16; ceramic lab, Bur. Standards, 17; physicist, *optical glass plant, Spencer Lens Co*, 18-20, manager, 20-

- Physical Soc; Optical Soc; Ceramic Soc; Chem. Soc. Calibration of thermo-elements; technical furnaces; optical glasses; reflecting telescope discs.
- Sharp, Dr. Frank Chapman**, Mendota Court, Madison, Wis. *Philosophy*. West Hoboken, N. J., July 30, 66. A.B. Amherst, 87; Ph.D., Berlin, 92. Instr. *philos.*, *Wisconsin*, 93-96, asst. prof, 96-04, assoc. prof, 04-05, *prof.*, 05- Philos. Ass; Psychol. Ass; West. Philos. Ass. (pres, 07); Wis. Acad. (sec'y, 99-01). Ethics; the psychology of the moral judgment; history of British ethics; applied ethics.
- Sharp, Dr. Lester W(hyland)**, Cornell University, Ithaca, N. Y. *Botany*, *Cytology*. Saratoga Springs, N. Y., April 21, 87. B.S., Alma, 08; Hopkins, 08-10; Chicago, 12, fellow, 11-12, Ph.D., 12, 13-14; Louvain, 12-13. Instr. *bot.*, *Cornell*, 14-15, *asst. prof.*, 15- A.A.; Bot. Soc. Embryo sac; spermatogenesis in Equisetum and Marsilia; chromosomes in Vicia and Tradescantia.
- Sharp, Dr. Robert G.**, 1000 Watts Building, San Diego, Calif. *Medicine*. Mankato, Minn., Jan. 22, 83. B.S., California, 11, M.S., 13, fellow, 14, Ph.D., 14; M.D., Hopkins, 17. Asst. zool., California, 10-12, anat., 12-13; asst. prof., Utah, 14-15. Physician in charge, Red Cross Hosp., Toul, France, 17-18. Protozoology; diseases of children.
- Sharpe, Benjamin F(ranklin)**, Greenwich, N. Y. *Physics*. Cape May, N. J., Jan. 7, 64. A.B., Wesleyan, 87, A.M., 90; Hopkins, 91-93; fellow, Clark, 93-95, 96-97. Master, Beeman Acad., Vt., 81-82; asst. principal, Monson Acad., Mass., 85-86; adj. prof. physics and biol., Randolph-Macon, 87-91; prof. math., State Nor. Sch., New Paltz, N. Y., 95-96. An absolute measure of the intensity of sounds; hydrodynamics and sound; increase of sensitiveness of the mercurial barometer; a new barograph.
- Sharpe, Prof. F(rancis) R(oberth)**, 213 Mitchell St., Ithaca, N. Y. **Mathematics*. Warrington, England, Jan. 23, 70. B.A., Cambridge, 92; Ph.D., Cornell, 07. Lecturer *math.*, Queen's (Can), 01-04; asst., *Cornell*, 05-06, instr., 06-10, asst. prof., 10-19, *prof.*, 19- Math. Soc. (assoc. ed., 'Trans.', 17-). Hydrodynamics; geometrical transformations.
- Sharpe, Prof. R(ichard) W(orthy)**, 113 E. 87th St., New York, N. Y. *Biology*. Tiskilwa, Ill., May 20, 69. B.S., Illinois, 93, M.S., 97. Principal, high sch., Farmer City, Ill., 93-96; instr. biol. and physics, high sch., Danville, Ill., 97-99; physics and chem., Dubuque, Iowa, 99-00; biol. and physics, New Trier High Sch., Winnetka, Ill., 00-06; prof. *biol.*, State Nor. Sch., River Falls, Wis., 06-07; *instr.*, *DeWitt Clinton High Sch.*, 07-Director, geol. and nat. hist. surv. of L. I., Brooklyn Inst. A.A.; Brooklyn Inst. (pres, dept. micros); Brooklyn Entom. Soc; Chicago Acad. Fresh water Ostracoda and marine Copepoda of the United States; marine and fresh water Ostracoda of the U. S. National Museum; fresh water biology; marine Copepoda and Cladocera of Woods Hole and adjacent regions; Ostracoda and Copepoda collected by the 'Albatross' expedition of 1902; Ostracoda and Copepoda of the Philippines; biology laboratory manual.
- Sharples, Philip P(rice)**, 91 Lloyd Road, Montclair, N. J. *Chemistry*. Cambridge, July 11, 73. A.B., Harvard, 95. City inspector milk and vinegar, Cambridge, 01-05; head chemist, *Barrett Mfg. Co.*, Boston, 05-14, *manager, tarvia dept.*, N. Y., 14- A.A.; Chem. Soc; Soc. Chem. Indust; Soc. Test. Mat. Bituminous road binders.
- Sharples, Prof. Stephen P(aschall)**, 22 Concord Ave., Cambridge, Mass. **Chemistry*. West Chester, Pa., April 21, 42. Pa. State, 64, hon. M.S., 15; B.S., Harvard, 66. Asst. chem., Lehigh, 67-68; Lawrence Sci. Sch., Harvard, 68-72; anal. and consulting chemist, 72-18, retired, 18; prof. chem., Boston Dental Col., 75-93. State assayer of ores and metals, Mass., 72-92; expert, tenth census, 80; inspector and assayer of liquors, Mass., 84-92; judge, Columbian Expos., 93; ed., 'Gen. Quarterly Mag.', 04- A.A. (sec'y, subsect. micros, 81); Chem. Soc; Soc. Chem. Indust; Chem. Eng; Electrochem. Soc; Min. Eng; Pharmaceut. Ass; Philos. Soc; Am. Acad; Boston Soc. Nat. Hist; New Eng. Hist. General Soc; Boston and Tufts Dental Alumni Ass; London Soc. Arts. Adulteration of food; methods of recovering caoutchouc from waste; genealogy.
- Sharwood, Dr. W(illiam) J(ohn)**, Homestake Mining Co., Lead, S. Dak. *Metallurgy*. Tuolumne, Calif., Sept. 2, 67. A.R.S.M., London, 87; Ph.D., California, 04. Instr. chem., California, 92-98; chemist, Mont. Mining Co., 98-03; asst. prof. chem., California, 04-05; *asst. metallurgist*, *Homestake Mining Co.*, 05- Consulting chemist, U. S. Bur. Mines, 12-20. De la Béche medal, Royal Sch. Mines, London, 87. A.A.; Min. and Metal. Eng; Soc. Chem. Indust; Chem. Soc; British Inst. Min. and Metal; S. African Chem. Metal. and Min. Soc. Analytical chemistry; cyanids; metallurgy of gold and silver; gold ores.
- Shattuck, Dr. Charles H(ouston)**, Idaho Falls, Idaho. *Botany*, *Forestry*. Vandalia, Mo., Nov. 21, 67. B.S., Campbell, 94, M.S., 98; Woods Hole; Biltmore Sch. Forestry; fellow, Chicago, 08, Ph.D., 08. Prof. physical sciences, Campbell, 95-98, biol. and geol., 98-03; Washburn, 04-07; bot. and forestry, Clemson, 07-09; forestry, Idaho, 09-17, dean, col. letters and science, 14-17; prof. forestry, California, 17-19; *sec'y and manager*, *Mt. States Building and Loan Ass.*, 19-; *Idaho Loan and Trust Co.*, 19-; *v. pres.*, *Howard Pulp and Paper Co.*, 20- Mem. fossil fields expd. to Laramie Beds, Wyo., 99; instr. bot., Woods Hole, 03. A.A.; Forestry Ass; Soc. Foresters; Bot. Soc; Calif. Acad; Kans. Acad. Morphology of the Ulmaceae; origin of heterospory in the Marsiliaceae; methods of clearing logged-off lands; grazing in the West.
- Shattuck, Dr. F(rederick) C(heever)**, 135 Marlborough St., Boston, Mass. *Medicine*. Boston, Nov. 1, 47. A.B., Harvard, 68, A.M., 72, M.D., 73, hon. Sc.D., 12; LL.D., Cincinnati, 08. Visiting physician, Mass. Gen. Hosp., 84-12; Jackson prof. *clin. med.*, *Harvard*, 87-12, *Jackson emer. prof.*, 12-, overseer, 13-19. Trustee, St. Paul's Sch., Concord, N. H. A.A.; emer. mem. Am. Physicians (pres, 99); Am. Med. Ass. (v. pres, 06); Am. Acad; Boston Soc. Med. Improv;

- assoc. fel. Phila. Col. Physicians; cor. mem. Edinburgh Med. Chirurg. Soc. Internal medicine; medical education.
- Shattuck, Dr. George B(rune)**, 183 Beacon St, Boston, Mass. *Medicine*. Boston, Aug. 18, 44. A.B. Harvard, 63, A.M., 65, M.D., 69. Instr. clin. med, Harvard Med. Sch., 83-85. Overseer, Harvard, 90-01, 03-; senior physician, Boston City Hosp; past pres, Mass. Charitable Eye and Ear Infirmary; ed, 'Boston Med. and Surg. Jour,' 81-12. A.A.; emer. mem. Am. Physicians; Mass. Med. Soc. (past pres); Boston Med. Library Ass. (past pres).
- Shattuck, Dr. George B(urbank)**, Poughkeepsie, N. Y. *Geology*. Lowell, Mass., Sept. 28, 69. B.S., Amherst, 92; Ph.D., Hopkins, 97. Asst. geol., Hopkins, 97-98, instr., 98-99, assoc., 99-02, assoc. prof., 02-06; prof., Vassar, 06-19; mem. exped. to Africa, 19-20; in charge research dept., *Famous Players-Lasky Corp.* A.A. (sec'y, E, 04); Geol. Soc.; Ass. Geog. Geology of the north Atlantic coastal plain; geology of the Bahamas.
- Shattuck, Dr. George Cheever**, 135 Marlborough St, Boston, Mass. *Medicine*. Boston, Oct. 12, 79. A.B. Harvard, 01, M.D., 05, hon. A.M., 19. Asst. clin. med, Harvard; sec'y, cent. med. bur., *League of Red Cross Societies*, Geneva, 19- Asst. visiting physician, Mass. Gen. Hosp. Mem. typhus fever exped. to Serbia, 15; major, R.A.M.C., 17-19. Am. Physicians; Soc. Clin. Invest; Soc. Trop. Med; Climat. Ass; Am. Med. Ass. Tropical ulcers; chest wounds.
- Shaw, Prof. A(lbert) Norman**, McGill University, Montreal, Can. *Physics*. Huddersfield, England, Dec. 31, 86. B.A., McGill, 08, fellow, 09-10, M.S., 10, D.Sc., 15; Cambridge, 11-13. Lecturer physics, McGill, 10-11; Macdonald, 13-18; assoc. prof., McGill, 18- Gov. General's medal, 10; 1851 exhibition scholar, 11-13. Physical Soc. Absolute measurement of current; interference phenomena with gamma rays; contact potential; bifilar suspensions; hygrometry; anemometry; estuary tidal analysis; standard cells.
- Shaw, Charles F(rederick)**, Hilgard Hall, Berkeley, Calif. *Agriculture*. W. Henrietta, N. Y., May 2, 81. B.S.A., Cornell, 06. Asst. soils, Cornell, 05-06; bur. soils, U. S. Dept. Agr., 06-07; instr. agron, Pa. State, 07-09; asst. prof., 09-13; prof. soil technol., California, 13- Scientist, bur. soils, U. S. Dept. Agr., 09-13, collaborator, soil survey, 13-; v. pres, Nat. Drainage Cong., 20. A.A.; Soc. Agron; Am. Geog. Soc. Soil technology; soil survey; alkali; crop adaptations; land settlement.
- Shaw, E(ugene) W(esley)**, U. S. Geological Survey, Washington, D. C. **Geology*. Delaware, Ohio, July 29, 81. B.S., Ohio Wesleyan, 05; fellow, Chicago, 05-06, grad. student, 06-07. Instr. bot., Ohio Wesleyan, 03-05; asst. geol., Chicago, 06-07; junior geologist, U. S. Geol. Surv., 07-09, asst. geologist, 09-13, geologist, 13-, chief, sub-sect. sedimentation, 19- Asst. geol., Ohio Wesleyan, 04-05, zool., 05; exped. to study deltas of Europe, Asia and Africa, 13; valuation engineer, U. S. Treas., 18-19. A.A.; Geol. Soc. (councilor, 19-21); Ass. Geog.; Ass. Petrol. Geol.; Nat. Gas. Ass; Am. Geog. Soc.; Wash. Acad; Wash. Geol. Soc.; Wash. Petrol. Club. Areal and dynamic geology; erosion and sedimentation; petroleum engineering.
- Shaw, Dr. G(eorge) W(right)**, 1411 Arch St, Berkeley, Calif. *Agronomy*. Bradford, Vt., June 13, 64. A.B., Dartmouth, 87, A.M., 90; hon. Ph.D., Willamette, 95. Prof. chem. and physics, Whitman, 87-89; Pacific, 89-91; chem., Oregon Col., and chief chemist, Exp. Sta., 91-00; state chemist, Oregon, 91-00; chemist and agr. expert, Colo. Sugar Mfg. Co., 00-02; asst. prof. agr. chem., California, 02-04, agr. tech., 04-07, assoc. prof. exp. agron. and agr. tech., 07-12; consulting agriculturist, 12-17; chief appraiser, Federal Land Bank, Berkeley, Calif., 17-20; supervisor farm loans, and appraiser, Los Angeles Trust and Savings Bank, 20- Chem. Soc.; Agr. Chem. Sugar-beets; soils; cereals; effect of environment on the composition of the sugar-beet; optical method of determining soil humus; effect of environment on the composition of the wheat kernel.
- Shaw, Harry B(erry)**, 265 Empire Boulevard, Brooklyn, N. Y. *Plant pathology*. Huddersfield, England, Sept. 11, 69. George Washington, 99, 06. Scientific asst. plant bacter., bur. plant indust., U. S. Dept. Agr., 07-10, asst. path., sugar plant investigations, 10-14, chief path. inspector, N. Y. Office, fed. hort. board, 14- A.A.; Bot. Soc.; Phytopath. Soc. Curly-top disease of beets; Thrips as pollinators of beets; sugar-beet nematodes.
- Shaw, Prof. H(oward) B(urton)**, Henry L. Doherty and Co, 60 Wall St, New York, N. Y. *Electrical engineering*. Winslow, Maine, Aug. 8, 69. A.B., North Carolina, 90, B.C.E., 91; A.M., Harvard, 94. Instr. math, North Carolina, 89-90, math, surveying and drawing, 91-93; asst. elec. eng. lab, Harvard, 94-96; asst. prof. elec. eng., Missouri, 96-99, prof., 99-13, dean, sch. of eng., 07-13, director eng., Exp. Sta., 09-13; commissioner, Mo. Pub. Service Commission, 13-17; director, Doherty Training Schools, 17- A.A.; assoc. mem. Elec. Eng.; Eng. Educ.; St. Louis Eng. Club; hon. mem. Mo. Utilities Ass. Insulation; alternating current curves; alternating current motors; energy losses in magnetic materials; industrial application of electricity; operation of utilities; economics of industry; personnel and training.
- Shaw, Dr. J(acob) K(ingsley)**, Massachusetts Agricultural Experiment Station, Amherst, Mass. *Pomology*. Northfield, Vt., Aug. 5, 77. B.S., Vermont, 99; M.S., Mass. Col., 08, Ph.D., 11. Acting asst. prof. hort., Missouri, 05-08; instr., N. H. Col., 06-07; asst. horticulturist, Mass. Exp. Sta., 08-13, research pomologist, 13-19; prof. hort., West Virginia, 19-20; research prof. pomol., Mass. Col., 20- A.A.; Soc. Hort. Sci.; Pomol. Soc. Plant breeding.
- Shaw, Prof. James B(rynie)**, University of Illinois, Urbana, Ill. **Mathematics*. Remington, Ind., March 20, 66. B.S., Purdue, 89, M.S., 90, Sc.D., 93. Prof. math., Illinois Col., 90-98; Kenyon, 99-03; James Millikin, 03-10; asst. prof., Illinois, 10-15, assoc. prof., 15-18, prof., 18- Prof. math., Chicago, summer, 09. Math. Soc.; London Math. Soc.; Soc. math. de France; Circolo Mat. di Palermo. Multiple algebra; linear associative algebra; general algebra.

- Shaw, Dr. L(eon) I(rwin)**, U. S. Bureau of Mines, Washington, D. C. *Chemistry*. Alfred, N. Y., May 30, 86. B.S., Alfred, 07; M.S., Syracuse, 08; Ph.D., Wisconsin, 11. Asst. chem., Alfred, 06-07; Syracuse, 07-08; instr., Mass. Col., 08-09; asst., Wisconsin, 09-10, instr., 10-11; *Northwestern*, 11-17, asst. prof., 17-18 (*now on leave*); lieut., ordnance R.C., 17-18; capt., C.W.S., 18-19; asst. chief chemist, U. S. Bur. Mines, 19-A.A.; Chem. Soc.; Ceramic Soc.; Ill. Acad. The system, $PbO \cdot SiO_2$; conduction in non-aqueous solution; dielectric constants; smoke and incendiary material; ceramics.
- Shaw, Prof. Reuben T(aylor)**, 245 S. 51st St., Philadelphia, Pa. *Chemistry, Botany*. Delaware, Ohio, Oct. 8, 84. B.S., Ohio Wesleyan, 05, A.M., 08; Pennsylvania, 05-07. Teacher science, Radnor High Sch., Wayne, Pa., 07; prof. chem. and geol., Temple, 07-09; *instr. science, S. Manual Training High Sch., Phila.*, 09- Exped. to Canadian Rockies and Selkirk, summers, 04, 06, 08, 09. A.A.; Chem. Soc. The chemical effects of plants upon the decay of rocks.
- Shaw, Dean Robert Sidey**, East Lansing, Mich. *Agriculture*. Woodburn, Ont., July 24, 71. B.S.A., Ont. Agr. Col., 93. Prof. agr., Mont. Col., 98-02; *Mich. Agr. Col.*, 02-08, dean agr. and director, *Exp. Sta.*, 08- Soc. Prom. Agr. Sci.; Mich. Acad. Animal husbandry; crops.
- Shaw, Roscoe H(art)**, 1436 Meridian Place, Washington, D. C. *Chemistry*. South Berwick, Maine, June 10, 77. B.S., N. H. Col., 97; Zürich, 99. Asst. chemist, N. H. Exp. Sta., 99-00; acting chemist, Wis. Exp. Sta., 00-01; asst. gen. chem., Wisconsin, 01-02; asst. chemist, Kans. Exp. Sta., 02-06; assoc. chemist, Nebr. Exp. Sta., and asst. prof. agr. chem., Nebraska, 06; asst. prof. dairy husbandry, Missouri, and asst. dairyman in charge milk secretion investigations, *dairy div.*, U. S. Dept. Agr., 06-09, *research chemist*, 09- Biochemistry; general agricultural chemistry; chemistry of dairy products.
- Shaw, Dr. Walter R(obert)**, Bureau of Science, Manila, P. I. *Botany, Pharmacognosy*. Galena, Ill., May 4, 71. Indiana, 88-91; A.B., Stanford, 92, A.M., 94, Ph.D., 97; Bonn, 97-98. Asst. bot., Stanford, 92-94, instr., 94-97; tutor, Barnard, Columbia, 98-99; asst. biol., Pomona, 00-01; prof. bot. and entom., Okla. Col., and botanist and entomologist, Okla. Exp. Sta., 01-05; teacher bot., Philippine Nor. Sch., 06-10; asst. prof. bot., *Univ. Philippines*, 10-17, assoc. prof., 17-20, *prof.*, 20- Asst. div. ethnol., Columbian Expos., 92; instr. bot., seaside lab., Hopkins, 93-97; Woods Hole, 98. A.A.; Bot. Soc. Embryology and embryogeny of ferns and conifers; species of Volvocaceae; spermatogenesis and fertilization in ferns and conifers; microtechnique; new Volvocaceae; Strophanthus.
- Shaw, Prof. W(illiam) T(homas)**, State College of Washington, Pullman, Wash. *Zoology*. Woodburn, Ont., Feb. 10, 73. Guelph Col. Inst., 88-92; B.Agr., Minnesota, 98, B.S., 99; M.S., Mich. Agr. Col., 01; Stanford, 14-15. Instr. zool., Mich. Agr. Col., 00; asst. entom., Iowa State and Exp. Sta., 01; instr. zool., Oregon Col., 01-07; asst. prof. *Wash. State*, 08-09, *prof.*, 09-, *zoologist, Exp. Sta.*, 09- Curator, museum, Wash. State, 13. Mem. expeditions to Alaska, summers, 07, 08, to collect birds for Alaska-Yukon-Pacific Expos., 09. Gold medal, Lewis and Clark Expos., 05. A.A.; mem. Ornith. Union; Soc. Mammal; Ecol. Soc.; Cooper Ornith. Club; Caurinus Club. Ornithology; the China or Denny pheasant in Oregon; food habits of certain birds in eastern Washington.
- Shea, Prof. Daniel W(illiam)**, Catholic University, Washington, D. C. **Physics*. Portsmouth, N. H., Nov. 27, 59. A.B., Harvard, 86, A.M., 88; Ph.D., Berlin, 92. Asst. *physics*, Harvard, 89, 92; asst. prof., Illinois, 92-93, *prof.*, 94-95; *Catholic Univ.*, 95-, gen. sec'y., 97-03, director, sch. tech., 97-05, dean of faculty, 05-15. Mem. N. H. Legislature, 86-88. A.A.; Physical Soc.
- Shear, Dr. C(ornelius) L(ott)**, U. S. Department of Agriculture, Washington, D. C. **Phytopathology*. Coeymans Hollow, N. Y., March 26, 65. B.S., Nebraska, 97, A.M., 01; Ph.D., George Washington, 06. Asst. agrostologist, U. S. Dept. Agr., 98-01, asst. pathologist, 01-02, *pathologist*, 02- Ed., 'Asa Gray Bul.', 98-00; assoc. ed., 'The Plant World,' 00-05; ed. and publisher, 'N. Y. Fungi Exsiccati'; ed. phytopath. and mycol. revision of 'Cent. Diet'; assoc. ed., 'Mycologia,' 09- Int. Cong. Arts and Sciences, St. Louis, 04 (sec'y., sect. D.). A.A.; Bot. Soc. (v. pres, 08); Phytopath. Soc. (sec'y-treas, 09-18, pres, 19); Wash. Biol. and Bot. Societies; Int. Ass. Bot. Grass and forage plants; plant diseases; diseases of small fruits, especially cranberries and grapes; cotton root-rot; systematic mycology; history of mycology; Ascomycetes.
- Sheard, Dr. Charles**, American Optical Co., Southridge, Mass. *Physics*. Dolgeville, N. Y., May 26, 83. A.B., St. Lawrence, 03; A.M., Dartmouth, 07; Ph.D., Princeton, 12. Instr. pub. schools, N. Y., 03-05; asst. physics, Dartmouth, 05-07; instr., Ohio State, 07-09, asst. prof., 09-14, prof. and director, applied optics, 14-15; *physiological optician, Am. Optical Co.*, 19- Collaborator, 'Am. Ency. Ophthal.' Physical Soc.; Optical Soc.; hon. mem. Optom. Ass. Stationary waves along lecher wires; spectra of compounds; ionization from hot wires and heated salts; diffraction in the eye; scissor movements in skiometry; accommodative exophoria; transmission of ophthalmic glasses; skiometry; skiascopy; ocular accommodation.
- Shearer, Dr. J(ohn) S(anford)**, Cornell University, Ithaca, N. Y. **Physics*. New York, Oct. 20, 65. B.S., Cornell, 93, Ph.D., 01. Teacher, Homer Acad., 87-88; instr. *physics*, Cornell, 93-03, asst. prof., 03-09, prof., 09-10; assoc. prof., Columbia, 10; *prof., Cornell*. Lieut. col., Sanit. C., 18-19. Medaille d'honneur, 19. A.A.; Physical Soc. Effect of temperature on tuning-forks; electrostriction; heat of vaporization; liquid air; oxygen; nitrogen; specific heat of air; coefficient of expansion at low temperature; dielectric strain; specific heat of gases at low temperature; thermo-electromotive force; X-rays; design and testing apparatus for military Röntgenology.
- Shedd, Prof. J(ohn) C(utler)**, Occidental College, Los Angeles, Calif. *Physics*. Urumia, Persia, June 30, 68. A.B., Princeton, 91; M.S., Cornell, 92; fellow, Wisconsin, 97-99, Ph.D., 99. Prof. physics, Marietta, 93-97; instr., Wisconsin, 99-00; prof., Colo. Col., 00-07; prof. and dean,

- Westminster (Colo.), 07-09; prof, Olivet, 09-16, dean, 15-16, *prof. physics, Occidental*, 16- A.A.; Physical Soc; Astron. Soc; Elec. Eng; Meteorol. Soc. Radiation in magnetic field; elasticity of rubber; radioactivity of spring water; Kater pendulum; evolution of snow crystals.
- Shedd, Prof. O(liver) M(arch)**, University of Kentucky, Lexington, Ky. *Chemistry*. Lexington, March 8, 80. B.S, Kentucky, 01, M.S., 04. *Chemist*, Henderson Tobacco Extract Works, 02; *Ky. Exp. Sta.*, 02- Expert, Council Nat. Defense, 17. Chem. Soc. (acting chairman, Lexington sect, 17, sec'y-treas, 20); Agr. Chem. (referee, 09-11); Ass. S. Agr. Workers. Agricultural and biological chemistry; soils.
- Shedd, Prof. S(olon)**, Pullman, Wash. *Geology, Mineralogy*. Mercer Co, Ill, May 25, 60. B.S, Monmouth (Oregon), 89; A.B, Stanford, 96, A.M., 07, Ph.D, 10. Instr. nat. science, Oregon State Nor. Sch, 90-94; asst. prof. *geol. and miner. Wash. State*, 96-01, *prof.*, 01- Geologist, Wash. Geol. Surv, asst. state geologist, 09- A.A.; Geol. Soc; Min. Eng. Iron ores; building and ornamental stones; clay and clay industries of Washington; metamorphic rocks of the Santa Cruz quadrangle, California; cement resources of Washington.
- Sheldon, C(harles)**, 3102 Q St, Washington, D. C. *Natural history*. Rutland, Vt, Oct. 17, 67. A.B, Yale, 90. Business and railroads, 02. Expeditions to Mexico, southwest U. S, Yukon Ter. and Alaska. Distribution and species of mountain sheep.
- Sheldon, Prof. Henry D(avidson)**, 1343 University Ave, Eugene, Oregon. *Pedagogy*. Salt Lake City, Utah, Oct. 3, 74. A.B, Stanford, 96, A.M., 97; Ph.D, Clark, 00. *Prof. philos. and educ, Oregon*, 02- Lecturer hist. of educ, summer sch, Clark, 99. History of student societies; elementary method; children's voluntary societies; bibliography of the educational awakening in the United States, 1800-1850; history of the teaching profession.
- Sheldon, Mrs. J(ennie) M(aria) Arms**, Deerfield, Mass. *Zoology, Geology*. Bellows Falls, Vt, July 29, 52. Mass. Inst. Tech, 77-79; special student, lab, Boston Soc. Nat. Hist, 79-80. Asst. to Prof. Alpheus Hyatt, 80-90; museum, Boston Soc. Nat. Hist, 90-04; *curator, museum, Pocumtuck Valley Mem. Ass.*, 12- Special teacher, zool. and geol, Boston, 78-97; lecturer nat. science, Saratoga, summers, 86-88. A.A.; Boston Soc. Nat. Hist; Boston Sci. Club; Naples Table for Promoting Lab. Research by Women. Insecta; concretions of the Champlain clays of the Connecticut Valley; geologic features within the '8,000 acre grant'; pitted stones.
- Sheldon, Prof. John L(ewis)**, Morgantown, W. Va. *Botany*. Voluntown, Conn, Nov. 10, 65. B.S, B.Ped, Ohio North. Univ, 95, M.S, 99; B.S, Nebraska, 99, A.M, 01, fellow, 00-03, Ph.D, 03. Teacher, Conn. pub. schools, 85-90, 95-97; Mt. Hermon Sch, 92-94; prep. sch, Nebraska, 98-99; Nebr. State Nor. Sch, 99-00; instr. bot, Nebraska, 00-03; prof. bacter, West Virginia, and bacteriologist, W. Va. Exp. Sta, 03-07, prof. bot. and bacter, 07-13, bot, 13-19. Colaborator, bur. plant indust, U. S. Dept. Agr, 02-03, 05- A.A.; Bot. Soc; Phytopath. Soc;
- Micros. Soc; Sullivan Moss. Soc; Ass. Prof. Rusts of asparagus and carnation; parasitism of *Darluka filum*; cultures of *Empusa*; diseases of melons and cucumbers; ripe-rot of the guava; cane-blight of the rose; *Uromyces*; fungi causing anthracnose of sweet pea, bitter-rot of apple and leaf-spot of fruit trees; leaf-tip blight of *Dracaena fragrans*; tubercles on legumes without cultures; nematode galls on clover roots; Hepaticae of West Virginia; relationship of *Phyllosticia* to fruit-blotch of apples.
- Sheldon, Dr. Pearl G(ertrude)**, Cayuga Heights, Ithaca, N. Y. *Geology*. Lisle, N. Y., Sept. 26, 85. A.B, Cornell, 08, A.M, 09, Ph.D, 11. *Asst. geol, Cornell*. Seismol. Soc. Fossil and recent areas of eastern North and South America; joint planes.
- Shelford, Dr. Victor E(mest)**, University of Illinois, Urbana, Ill. *Zoology*. Chemung, N. Y., Sept. 22, 77. B.S, Chicago, 03, Ph.D, 07. Asst. and tutor *zool*, West Virginia, 00-01; asst, Chicago, 04-07, assoc, 07-09, instr, 09-14; *asst. prof, Illinois*, 14-20, *assoc. prof.*, 20-, *biologist in charge, research laboratories, Ill. Nat. Hist. Surv.*, 14- In charge marine ecol, Puget Sound Marine Sta, alternate years, 14- A.A.; Soc. Nat; Soc. Zool; Entom. Soc; Ass. Econ. Entom; Fisheries Soc; Ecol. Soc. (v. chairman, organizing committee, 15, pres, 16, chairman preserves committee, 17-); Ass. Geog; Ill. Acad. (committee on ecol. surv. of Ill); British Ecol. Soc. Succession, life histories and color pattern of tiger beetles; ecology of aquatic animals; physiological life histories.
- Shelton, E(dward) M(ason)**, 2904 Franklin Ave, Seattle, Wash. *Agriculture*. Hilton, England, Aug. 7, 46. B.S, Mich. Agr. Col, 71, M.S, 74. Teacher agr, Japanese Govt, 72; prof, Kansas State, 74-89; instr. to Govt. of Queensland, Australia, 89-98; principal, Queensland Agr. Sch, 98-99; mine operator, Alaska and British Columbia; orchardist, Wenatchee Valley, Wash. Director, Kans. Exp. Sta, 88-89. Soc. Prom. Agr. Sci. Experiments in stock feeding and in the growth of grains and grasses.
- Shenehon, Dean Francis C(linton)**, Metropolitan Bank Building, Minneapolis, Minn. *Hydraulics*. Brooklyn, N. Y., Dec. 20, 61. B.C.E, Minnesota, 95, C.E, 00. Chief civil engineer, U. S. Lake Surv, 06-09; prof. civil eng. and dean, col. eng, Minnesota, 09-17; civil and later *consulting engineer*, 88- A.A.; Civil Eng; hon. mem. Consult. Eng; Eng. Educ; Detroit Eng. Soc. (pres, 08). River hydraulics; preservation of Niagara Falls; raising levels of water of Great Lakes; ship locks; wire sweep.
- Shenton, Dr. Walter F(rancis)**, 308 West St, Annapolis, Md. *Mathematics*. Pottstown, Pa, April 1, 86. Sc.B, Dickinson, 07, A.M, 09; Ph.D, Hopkins, 14. Instr. *math*, Dickinson Sem, 07-10; instr, Hopkins, 14-17; *U. S. Naval Acad.*, 17-20; *asst. prof.*, 20- Linear and quadratic combinants of systems of forms; anaglyphs; mathematical models.
- Shepard, Dr. Edward M(artin)**, 1403 Benton Ave, Springfield, Mo. *Geology*. Winsted, Conn, May 15, 54. A.M, Williams, 81; Sc.D, Waynesburg, 02. Curator, museum, Roanoke, 78; prof. biol. and geol, Waynesburg, 78; Drury, 79-08, dean,

- col. faculty, 03-08. Acting pres, Drury, 93-94; mem. board of managers, Mo. Geol. Surv, 93-; asst, 94-97, v. pres, board of managers, 01-05, sec'y, 05-; acting state geologist, Mo, 01; field asst, U. S. Geol. Surv, 03-07; ed, 'Bul. Bradley Geol. Field Sta.' Mem. and delegate, Tenth Int. Cong. Geol. Mex, 06. A.A; fel. Geol. Soc; Min. and Metal. Eng; Seismol. Soc; Min. Cong; Ass. Petrol. Geol. Origin of lead and zinc deposits; asphalt and petroleum; hydrology of Missouri; New Madrid earthquake; Hawaiian geology.
- Shepard, Frank E(dward), 924 Washington St, Denver, Colo. *Mechanical engineering*. Ashland, N. H, Nov. 29, 65. B.S, Mass. Inst. Tech, 87. Asst. inspector steam vessels, U. S. Treasury Dept, 87-89; mech. engineer, Shepard and Searing, 89-95; *pres. and metal. engineer, Denver Eng. Works, 95-* Mem. council, Colorado. Mech. Eng; Min. Eng; Colo. Sci. Soc. Concentration of ores.
- Shepard, Prof. John F(rederick), University of Michigan, Ann Arbor, Mich. *Psychology*. Greenfield, Ill, Jan. 30, 81. B.S, St. Lawrence, 01; Chicago, 02-03; Ph.D, Michigan, 06. Asst. *psychol, Michigan*, 03-06, instr, 06-11, asst. prof, 11-15, assoc. prof, 15-18, *prof, 18-* A.A; Psychol. Ass. Organic changes and feelings; circulation and sleep; association; learning processes; phonetics.
- Shepard, Dr. N(orman) (Arthur), 130 Casterton Ave, Akron, Ohio. *Chemistry*. New Haven, Conn, April 8, 90. Ph.B, Yale, 10, Ph.D, 13. Instr. chem, Yale, 13-17, asst. prof, 17-19; *director, chem. research, Firestone Tire and Rubber Co, 19-* Chem. Soc. Organic chemistry.
- Shepard, Dr. William K(ent), 154 Mansfield St, New Haven, Conn. *Physics, Mathematics*. Adams, N. Y, Oct. 19, 75. Ph.B, Yale, 97, Ph.D, 00. Asst. physics, Yale, 98-00, instr. math, 00-01, mech, 01-15; asst. prof. strength of materials, 16-20; *with the Barrett Co, 20-* Electricity; solutions for copper voltameter; mechanics; strength of materials.
- Shepardson, Prof. Geo(rge) D(efrees), University of Minnesota, Minneapolis, Minn. *Electrical engineering*. Cincinnati, Ohio, Nov. 20, 64. A.B, Denison, 85, A.M, 88; Ohio State, 85-86; M.E, Cornell, 89; Sc.D, Harvard, 12. Instr. sciences, Shepardson Col, Granville, Ohio, 86-87; elec. engineer, Boston Edison Co, 87-88; Akron Elec. Mfg. Co, 89; instr. physics, Cornell, 90-91; asst. prof. *elec. eng, Minnesota*, 91-92, *prof, 92-* Mem. jury of awards, Pan-Am. Expos, 01; La. Purchase Expos, 04. A.A; Elec. Eng. (chairman, Minn. branch, 02-); Ass. Eng. Societies (past pres, board of managers); Eng. Educ; Illum. Eng. Soc; Nat. Elec. Light Ass. Electric lighting, especially for railway trains; telephone disturbances; electricity directly from heat; electric headlights; illumination.
- Shepherd, E(arnest) S(tanley), Geophysical Laboratory, Carnegie Institution, Washington, D. C. *Chemistry*. Remington, Ind, March 30, 79. Indiana, 97-00; A.B, Cornell, 02. Private asst. to Prof. Wilder D. Bancroft, 02-03; asst. electrochem, and research asst, Cornell, 03-05; *asst, geophys. lab, Carnegie Institution, 04-* Chem. Soc. Alloys; high temperature work on minerals; application of physical chemistry to rock magmas; Portland cement; volcanic gases.
- Shepherd, Prof. Francis J(ohn), 152 Mansfield St, Montreal, Can. *Anatomy*. Vandreuil Co, Que, 51. M.D, C.M, McGill, 73, LL.D, 16; Queen's (Can), 19; St. Thomas Hosp, London, 74; Marburg and Vienna, 74-75; Paris; F.R.C.S, Edinburgh, LL.D, 05; F.R.C.S, 13, LL.D, Harvard, 06. Demonstrator *anat, McGill*, 75-83, prof, 83-13, dean, faculty of med, 08-13, *emer. prof, 13-*; surgeon, Montreal Gen. Hosp, 83-13. Int. Dermat. Cong, London, 96 (v. pres). Ass. Anat; fel. Surg. Ass; Dermat. Ass. (pres, 00); hon. fel. Col. Surg; for. mem. Am. Acad; Can. Med. Ass. (pres, 02); Montreal Medico-Chirurg. Soc. (pres, 90); cor. mem. Edinburgh Medico-Chirurg. Soc; Soc. Int. Chirurgie. Significance of human anomalies; anatomy of the black bear; the musculus sternalis and its nerve supply; surgery of thyroid glands; operation as a curative measure in the treatment of exophthalmic goitre; causes and treatment of intestinal obstruction.
- Shepherd, Prof. W(illiam) T(homas), 907 11th St, Washington, D. C. *Psychology*. Reinersville, Ohio, Feb. 4, 67. B.S, Gale, 99; A.M, Oklahoma, 05, M.S, 06; Ph.D, George Washington, 10. Principal, private schools, Oklahoma and Washington, D. C; teaching fellow, George Washington; pres, State Nor. Sch, Conway, Ark; prof. zool. and dean, Waynesburg, 13; *principal, Columbia Univ. Sch. A.A; Psychol. Ass; Soc. Zool; S. Soc. Philos. and Psychol.* Comparative psychology; psychology of religion; discrimination of sounds by raccoons and cats; imitation in raccoons.
- Sheppard, Prof. Hubert, University of Kansas, Lawrence, Kans. *Anatomy*. Ash Flat, Ark, July 28, 85. A.B, A.M, Oklahoma, 17, fellow, Kansas, 17; Ph.D, Cornell, 19. Instr. psychol, Kansas, 17-18; Cornell, 18-19; *asst. prof. anat, Kansas, 19-* The eye; correlation between structure and function in the ear.
- Sheppard, Dr. S(amuel) E(dward), 83 Gorsline St, Rochester, N. Y. *Chemistry*. Kent, England, July 29, 82. B.Sc, London, 03, D.Sc, 06, 1851 Exhibition scholar, 07-10; Marburg, 07-08; Paris, 08-09; Cambridge, 12. *Chemist, Eastman Kodak Co, 13-* Chem. Soc; fel. London Chem. Soc; Royal Photog. Soc; *cor. mem. Paris Soc. Biol.* Photochemistry; colloid chemistry.
- Shepperd, Prof. J(ohn) H(enry), Agricultural College, N. Dak. *Agriculture*. Chariton, Iowa, Jan. 12, 69. Drake, 87-88; B.Agr, Iowa State, 91; M.S.A, Wisconsin, 93. On ed. staff, 'Orange Judd Farmer,' 93; prof. agr, N. Dak. Col, and agriculturist, *Exp. Sta*, 93-04, *dean and v. director, 04-*, chairman, *dept. animal husbandry, 18-* Gold medal, Paris Expos. A.A; Soc. Prom. Agr. Sci. Animal nutrition; plant breeding.
- Sherbakoff, Dr. C(onstantine) D(imitriev), 701 N. Virginia Ave, Gainesville, Fla. *Phytopathology*. Ekaterinoslav, Russia, May 24, 78. Grad. Agr. Sch, Kherson, Russia, 01; Col. Forestry, Petrograd, 03-07; B.S.A, Cornell, 11, fellow, 12-14, Ph.D, 15. *Assoc. plant pathologist, Fla. Exp. Sta, 14-* A.A; Bot. Soc; Phytopath. Soc. Diseases of truck crops and vegetables.

- Sherff, Dr. Earl E(dward)**, 7419 Stewart Ave, Chicago, Ill. *Botany*. Flint, Mich, May 18, 86. A.B. Albion, 07; M.S. Chicago, 12; Ph.D. 16. Prof. biol. and agr. Mt. Morris, 07-09; *instr.* chem. and physiol. high sch, Elgin, Ill, 09-10; biol. and agr. Deerfield Township High Sch, Highland Park, 10-12; *biol.* Christian Fenger Pub. High Sch, Chicago, 12-19; *Robert Lindblom Tech. High Sch*, 19- Asst. desert lab, Carnegie Institution, 08. A.A; Bot. Soc. Ecology of marsh plants; taxonomy of *Bidens* and related genera; flora of Illinois.
- Sherk, Prof. Wilfred H(obson)**, 367 W. Delavan Ave, Buffalo, N. Y. *Mathematics*. Ridgeway, Ont, Nov. 6, 73. A.B. Oberlin, 99; A.M. Chicago, 05. Instr. math. Oberlin Acad. and Col, 99-04; *head, dept. math.* Akron, 05-06; *Buffalo*, 13- Instr. math. Oberlin, 04. Ass. Teachers Math. Middle States and Md. (mem. council, 15, 18, chairman, Buffalo sect, 17-).
- Sherman, Althea R(osina)**, National, via McGregor, Iowa. *Zoology*. National, Oct. 10, 53. A.B. Oberlin, 75, A.M. 82. Instr. drawing and painting, Carleton, 82-87; supervisor drawing, pub. schools, Tacoma, Wash, 92-95. A.A; mem. Ornith. Union; Nat. Ass. Audubon Societies; Wilson Ornith. Club; Cooper Ornith. Club; Soc. Mammal; Wis. Archeol. Soc; Wash. Biol. Soc. Nesting and feeding habits of birds; life histories of bats.
- Sherman, Prof. Franklin, Jr**, State Department of Agriculture, Raleigh, N. C. *Entomology*. Ashgrove, Va, Nov. 2, 77. B.S.Agr. Cornell, 00. Student asst. to entomologist, Md. Exp. Sta, 97-98; deputy nursery inspector, Wis, 99; instr. entom., N. C. Col, entomologist, N. C. Exp. Sta, N. C. Dept. Agr. and N. C. Crop Pest Commission, 00-05; prof. entom. and zool. Ont. Agr. Col, 05-06; *entomologist, N. C. Dept. Agr*, 06- Instr. nature study, Cornell, summer, 00. Ass. Econ. Entom; N. C. Acad. Insect fauna of North Carolina.
- Sherman, Prof. George W(illiam)**, Purdue University, La Fayette, Ind. *Physics*. Slocums, R. I, April 8, 90. B.S.(E.E), R. I. Col, 12; M.S. Purdue, 14. Asst. *physics*, Purdue, 12-15, instr, 15-18, *asst. prof*, 18- Ass. Prof; Ind. Acad. Effect of heat treatment on the magnetic qualities of iron and steel.
- Sherman, Dr. Harry M(itchell)**, 2165 Jackson St, San Francisco, Calif. *Surgery*. Providence, R. I, Nov. 23, 54. A.B. Trinity (Conn), 77, A.M, 80; M.D. Columbia, 80. Surgeon, Bellevue Hosp, N. Y. City, 80-81; orthop. surgeon, *Children's Hosp, San Francisco*, 85-20, *emer. orthop. surgeon*, 20-; prof. orthop. surg, San Francisco Polyclinic; clin. prof, California, 96-00, prof. principles and practise of surg, 00-12; *surgeon, St. Luke's Hosp, San Francisco*, 00- Major, M.C, 17-19. Am. Med. Ass; Surg. Ass; Orthop. Ass. Cleft palate; congenital dislocation of hip; tuberculosis of bone and joints; hydrocephalus; fractures.
- Sherman, Prof. H(enry) C(lapp)**, Columbia University, New York, N. Y. **Chemistry*. Ash Grove, Va, Oct. 16, 75. B.S. Md. Col. 93; Sc.D, 13; A.M, Columbia, 96, Ph.D, 97. Asst. chem, Md. Col, 93-95; nutrition investigations, U. S.
- Dept. Agr, 98-99; anal. chem, *Columbia*, 97-98, lecturer, 99-01, instr, 01-05, adj. prof, 05-07, *prof. org. anal*, 07-11, *food chem*, 11- Head, dept. nutrition and food econ, Teachers Col, Columbia, 09-; research assoc, Carnegie Institution, 12-; major, Red Cross Mission to Russia, 17. A.A; Chem. Soc. (v. pres, 07); Soc. Exp. Biol; Soc. Biol. Chem. Chemistry of foods and nutrition.
- Sherman, Dr. James M(organ)**, U. S. Department of Agriculture, Washington, D. C. *Bacteriology*. Ash Grove, Va, May 6, 90. B.S. N. C. Col, 11; M.S. Wisconsin, 12, Ph.D, 16. Asst. *bacter*, Wisconsin, 13-14; instr, Pa. State, 14-15, asst. prof, 15; *with dairy div, U. S. Dept. Agr*. A.A; Soc. Bact. Dairy, soil and systematic bacteriology.
- Sherman, LeRoy K(empton)**, 926 Massachusetts Ave, N. W, Washington, D. C. *Civil engineering*. Eastham, Mass, July 20, 69. B.S, Mass. Inst. Tech, 92. Mem. Ill. Rivers and Lakes Commission, 13-16; *director, U. S. Housing Bur*, 19- Mem. Chicago Sanit. Commission, 10-11. Civil Eng; Ass. Eng. (pres, 20); West. Soc. Eng; Ill. Soc. Eng. (past pres). Industrial housing; sewage disposal.
- Sherrill, Prof. Miles S(tandish)**, 5 Revere St. Place, Boston, Mass. *Chemistry*. Louisville, Ky, Aug. 2, 77. B.S, Mass. Inst. Tech, 99, fellow, 00-02 (Leipzig, 00-01); Ph.D, Breslau, 03. Asst. anal. chem, *Mass. Inst. Tech*, 99-00, instr, 03-07, asst. prof. *theoret. chem*, 07-12. *assoc. prof*, 12- Special lecturer constitution of alloys, research dept, Mass. Inst. Tech, 04-05; research chemist high explosives, ordnance dept, U.S.A, 18. A.A; Chem. Soc; Ass. Prof; Am. Acad. The complex composition and some physicochemical constants of mercury halide complexes; mercury sulphocyanate complexes; equilibrium relations of chromates in solution; ionization of salts in mixtures with no common ions; catalytic oxidation and nitration of benzene to picric acid.
- Sherwin, Prof. Carl P(axson)**, Fordham University, New York, N. Y. *Physiological chemistry*. Bristol, Ind, May 21, 85. B.S, Hanover, 09; fellow, Indiana, 09-10, A.M, 10; M.S, Illinois, 12; Sc.D, Tübingen, 15; M.D, Fordham, 20. Asst. chem, Illinois, 10-12; head, science dept, high sch, Quincy, Ill, 12-13; asst, Tübingen, 13-15; asst. prof. *physiol. chem*, *Fordham*, 15-17, prof, 17-19, *head of dept*, 19- Research chemist, Pellagra Hosp, Spartanburg, S.C, summer, 16. Soc. Biol. Chem; Chem. Soc; Soc. Exp. Biol; Physiol. Soc; Conf. Biol. Chem; Cong. de Physiol; Chem. Gesell. Intestinal putrefaction; glutamin; glycine; adenin and guanin in cow's milk; metabolism of aromatic acids and aldehydes; diabetes insipidus; psoriasis.
- Sherwood, Prof. Andrew**, 'Rosemont,' Portland, Oregon. *Geology*. Mansfield, Pa, July 16, 48. Chicago, 68. Asst. state geologist, Second Pa. Geol. Surv, 74-78; with Geol. Surveys of Ohio and New York under J. S. Newberry and James Hall, 69, 71-74, 78-80; U. S. deputy mineral surveyor, 00-10. In charge Pa. exhibit, Columbian Expos, 93; exped. to the Yukon, 98. For-

- estry Ass; Philos. Soc; cor. mem. N. Y. Acad. Structural geology; mineralogy; paleontology; horticulture; mineral deposits of North America.
- Sherwood, Dr. C(larence) McK(inlay)**, Hercules Powder Co., Kenil, N. J. *Chemistry*. Broadalbin, N. Y., April 1, 88. A.B., Wesleyan, 09; Ph.D., Cornell, 14. *Chemist*, U. S. Pub. Health Service, 15; U. S. Dept. Agr., 15-17; *Hercules Powder Co.*, 17- Chem. Soc. Medical chemicals; bacteriological culture media.
- Sherwood, Geo(rge) H(erbert)**, American Museum of Natural History, New York, N. Y. *Zoology*. Richmond, Maine, March 28, 76. A.B., Brown, 98, A.M., 99. Asst. curator invert. zool., *Am. Museum Nat. Hist.*, 01-06, curator pub. educ., 06-, asst. treas., 06-11, asst. sec'y., 06- Asst., Biol. Lab., U. S. Fish Commission, Woods Hole, 98-02. Mus. Ass; fel. N. Y. Acad. Animal behavior; correlation of the migration of fishes with changes in temperature of the seawater; methods of visual instruction; nature education in schools.
- Sherwood, Prof. Noble P(ierce)**, University of Kansas, Lawrence, Kans. *Bacteriology*. Indianapolis, Ind., March 24, 82. B.S., Kansas, 05, A.M., 11; Chicago, 15. Rodman, A. T. and S. F. R. R., 05-06, topographer, 07; transitman and chief of party, M. of W., 07-08; instr. in charge science, high sch. Trego County, 09-10; asst. instr. bacter. and bot., Kansas, 10-11, instr., 11-14, asst. prof., bacter., 14-16, assoc. prof., 16-18, prof., 18- Exchange prof. bacter., Washington (St. Louis), 18. Soc. Bact; Kans. Acad. Pleomorphic Streptococci; effect of chemicals upon the hemolytic reaction.
- Sherwood, R(obert) G(riffin)**, 72 E. Second St., Corning, N. Y. *Physics*. Utley, Wis., Dec. 15, 85. A.B., Ripon, 08; A.M., Wisconsin, 10. Instr. math., Ripon, 08-09; asst., Wisconsin, 09-10; assoc. prof., Ripon, 10-12; instr. physics, Princeton, 12-15; *research physicist*, Eastman Kodak Co., 15; Westinghouse Elec. and Mfg. Co., 15-17; *Corning Glass Works*, 17- Assoc. Physical Soc. Gases and vapors from glass; effects of heat on chemical glassware; high vacua and vacuum gases; electrical resistivity of alloys.
- Sherzer, Prof. W(illiam) H(ittell)**, Ypsilanti, Mich. *Geology, Nature study*. Franklin, Ohio, Sept. 6, 60. B.S., Michigan, 89, M.S., 90, Ph.D., 01; Berlin, 00-01. Instr. geol. and paleont., Michigan, 91-92; *prof. nat. science*, Mich. State Nor. Col., 92- Instr. nature study, Chautauqua, three years; field instr. geol., Nat. Sci. Camp, Canandaigua, N. Y., four years; in charge Smithsonian glacial expd., Canadian Rockies and Selkirks, summer, 04. A.A.; Geol. Soc; Mich. Acad. (past pres). Fossil corals; glacial geology; Canadian glaciers; geological survey of Monroe County and Wayne County, Michigan.
- Shetterly, Dr. Fred F(loyd)**, Kingsport, Tenn. *Chemistry*. Lapel, Ind., April 17, 83. A.B., Indiana, 06; Ph.D., Cornell, 10. Asst. chem., Indiana, 05-06; Cornell, 06-08, instr., 08. Chem. Soc. Oxidation of hydrazin; behavior of anhydrous hydrazin.
- Shewhart, W(alter) A(ndrew)**, 173 Lenox Road, Brooklyn, N. Y. *Physics*. New Canton, Ill., March 17, 91. A.B., Illinois, 13, A.M., 14; Whiting fellow, California, 15-16, Ph.D., 17. Asst. physics, California, 14-15; Illinois, 16-17; *engineer*, Western Elec. Co., 18- A.A.; Physical Soc; Elec. Soc. Ripple wave motion; accelerated motion of drops through viscous medium.
- Shideler, Prof. W(illiam) H(enry)**, Miami University, Oxford, Ohio. *Geology*. West Middletown, Ohio, July 14, 86. A.B., Miami, 07; Ph.D., Cornell, 10. Asst. prof. zool. and geol., Miami, 10-20, *prof. geol.*, 20- Asst. geologist, Ohio Geol. Surv. A.A.; Geol. Soc; Paleont. Soc; Ohio Acad; Cincinnati Soc. Nat. Hist. Ordovician paleontology and stratigraphy; general paleontology and stratigraphy of the Cincinnati.
- Shidy, L(eland) P(erry)**, U. S. Coast and Geodetic Survey, Washington, D. C. *Mathematical physics*. St. Louis, Mo., July 27, 51. Missouri, 70-73; George Washington, 85-87. *Computer*, U. S. Coast and Geod. Surv., 73-, chief, tidal div., 97-16, asst. chief, 16- A.A.; Wash. Philos. Soc. Tides and tidal phenomena; currents.
- Shields, Prof. Margaret C(alderwood)**, Mt. Holyoke College, South Hadley, Mass. *Physics*. St. Johnsbury, Vt., 83. A.B., Mt. Holyoke, 05; Ph.D., Chicago, 17. Instr. physics, Mt. Holyoke, 07-11; Wellesley, 11-14; *assoc. prof.*, Mt. Holyoke, 18- Physical Soc. Thermodynamics.
- Shilliday, Prof. C(larence) Lee**, Gettysburg, Pa. *Anatomy*. Deerfield, Ohio, June 25, 82. Ph.B., Ohio (Athens), 12, M.S., 13. Asst. histol. and embryol., Cornell, 12-14; instr. histol. and biol., Buffalo, 14-18; *prof. anat. histol. and embryol.*, and sec'y-registrar, col. dentistry, Tennessee, 18-20; *biol.*, Pennsylvania Col., 20- A.A.; Ohio Acad. Histology.
- Shimek, Prof. B(ohumil)**, Iowa City, Iowa. *Botany*. Near Shueyville, Iowa, June 25, 61. C.E., Iowa, 83, M.S., 02; hon. Ph.D., Prague, 19. Instr., Iowa City Acad., 83-85; high sch., Iowa City, 85-88; zool., Nebraska, 88-90; bot., Iowa, 90-96, asst. prof., 96-02, *prof.*, col. pharmacy, 96-02, *physiol. bot.*, 02-14, *bot.*, 14-, head of dept., 14-19, *curator, herbarium*, 19- Special field work, U. S. Bur. Forestry, 99-03; field asst., Iowa Geol. Surv., 08, 09, exchange prof. plant ecol., Prague, 14; director, Iowa Lakeside Lab., 16, 18. Hon. pres. geol. sect. Sci. Cong., Prague, 14. A.A. (v. pres); Bot. Soc; Soc. Nat; Bot. Cent. States; Geol. Soc; Iowa Acad. (pres. 04); cor. mem. Davenport Acad; Wash. Acad; St. Louis Acad. Systematic botany; sand dunes and desert floras; the prairies; plant distribution in Iowa; the fauna and origin of the loess.
- Shimer, Prof. H(ervey) W(oodburn)**, Massachusetts Institute of Technology, Boston, Mass. *Paleontology*. Martin's Creek, Pa., April 17, 72. Gettysburg, 91-93, hon. Sc.D., 16; A.B., Lafayette, 99, A.M., 01; Ph.D., Columbia, 04; Harvard, 04-05. Tutor modern lang., Lafayette, 99-01; asst. paleont., Columbia, 01-03; non-res. lecturer stratig. geol., Mass. Inst. Tech., 03, instr., 03-08, asst. prof. paleont., 08-12, *assoc. prof.*, 12- A.A.; Geol. Soc; Paleont. Soc; Am. Acad; Wash. Acad; Boston Soc. Nat. Hist. Stratigraphy; evolution; old age in brachiopods and mollusks; stratigraphic work in Massachusetts, New York, Arizona and Canada.
- Shimer, Dr. Porter W(illiam)**, Easton, Pa. **Chemistry*. Shimerville, Pa., March 13, 57. E.M.,

- Lafayette, 78, Ph.D. 99. Chief chemist, Thomas Iron Co, 78-79; chief asst. in chem. lab. of Dr. Thomas M. Drown, 79-85; *proprietor, chem. and metal, lab.*, 85- Res. lecturer on iron and steel, Lafayette, 94-02. John Scott medal and premium, 01. Mem. Int. Steel Standards Committee. A.A.; Chem. Soc.; Chem. Eng.; Min. Eng.; Franklin Inst. Methods and apparatus used in analytical chemistry; application of chemistry to metallurgical problems; titanium carbide; a new system of filtration in quantitative chemical analysis; a simplified combustion crucible; improved method in analysis of coke and anthracite; volumetric method for the determination of titanium in iron ores; application of chemistry to various problems in iron and steel manufacture; new process of case-hardening steel.
- Shingler, Prof. Geo(rge) P(inckney), Jr.**, Oxford, Ga. *Chemistry*. Greenpond, S. C., Nov. 28, 79. B.S., Mercer, 02; Georgia, 03-04; B.S., Mass. Inst. Tech, 05. Acting prof. *chem.*, Emory, 06-08, *prof.*, 08- A.A.; Chem. Soc. Standards for malt vinegar; the walnut stain and its effect on fish life; complex silicates.
- Shinn, Prof. F(rederick) L(afayette)**, 854 18th Ave, E, Eugene, Oregon. *Chemistry*. Montpelier, Ind., April 17, 76. A.B., Indiana, 01, A.M., 02; Yale, 02-03; Ph.D., Wisconsin, 06. Asst. *chem.*, Indiana, 01-02; instr., Wisconsin, 03-05; asst. prof., Indiana, 05; instr., Wisconsin, 05-07; asst. prof., Oregon, 07-10, *prof.*, 10- A.A.; Electrochem. Soc. Electrical conductivity of solutions in ethylamin; double and triple thiocyanates of caesium, cobalt and silver; optical rotatory power of salts in dilute solutions; differential osmotic pressure in non-aqueous solvents.
- Shinn, Dr. M(ilicent) W(ashburn)**, Niles, Calif. *Psychology, Pedagogy*. Niles, April 15, 58. A.B., California, 80, Ph.D., 98. Teacher, pub. schools, 75-76, 81-82; ed., 'San Francisco Commercial Herald,' 79-81; 'Overland Monthly,' 83-94. Mem. advisory council on educ. congresses, Columbian Expos, 93; chairman, child-study cong, Midwinter Fair, San Francisco, 94. Wash. Women's Anthropol. Soc. Development of the senses in infancy; development of instinctive movements; primary education; development of memory and association in infancy.
- Shinn, Dr. Owen Louis**, University of Pennsylvania, Philadelphia, Pa. *Chemistry*. Philadelphia, July 30, 71. B.S., Pennsylvania, 93, Ph.D., 96. Instr. *chem.*, Pennsylvania, 93-05, asst. prof., 05-13, *prof. applied chem.*, 13- Mem. U. S. Assay Commission, 07, 10-15. A.A.; Chem. Soc. Atomic weight of palladium and tungsten; molybdenum; complex thiosulphates; some vanadium compounds; electrochemistry; graphite.
- Shipley, Prof. J(ohn) W(esley)**, 638 Jubilee Ave, Winnipeg, Man., Can. *Chemistry*. Stonewall, Man., Feb. 14, 78. B.A., Manitoba, 08; A.M., Harvard, 10, Ph.D., 13. Asst. director, Wolcott Gibbs Lab, Harvard, 12-14; asst. prof. *chem.*, Ohio State, 14-16; prof., Man. Agr. Col., 16-19; *asst. prof.*, Manitoba, 19- Chemist, Nat. Geog. Soc. exped. to Mt. Katmai, 17. Chem. Soc. Analytical chemistry; compressibility of liquids; nitrogen content of volcanic ash and of air in Alaska.
- Shipley, Dr. P(aul) G(alpin)**, 2412 Linden Ave, Baltimore, Md. *Pediatrics*. New Haven, Conn., Oct. 17, 88. M.D., Yale, 13. Asst. biol., Sheffield Sci. Sch., Yale, 10-12; asst. and instr. *anat.*, Hopkins, 13-15, assoc., 15-17, *instr. pediat. and asst. dispensary*, 17- Ass. Anat. Hematology; gastro-intestinal tract; cell physiology; growth of bone.
- Shipton, Prof. Washburne D(enning)**, Washington University, St. Louis, Mo. *Geology*. Derinda, Ill., Jan. 19, 93. B.S., Coe, 14; fellow, Iowa, 15-16, M.S., 16. Asst. *geol.*, Iowa, 16-17; *asst. prof.*, Washington (St. Louis), 17- Instr. *geol.*, Iowa, summers, 15-17; with Mo. Geol. Surv., summer, 19. A.A.; Iowa Acad. Stratigraphic and physiographic geology; Pleistocene geology of Missouri.
- Shiras, Geo(rge)**, 3d, Stoneleigh Court, Washington, D. C. *Zoology*. Pittsburgh, Pa., Jan. 1, 59. Cornell, 81; LL.B., Yale, 83; hon. Sc.D., Trinity, 18. Mem. Pa. Legislature, 89-90; U. S. Congress, 03-05; board of managers, Nat. Geog. Soc., 10- Biol. expeditions to Newfoundland, Ont., Alaska, West Indies, Mex., Panama, Hawaii, Lake Superior, Florida and the Rocky Mountains. Gold medal, Paris Expos, 00; grand prize, La. Purchase Expos, 04. A.A.; Mem. Ornith. Union; Audubon Soc.; Am. Bison Soc.; Soc. Foresters; League of Wild Life Photog. (pres); Game Protec. and Propag. Ass. (director); N. Y. Explorers Club; Wash. Biol. Soc. Biological expeditions; federal migratory bird bill.
- Shirk, Prof. Claude J(ospeh)**, 601 E. 14th St, University Place, Nebr. *Botany*. Morrilton, Ill., Aug. 18, 75. M.S.D., A.B., McPherson, 01, A.M., 02; M.S., Chicago, 09; Nebraska. *Prof. chem. and physics*, McPherson, 04-11; math, Ottawa (Kans.), 11-13; *bot.*, Nebr. Wesleyan, 13-, *head, dept. biol.*, 19- A.A.; Bot. Soc.; Ecol. Soc.; Kans. Acad.; Nebr. Acad. Ecology; physiology; salt marshes and alkali lands.
- Shirk, Prof. James A(brahm) G(arfield)**, Manual Training Normal School, Pittsburg, Kans. *Mathematics, Physics*. McPherson, Kans., Jan. 12, 81. A.B., McPherson, 01, A.M., 02; M.S., Kansas, 05; Chicago, summer, 06. Prof. *math. and physics*, McPherson, 01-04; asst. instr. *math.*, Kansas, 04-06; prof. *math. and physics*, Ottawa, 06-12; asst. prof. *physical science*, Manual Training Nor. Sch., Pittsburg, Kans., 12-14, *head of dept. math. and applied mech.*, 14-, *director civil and mech. eng.*, 20- Math. Ass.; Kans. Acad. (pres, 15); Kans. Eng. Soc. Development of non-collegiate technical education.
- Shive, Dr. J(ohn) W(esley)**, Agricultural Experiment Station, New Brunswick, N. J. *Plant physiology*. Halifax, Pa., Feb. 13, 77. Ph.B., Dickinson, 06, A.M., 08; Ph.D., Hopkins, 15. *Plant physiologist*, N. J. Exp. Sta., 15- A.A.; Bot. Soc.; Soc. Exp. Biol.; Chem. Soc. Salt requirements of agricultural plants.
- Shively, Pres. L(evi) S(tephen)**, Mount Morris, Ill. *Mathematics*. Cerro Gordo, Ill., Oct. 10, 84. A.B., Michigan, 08; A.M., Chicago, 16,

- Ph.D, 17. *Prof. math, Mt. Morris*, 08-15, 17-, acting pres, 18-19, *pres*, 19- *Differential geometry*.
- Shoemaker, Dr. D(aniel) N(aylor)**, U. S. Department of Agriculture, Washington, D. C. *Horticulture*. Fair Haven, Ohio, Nov. 16, 69. B.S., Earlham, 94; fellow, Hopkins, 02-03, Ph.D, 03. Asst. biol, Hopkins, 02-03; cotton breeding, U. S. Dept. Agr, 04-10, *horticulturist, bur. plant indust*, 10- Bot. Soc; Wash. Bot. Soc. *Hamamelis virginiana*; garden vegetables.
- Shoemaker, Prof. H(arry) M(elvin)**, 1906 N. 13th St., Philadelphia, Pa. *Mathematics*. Hagerstown, Md, Jan. 3, 80. B.S., Pennsylvania, 02, A.M, 03, Ph.D, 17. *Prof. math*, Pa. Mil. Col, 08-10; *North East High Sch, Phila*, 10- Applied mathematics; partial differential equations; Bessel's functions; vibrating membranes.
- Shonle, Horace A(bbot)**, Eli Lilly and Co, Indianapolis, Ind. *Chemistry*. Tuscola, Ill, May 14, 92. B.S., Illinois, 16, M.S, 17. Biol. chemist, U. S. Dept. Agr, 17-18; *in charge research in org. chem, Eli Lilly and Co*, 19- With C.W.S. and M.C., U.S.A. 18-19. Chem. Soc; Ind. Acad. Organic chemistry; relation of physiological action of organic compounds to their structure and physical properties.
- Shook, G(lenn) A(lfred)**, Norton, Mass. *Physics*. Osgood, Ind, July 16, 82. A.B., Wisconsin, 07; Ph.D, Illinois, 14. Instr. physics, Purdue, 07-11; Illinois, 11-14; Michigan, 14-15; Williams, 15-18; *prof. physics and math, Wheaton*, 18- Physical Soc; Ind. Acad. Radiation pyrometry; spectrum analysis; refractometry.
- Shorey, Dr. Edmund C(ecil)**, Semet Solvay Co, Syracuse, N. Y. *Chemistry*. Ont, Can, March 5, 65. A.B., Queen's (Can), 86, A.M, 87, D.Sc, 96. Chemist, Kohala Sugar Co, 93-99; Territory of Hawaii, 99-03; Hawaii Exp. Sta, 03-07; fertility investigations, bur. soils, U. S. Dept. Agr, 07-15, in charge chem. investigations, 15-18; research chemist, Nat. Aniline and Chem. Co, 18; *with Semet Solvay Process Co*. Gold and silver medals, Queen's (Can). Chem. Soc; Soc. Biol. Chem; Soc. Test. Mat. Dye intermediates; organic matter of soils.
- Short, Miss Jessie M(ay)**, 282 N. Fulton Ave, Mt. Vernon, N. Y. *Astronomy, Mathematics*. College Springs, Iowa, June 5, 73. A.B., Beloit, 00; A.M., Carleton, 11; fellow, Chicago, 14-16. Principal, high sch, Browns Valley, Minn., 01-04; Redwood Falls, 04-09; instr. math, Carleton, 09-11, dean of women, 11-14; Rollins, 17-18; office supervisor, Nat. Workmen's Compensation Service Bur, 18-20; *instr. math, Reed*, 20- Astron. Soc. Actuarial mathematics; system of algol; photographic distortions of the 24-inch reflector of the Yerkes Observatory.
- Short, Prof. R(obert) L(ouis)**, Lakewood High School, Lakewood, Ohio. *Mathematics*. Danville, Ill, Sept. 18, 66. A.B., Chaddock, 90; Illinois; Northwestern; Munich, 97-98. Tutor math, Wesleyan Sem, 85-87; instr., Chaddock, 87-90, prof, 93-94; v. pres. and prof. math, Ft. Worth, 94-97; instr, high sch, Quincy, Ill, 98-99; Illinois, 00-01, asst. prof, 01-02; ed, D. C. Heath and Co, 02-07; head instr, Tech. High Sch, Cleveland, 03. A.A.; Math. Soc; Eng. Educ; Central Ass. Sci. and Math. Teachers. Algebra; geometry; unification of secondary mathematics; mathematics for industrial and technical schools.
- Shoub, H(yman) L(ouis)**, Hygienic Laboratory, Washington, D. C. *Chemistry*. Russia, 78. B.S., Mass. Inst. Tech, 13. With N. Y. Commission of Ventilation, 13; asst. health officer, Wellesley, Mass, 13-14; *with hygienic lab, U. S. Pub. Health Service*, 14- Chem. Soc; Soc. Bact; Ecol. Soc. Public health; ventilation; nitrates in sewage; reconstructed milk.
- Showalter, R(alph) W(aldo)**, Indianapolis, Ind. *Bacteriology*. Fremont, Nebr, 85. B.S., Purdue, 09. Asst. chem, Purdue, 09; research chemist, *Eli Lilly and Co*, 10-15, *director, biol. lab*, 15- A.A.; Chem. Soc; Pub. Health Ass; Pharmaceut. Ass. Biological products.
- Showman, Prof. Harry M(unson)**, University of California, Southern Branch, Los Angeles, Calif. *Mechanics*. Denver, Colo, April 17, 89. E.M., Colo. Sch. Mines, 10; A.M., Harvard, 19. Instr. math, Colo. Sch. Mines, 10-12, asst. prof. civil eng, 12-17, prof. mech. and civil eng, 17-18; *asst. prof. mech. and hydraul*, Case, 19-20; *math, California (Southern Branch)*, 20- Lecturer physics, Harvard, 19. Math. Ass. Strength of materials.
- Shrader, Dr. J(ames) H(ouston)**, Coconut Products Corporation, Baltimore, Md. *Chemistry*. Washington, Sept. 30, 85. A.B., George Washington, 09; Ph.D, Hopkins, 13. Asst. chem, Hopkins, 12-13; lab. director, Gibbs Preserving Co, 13-17; chem. technologist, bur. plant indust, U. S. Dept. Agr, 17-19; *chief chemist, Coconut Products Corp*, 19- Industrial utilization of plant products; canning-house wastes; vegetable oils; food packing; pectin jellies.
- Shreve, Dr. Forrest**, Desert Botanical Laboratory, Tucson, Ariz. **Botany*. Easton, Md, July 8, 78. A.B., Hopkins, 01, Ph.D, 05, Bruce fellow, 05-06. Instr. in charge phanerogamic bot, Cold Spring Harbor, 04-05; assoc. prof. bot, Goucher, 06-08; *staff mem. desert lab, Carnegie Institution*, 08- Ed, 'Plant World', 11-19. A.A.; Soc. Nat; Bot. Soc; Ecol. Soc. (see 'y-treas, 15-19); Ass. Geog; Soc. Foresters; West. Soc. Nat; Arizona State Forestry Ass. (pres). Development of Sarracenia; plant life of Maryland; ecology and physiology of the mountain rain-forests of Jamaica and of desert vegetation; water relations of plants; rainfall and temperature in mountains; vegetation and climate in the United States.
- Shreve, Mrs. Forrest (Edith Coffin Bellamy)**, Desert Botanical Laboratory, Tucson, Ariz. *Plant physiology*. Grand Rapids, Mich, Nov. 7, 82. A.B., Chicago, 03. Instr. physics, Goucher, 07-09; research asst. plant physiol, Hopkins, 11-12; *vol. investigator, desert lab, Carnegie Institution*, 12- A.A.; Ecol. Soc; West. Soc. Nat. Water relations of desert plants; colloidal gels; leaf temperature.
- Shufeldt, Dr. R(obert) W(ilson)**, 3356 18th St, N.W., Washington, D. C. **Zoology, Biology*. New York, N. Y., Dec. 1, 50. Cornell, 74; M.D., George Washington, 76. Capt.'s clerk and signal officer, U.S.N., 64, hydrographer, Hydrog. Office, 74; lieut, med. dept, U.S.A., 76-81, capt, 81-94,

- major, 04, retired, 04. Hon. curator, Smithsonian Inst, 82-83; in charge, dept. comp. anat, U. S. Army Med. Museum, 83, on duty, 18-19; assoc. zool, Smithsonian Inst; ed, nat. hist. departments of several magazines and journals; judge, Columbian Expos, 93. Belgian Order of St. John of Jerusalem, 19. A.A.; fel. Ornith. Union; Soc. Mammal; Wash. Aquarium Soc. (pres, 16); Wash. Biol. Soc.; N. Y. Medico-Legal Soc. (trustee); cor. mem. London Zool. Soc.; Royal Australasian Ornith. Union; Soc. Ital. d'Anthrop, Etnol. e Psicol. comp; l'Alliance scientifique universelle. Anatomy of vertebrates; psychological phenomena; biology; exploration; a classification of birds; osteology of various groups of birds; studies of the human form; game mammals of United States.
- Shuler, Dr. Ellis W(illiam)**, Southern Methodist University, Dallas, Tex. *Geology*. Comers Rock, Va, Oct. 15, 81. A.B, Emory and Henry, 03; A.M, Vanderbilt, 07; fellow, Harvard, 13-14, A.M, 14, Ph.D, 15. Asst. biol, Vanderbilt, 07-08; prof. biol. and geol, Polytech, Ft. Worth, Tex, 08-13; asst. geol, Harvard, 14-15; assoc. prof, *South. Methodist*, 15-17, prof, 18- Mem. Shaler Mem. exped. to South. Appalachians, 16; acting geologist, Tex. Bur. Econ. Geol, 17. A.A.; Geol. Soc; Ass. Petrol. Geol. Stratigraphic geology; physiography; paleontology.
- Shull, Prof. A(aron) Franklin**, 520 Linden St, Ann Arbor, Mich. **Zoology*. Miami Co, Ohio, Aug. 1, 81. A.B, Michigan, 08; Ph.D, Columbia, 11. Asst. zool, Michigan, 05-08; Columbia, 09-11, acting asst. prof, *Michigan*, 11, instr, 11-12, asst. prof, 12-14, *assoc. prof*, 14- Entomologist, Mich. Biol. Surv, summer, 08. A.A.; Soc. Nat. (sec'y, 20-); Soc. Zool. (exec. committee, 13-18); Entom. Soc; Mich. Acad. Genetics; life cycles in rotifers, aphids and thrips; sex determination and heredity in rotifers and insects; mammals.
- Shull, Prof. Charles A(ibert)**, University of Kentucky, Lexington, Ky. *Botany*. Clark Co, Ohio, Jan. 19, 79. Antioch, 00-02; B.S, Chicago, 05, fellow, 05-06, Ph.D, 15; Cold Spring Harbor, 07. Asst. prof. biol, Transylvania, 06-08, prof. biol. and geol, 08-12; asst. prof. bot, Kansas, 12-15, assoc. prof. plant physiol. and genetics, 15-18; *prof. plant physiol. and head, dept. bot, Kentucky*, 18- Asst. bot, Chicago, summer, 11. A.A.; Bot. Soc. (chairman, physiol. sect, 19); Ecol. Soc; Bot. Cent. States; Wash. Biol. Soc. Plant physiology; germination; semipermeability; surface forces in soils; intake of water vapor by colloids; effects of natural gas on plants.
- Shull, Dr. Geo(rge) H(arrison)**, 60 Jefferson Road, Princeton, N. J. **Botany*, Clark Co, Ohio, April 15, 74. B.S, Antioch, 01; Ph.D, Chicago, 04. Student asst, U. S. Bur. Forestry, 01; bot. asst, U. S. Nat. Museum, 02; bot. expert, bur. plant indust, U. S. Dept. Agr, 02-04; asst. plant physiol, Chicago, 03-04; bot. investigator, Carnegie Institution, 04-15; *prof. bot. and genetics, Princeton*, 15- Ed, 'Genetics'; ed. for genetics, 'Bot. Abstracts.' A.A.; Soc. Nat. (v. pres, 11, pres, 17); Genetics' Ass. (chairman, plant sect, 12); Ecol. Soc; Bot. Soc; Am. Geog. Soc; Philos. Soc; Torrey Bot. Club; Wash. Acad; Bot. Gesell; Int. Ass. Bot.
- Gross morphology; variation; heredity; plant breeding; secular variation; latency; in-breeding; heredity of sex and of other characters in *Lychnis*, *Oenothera*, *Bursa*, etc.
- Shull, J(ames) Marion**, U. S. Department of Agriculture, Washington, D. C. *Botany*. Clark Co, Ohio, Jan. 23, 72. Valparaiso, 94-95; Art Students' League, 02-03. Instr. art, Antioch, 96-98, bot, 97-98; *bot. artist, U. S. Dept. Agr*, 08- Wash. Bot. Soc. Plant morphology; plant breeding; botanical illustration.
- Shumway, Prof. Waldo**, Dartmouth College, Hanover, N. H. *Zoology*. New Brunswick, N. J, May 8, 91. A.B, Amherst, 11; A.M, Columbia, 13, Ph.D, 16. Asst. zool, Columbia, 14-15; *biol*, Amherst, 15-16, instr, 16-17; *asst. prof, Dartmouth*, 19- Mem. Amherst biol. exped. to Patagonia, 11-12. A.A; N. Y. Acad. Protozoology; endocrinology.
- Shupp, Dr. Asher Franklin**, Mellon Institute, Pittsburgh, Pa. *Chemistry*. Effort, Pa, Oct. 8, 87. A.B, Muhlenberg, 10; fellow, Pittsburgh, 15-17, Ph.D, 17. Prof. chem, Thiel, 10-15; research chemist, E. I. duPont de Nemours and Co, 17-19; fellow, *Mellon Inst*, 19- Chem. Soc. Organic chemistry; phthalic acid; phenolphthalein.
- Shute, Dr. D(aniel) Kerfoot**, 1727 De Sales St, N. W, Washington, D. C. *Anatomy, Ophthalmology*. Alexandria, Va, Oct. 22, 58. A.B, George Washington, 79, M.D, 83. Prosecutor to chair of anat, George Washington, 86-87, lecturer, 87-88, prof, 88-10. Clin. asst, Royal Ophthal. Hosp, London, 88-89; ophthalmologist to various hospitals, D. C; consulting ophthalmologist, Govt. Hosp. for Insane. A.A; Ass. Anat; Col. Surg; Am. Med. Ass; D. C. Soc. Ophthal. and Otol. (past pres); Wash. Acad. (past v. pres); Wash. Anthropol. Soc. Human and comparative anatomy of the nervous system.
- Shutt, F(rank) T(homas)**, Experimental Farm, Ottawa, Can. *Agricultural chemistry*. London, England, Sept. 15, 59. B.A, Toronto, 85, M.A, 86, D.Sc, 14. Demonstrator chem, Toronto, 85-87; *Dominion chemist and asst. director, Dominion Exp. Farms*, 87- A.A; Chem. Soc; fel. Royal Soc. Can; fel. Can. Inst. Chem; fel. London Chem. Soc; fel. Inst. Chem. Gt. Britain and Ireland. Rational means of maintaining and increasing soil fertility; conservation of soil moisture.
- Sibert, Major Gen. W(illiam) L(uther)**, Chemical Warfare Service, Washington, D. C. *Engineering*. Gadsen, Ala, Oct. 12, 60. Grad, U. S. Mil. Acad, 84; hon. D.E, Nebraska; LL.D, Alabama. All grades from second lieutenant to major gen, 84-17; in charge, several river and harbor districts, U. S, and chief engineer and gen. manager, Manila and Dagupan R. R, 99-00; in charge construction of Atlantic end, Panama Canal, 07-14; *director, C.W.S.*, 18- Mem. Isthmian Canal Commission; chairman, Board of Engineers for Flood Prevention in China, 14. D. S. medal; Commandeur Légion d'honneur. Civil Eng.
- Sibley, Prof. Frederick H(ubbard)**, 307 Sixth St, Reno, Nev. *Mechanical engineering*. Oxford, Mass, 72. Ph.B, Brown, 98; M.E, Case, 05. Asst. prof. mech. eng, Case, 03-08; prof, Ala-

- bama, 08-12; assoc. prof. and later prof., Kansas, 12; *prof. mech. eng. and dean, col. eng., Nevada*. A.A.; Mech. Eng.; Eng. Educ. Flow of steam through nozzles; efficiency of involute gear teeth; petroleum cracking; oils; pure mechanism.
- Sibley, Robert**, Rialto Building, San Francisco, Calif. *Engineering*. Round Mountain, Ala., March 28, 81. B.S., California, 03. Chief elec. engineer, Mariposa Commercial and Mining Co., 03; *prof. elec. eng.*, Montana, 03-07; consulting engineer, 07-11; *prof. mech. eng.*, California, 11-15; *ed., 'Jour. Elec.'*, 16-; Pacific Coast *ed., 'Elec. World.'*, 19-20; *'Elec. Merchandising.'*, 19-20; *pres., McGraw Hill Co.*, 20- Fel. Elec. Eng.; Mech. Eng. (past chairman, San Francisco sect). Uses of fuel oil; steam power generation; water power and hydroelectric development.
- Siceloff, Prof. L(ewis) Parker**, Columbia University, New York, N. Y. *Mathematics*. Butler, Mo., Jan. 21, 80. A.B., Central Col. (Mo.), 00; Ph.D., Columbia, 12. *Instr. math.*, Buchanan, 00-02, *pres.*, 02-04; *instr.*, Col. City of N. Y., 05-06; *Columbia*, 06-12, *asst. prof.*, 12- *Math. Soc.* Theory of groups.
- Sickels, Dr. Irvin**, College of the City of New York, New York, N. Y. *Geology*. Nyack, N. Y., Aug. 13, 53. B.S., Col. City of N. Y., 74, M.S., 78; M.D., N. Y. Univ., 83. *Curator, Col. City of N. Y.*, 78-83, *tutor and instr. nat. hist.*, 83-97, *asst. prof.*, 97-05, *assoc. prof.*, 05-10, *prof.*, 10-18, *geol.*, 18- *Instr.*, lecturer and *assoc. prof. chem. and physics*, med. col., N. Y. Univ., 80-98; *asst. prof.*, med. col., Cornell, 98-09. A.A.; Chem. Soc.; fel. N. Y. Acad.
- Sidener, Prof. C(harles) F(rederick)**, University of Minnesota, Minneapolis, Minn. *Chemistry*. Huntsville, Ill., Feb. 25, 58. B.S., Minnesota. *Instr. chem., Minnesota*, 83-93, *asst. prof.*, 93-06, *prof.*, 06- A.A.; Chem. Soc. Determination of aluminum; phosphorus in vanadium steel and ferro-vanadium.
- Sidis, Dr. Boris**, Portsmouth, N. H. **Psychology, Psychopathology*. Russia, Oct. 12, 67. A.B., Harvard, 94, A.M., 95, Ph.D., 97, M.D., 08. *Assoc. psychol. and psychopath.*, Path. Inst., N. Y. State Hospitals, 96-01; *director, psychopath. hosp. and psychopath. lab.*, N. Y. Infirmary for Women and Children, 01; *med. director, The Sidis Psychotherapeutic Inst.* Psychopath. Soc. (cor. sec'y); Psychol. Ass. Psychology of suggestion; mental dissociation; hallucinations; memory; multiple personality; forms and nature of functional mental dissociation; sleep; laughter; the nature and causation of galvanic phenomena.
- Siebenshal, C(laude) E(rlsworth)**, U. S. Geological Survey, Washington, D. C. *Geology*. Vevay, Ind., April 16, 69. A.B., Stanford, 92, A.M., 93; Indiana, 94; fellow, Chicago, 97-99, 00-01. *Asst. geologist*, Ark. Geol. Surv., 89-93; Ind. Geol. Surv., 96-99; *U. S. Geol. Surv.*, 01- *Instr. geol.*, Indiana, 91. Geol. Soc.; Min. and Metal. Eng.; Soc. Econ. Geol.; Wash. Geol. Soc. Economic geology; ore deposits.
- Sieg, Prof. L(oe) P(aul)**, University of Iowa, Iowa City, Iowa. **Physics*. Marshalltown, Iowa, Oct. 7, 79. B.S., Iowa, 00, fellow, 00-03, M.S., 01, Ph.D., 10. *Asst. physics*, Iowa, 99-00; *instr. and head of dept.*, Carleton, 03-06; *instr.*, Iowa, 06-08, *asst. and assoc. prof.*, 08-19, *prof.*, 20- *Capt.*, science and research div., Air Service, 18-19. A.A.; Physical Soc.; fel. Iowa Acad. Elasticity; optical properties of crystals and of selenium; air resistance; elasticity and crystal structure.
- Sieplein, Dr. O(tto) J(ulius)**, Grove City, Pa. *Chemistry*. Cleveland, Ohio, Dec. 21, 77. B.S., Case, 99, M.S., 02; Ph.D., Bonn, 06. *Instr. org. and applied chem.*, Case, 99-04; *asst. to Dr. Anschütz*, Bonn, 05-06; *prof. chem.*, Grove City, 06- *Chem. Soc.*; Chem. Gesell. Petroleum; mesaconic ester acids and other derivatives; thiamids.
- Sigerfoos, Prof. Charles P(eter)**, *1023 University Ave., S. E., Minneapolis, Minn. *Zoology*. Arcanum, Ohio, May 4, 65. B.S., Ohio State, 89; Ph.D., Hopkins, 97. *Instr. zool.*, Ohio State, 89-91; *biol.*, Virginia, 91-92; *asst. zool.*, Hopkins, 95-97; *asst. prof. animal biol.*, Minnesota, 97-00, *prof. zool.*, 00- *Instr. embryol.*, Cold Spring Harbor, 97-02. A.A.; Soc. Nat.; Soc. Zool. Ship-worms.
- Sigsbee, Rear Admiral Charles Dwight**, U. S. N., 539 W. 112th St., New York, N. Y. *Naval art and science*. Albany, N. Y., Jan. 16, 45. Grad., U. S. Naval Acad., 63. *Ensign and later lieut.*, *lieut. commander, commander, capt., rear admiral*, U.S.N., 59-07, *retired*, 07. *Coast and Geod. Surv.*, 74-78; *chief hydrographer*, Navy Dept., 93-97, *chief, intelligence office, commander*, League Isl. Navy Yard and Naval Sta., Phila. Red Eagle of Prussia from William I. A.A.; Philos. Soc. Naval art and science; practise and economy of deep-sea dredging; hydrography; meteorology; naval tactics and strategy.
- Siler, Lieut. Col. J(oseph) F(ranklin)**, U.S.A., Medical Corps, Office of Surgeon General, Washington, D. C. *Medicine*. Orion, Ala., June 7, 75. B.S., Ala. State Nor. Col., 95; M.D., Virginia, 98. *Med. officer, U.S.A.*, 03-; *in charge, div. laboratories and infectious diseases, S.G.O.* Lecturer tropical med., N. Y. Post-Grad. Med. Sch., *chief, lab. med. zool.*; *mem. Thompson McFadden Pellagra Commission*. A.A.; Am. Med. Ass.; Col. Surg.; Soc. Trop. Med.; Soc. Exp. Biol.; Ass. Study Pellagra (v. *pres.*, 12-15, *pres.*, 15); Ass. Mil. Surg.; N. Y. Acad.; fel. Royal Soc. Trop. Med. and Hygiene. Pellagra; sanitation; hygiene.
- Sill, Dr. Herbert F(owler)**, Research Building, East Pittsburgh, Pa. *Chemistry*. Geneseo, N. Y., March 7, 72. B.S., Princeton, 94, M.S., 96; Göttingen, 00-01; Ph.D., Leipzig, 04. *Instr. anal. chem.*, Princeton, 96-00, 01-03; Carnegie research *asst.*, 05; *asst. prof. chem.*, Carnegie Inst. Tech., 07-12, *prof.*, 12-14; *chem. research engineer, Westinghouse Elec. and Mfg. Co.*, 18- *Chem. Soc.*; Chem. Gesell. The equilibria between nitrogen bases and organic acids in various solvents; influence of pressure on solubility; metallic thorium, uranium and zirconium.
- Silsbee, Dr. Francis B(riggs)**, Bureau of Standards, Washington, D. C. *Physics*. Lawrence, Mass., July 8, 89. B.S., Mass. Inst. Tech., 10, M.S., 11; Ph.D., Harvard, 15. *Asst. physicist and later physicist, Bur. Standards*, 12- A.A.; Phys-

- ical Soc; assoc. Elec. Eng; Wash. Acad; Wash. Philos. Soc. Electrical measurements.
- Silverman, Prof. Alexander**, 5806 Ellsworth Ave, Pittsburgh, Pa. *Chemistry*. Pittsburgh, May 2, 81. Ph.B, Pittsburgh, 02, M.S, 07; A.B, Cornell, 05. Chemist, Macbeth-Evans Glass Co, 02-04; instr. *inorg. chem*, Pittsburgh, 05-09, asst. prof, 09-12, *prof*, 12-, *head, sch. chem*, 18- Consulting chemist on glass. A.A; Chem. Soc; Electrochem. Soc; Ceramic Soc; Soc. Test. Mat; Min. Eng; Soc. Chem. Indust; Soc. Glass Technol; N. Y. Chemists Club; London Inst. Metals. Technology and manufacture of glass; microscopic illumination.
- Silverman, Dr. L(ouis) L(azarus)**, Dartmouth College, Hanover, N. H. *Mathematics*. Suvalk, Russia, April 21, 84. A.B, Harvard, 05, A.M, 07; Ph.D, Missouri, 10. Instr. math, Missouri, 07-09; Cornell, 09-17; with Gen. Elec. Co, 17-18; *asst. prof. math*, Dartmouth, 18- Math. Soc. Divergent series.
- Silvester, Capt. Charles F(rederick)**, U. S. A., Army Medical Museum, Washington, D. C. *Anatomy*. Princeton, N. J, Dec. 21, 76. Preparator anat, Princeton, 97-99, asst, 99-19, curator, morphol. museum, 01, zool. museum, 09-19; *capt*, U.S.A., 17- Peary relief exped, 99; med. museum unit, A.E.F, 19. A.A; Ass. Anat; Ass. Mus; Soc. Ichthyol. and Herp. (board of governors); Int. Ass. Med. Mus. (v. pres). Comparative anatomy of vertebrates; ichthyology.
- Silvey, Prof. O(scar) W(illiam)**, College Station, Tex. *Physics*. Fisher's, Ind, April 3, 80. A.B, Indiana, 07, A.M, 10; Ph.D, Chicago, 15. Instr. *physics*, Purdue, 08-14, asst. prof, 15-16; *prof*, Tex. Col, 16- A.A; Physical Soc. Point discharge in electrostatic and magnetic fields; fall of a droplet in a gas and in a liquid.
- Simmons, Dr. George H(enry)**, 712 Gordon Terrace, Chicago, Ill. *Medicine*. Morton, England, Jan. 2, 52. Hahemann Med. Col, 82; M.D, Rush Med. Col, 92; hon. A.M, Tabor, 99; LL.D, Northwestern, 07. *Practising physician*, 92- A.A; Am. Med. Ass. (sec'y, 99-11, ed. and gen. manager, 'Jour.', 99-); West. Surg. and Gynec. Ass. (sec'y and treas, 96-01); Chicago Path. Soc.
- Simms, S(tephen) C(hapman)**, 7030 Chappel Ave, Chicago, Ill. *Ethnology*. Georgetown, D. C, March 22, 63. Private and pub. schools. Asst. curator, dept. anthrop, *Field Museum Nat. Hist*, 94-13, *curator, pub. sch. exten*, 13- Portuguese vice consul, Chicago, 92-19, consul, 19-; asst. sec'y and in charge, dept. of foreign affairs, Columbian Expos, representative of Sultan of Johore; ethnologist in charge, sect. ethnol, dept. anthrop, La. Purchase Expos, 04; mem. jury awards, Panama-Pacific Expos, 15. Anthrop. Ass; Folk-lore Soc. Ethnology of the North American aborigines.
- Simon, Dr. Charles E(dmund)**, 1734 Linden Ave, Baltimore, Md. *Medicine*. Baltimore, Sept. 23, 66. A.B, Hopkins, 88; M.D, Maryland, 90; Paris, 91-92. Asst. dispensary, Hopkins Hosp, 89-90, asst. res. physician, 90-91; prof. clin. path. and exp. med, Col. Physicians and Surg, Baltimore, and sch. med, Maryland, 10-20; fellow by courtesy, *sch. hygiene and pub. health*, Hopkins, 19-20; *lecturer med. zool*, 20- Managing ed, 'Am. Jour. Hygiene,' 20- A.A; Soc. Exp. Biol; Soc. Biol. Chem; Physiol. Soc; Micros. Soc; Am. Med. Ass; Md. Med. and Chirurg. Faculty. Physiological and pathological chemistry; clinical laboratory methods; experimental hematology; sulphur; metabolism; experimental cancer work; serology; immunology; protozoology.
- Simon, Dr. Webster G(odman)**, Western Reserve University, Cleveland, Ohio. *Mathematics*. Cincinnati, Ohio, Oct. 3, 92. A.B, Harvard, 14, A.M, 15; Ph.D, Chicago, 18. *Instr. math*, *Western Reserve*, 18- Math. Soc; Math. Ass. Differential equations in infinitely many variables.
- Simonds, Prof. Frederic W(illiam)**, University of Texas, Austin, Texas. *Geology*. Charlestown, Mass, July 3, 53. B.S, Cornell, 75, M.S, 76; Ph.D, Syracuse, 79; hon. Sc.D, Arkansas, 93. Instr. geol. and paleont, Cornell, 75-77; prof. geol, zool, bot. and physiol, North Carolina, 77-81; lecturer econ. geol, Cornell, 87; prof. biol. and geol, Arkansas, 87-90; assoc. prof. *geol*, Texas, 90-95, *prof*, 95- Special agent, dept. mining statist, tenth census, 80; biologist, Ark. Exp. Sta, 87-90; special asst, Ark. Geol. Surv, 87-92. A.A; Geol. Soc; Ass. Petrol. Geol; Southwest. Geol. Soc. (pres, Austin sect, 19); Tex. Acad. (pres, 99-00, sec'y, 00-12). Stratigraphical geology of the southwest; physiography of North America with special reference to the physiographic conditions in Texas and the southwest.
- Simonds, Prof. James P(ersons)**, 2421 S. Dearborn St, Chicago, Ill. *Pathology*. Cleburne, Tex, March 19, 78. A.B, Baylor, 01; M.D, Rush Med. Col, 07; D.P.H, Harvard, 14. Asst. city bacteriologist, St. Louis, 07-08; director, lab. of path. and bacter, Ind. State Board of Health, 08-12; prof. bacter. and hygiene, Texas, 12-14; *assoc. prof. path*, *Northwestern*, 14-; *attending pathologist*, Cook Co. Hosp, 18-; *coroner's physician*, 18- Lecturer hygiene, Indiana, 10-12. Special investigator gas gangrene, Rockefeller Inst, Belgium, 16. A.A; Ass. Path. and Bact; Soc. Exp. Path; Am. Med. Ass; Chicago Inst. Med; Chicago Path. Soc. (pres, 18). Gas gangrene; anaphylaxis; peptone poisoning; intracellular ferments; low blood pressures; surgical shock; fat embolism.
- Simpson, Dr. B(enjamin) R(oy)**, 476 Eastern Parkway, Brooklyn, N. Y. *Educational psychology*. Drumbo, Ont, Aug. 13, 77. A.B, McMaster, 99; Chicago, 05; Ph.D, Columbia, 12. Teacher, Victoria, B. C, 00-02; principal, high sch, Cumberland, B. C, 02-05; *instr. psychol. and educ. Training Sch. for Teachers*, Brooklyn, 08- Instr. Georgia, summer, 10. A.A; Psychol. Ass. Correlation of mental abilities.
- Simpson, Dr. Burton T(horne)**, 113 High St, Buffalo, N. Y. *Pathology*. Belleville, N. Y, July 30, 73. M.D, Buffalo, 03. Clin. pathologist, Buffalo Gen. Hosp, 06-10; *pathologist*, *State Inst. for Study of Malignant Diseases*, 10- Lecturer embryol. and anat. nervous system, Buffalo, 05-10. Soc. Cancer Research; Am. Acad. Med; Ass. Study Int. Secretions. Cancer; adenoma of thyroid and prostate; goitre; malignant leiomyoma.

- Simpson, Dr. C(harles) Augustus**, 1219 Connecticut Ave, N. W., Washington, D. C. *Dermatology*. Loudoun Co, Va, Aug. 12, 83. M.D., George Washington, 06; certificate, Vienna, 11. Staff, N. Y. Skin and Cancer Hosp; N. Y. Post-Grad. Hosp; N. Y. Dept. Health, 07-09; *assoc. dermat., George Washington*. Dermatologist to various hospitals; asst. surgeon, med. reserve corps, U.S.N. A.A; Am. Med. Ass; Wash. Acad. Röntgen-ray therapy of skin disease, exophthalmic goitre and cancer.
- Simpson, Prof. C(harles) G(amble)**, Carnegie Institute of Technology, Pittsburgh, Pa. *Mathematics*. Clarence, Iowa, May 20, 71. Ph.B., Cornell (Iowa), 95; Chicago, 98-00; Columbia, 10-13. Prof. math, Hedding, 00-03; instr. math. and physics, Mich. Col. of Mines, 03-06; instr. math, Iowa, 06-10; *assoc. mech.*, Columbia, 11-12; asst. prof. math, Pa. State, 13-20; *instr. mech.*, *Carnegie Inst. Tech.*, 20- Math. Soc.
- Simpson, Charles Torrey**, Little River, Fla. *Zoology, Botany*. Tiskilwa, Ill, June 3, 46. Pub. schools. Aid, div. mollusks, U. S. Nat. Museum, 89-02. Lecturer zool, Georgetown. Naiades; land and fresh water mollusks of the West Indies; flora of Florida and West Indies.
- Simpson, Prof. F(rank) M(orton)**, Bucknell University, Lewisburg, Pa. *Physics*. Clifford, Pa, Nov. 8, 72. B.S., Bucknell, 95, M.S., 97. *Prof. physics, Bucknell*, 00- A.A; Physical Soc. Expansion of solids.
- Simpson, Dr. George Stevens**, Marlboro, Mass, *Chemistry*. Marlboro, Sept. 20, 91. B.S., Maine, 13; M.S., Worcester, 15; Ph.D., Yale, 17. Asst. chem, Maine, 12-13; Worcester, 13-15; Yale, 15-17. Chem. Soc. Preparation and hydrolysis of halogen aliphatic acids; qualitative separation and detection of rare elements.
- Simpson, Prof. Howard E(dwin)**, University of North Dakota, Grand Forks, N. Dak. *Geology*. Clarence, Iowa, July 9, 74. Ph.B., Cornell (Iowa), 96; A.M., Harvard, 05. Principal, high sch, Knoxville, Iowa, 97-00; supt. schools, Columbus Junction, Iowa, 00-03; asst. physiog. and meteorol, Harvard, 04-05; instr. geol, Colby, 05-07, *assoc. prof.*, 07-09; asst. prof., *North Dakota*, 09-12, *assoc. prof.*, geol. and physiog, 12-19, *prof. geog. geol.*, 19-; asst. state geologist, 09- Field asst, U. S. Geol. Surv, 05-10; special meteorol. observer, U. S. Weather Bur, 10-; acting *assoc. prof.*, Chicago, summer, 18. A.A; Am. Geog. Soc; Meteorol. Soc; N. Dak. Acad. Underground waters of Iowa; physiography and meteorology of North Dakota.
- Simpson, Dr. Jesse P(ickrell)**, Palmer, Ill. *Biology*. Palmer, Oct. 29, 68. M.D., Washington (St. Louis), 99. Lieut, M.C. A.A; Am. Med. Ass. Genetics, synthetical and analytical hybridizing; laws for detecting impurities in supposedly pure bred animals; surgery; appendicitis.
- Simpson, Dr. John N(athan)**, West Virginia University, Morgantown, W. Va. *Physiology*. Mason, W. Va, March 19, 69. A.B., Nashville, 93; M.D., Hopkins, 02. Prof. physiol. and anat. and head of med. faculty, *West Virginia*, 02-12, *dean, sch. med.*, 12- Director, W. Va. State Hygienic Lab, 13-17; capt, M.R.C. Am. Med. Ass; Am. Acad. Med.
- Simpson, Q(uintus) I(rvin)**, Bear Creek Farm, Palmer, Ill. *Biology*. Palmer, Sept. 20, 62. Pub. schools. Swine judge at Int. and State Fairs. A.A; Soc. Nat; Ill. Acad. Genetics; synthetical and analytical hybridizing; laws for detecting impurities in supposedly pure bred animals.
- Simpson, Prof. Sutherland**, Cornell University, Ithaca, N. Y. **Physiology*. Orkney, Scotland, Feb. 3, 63. B.Sc., Edinburgh, 94, M.B., Ch.B., 99, Crichton scholar, 00, Goodsir fellow, 01, M.D., 01, D.Sc., 03. Lecturer exp. physiol, Edinburgh, 02-08; *prof. physiol.*, *Cornell*, 08- A.A; Physiol. Soc; Soc. Exp. Biol; Am. Med. Ass; Ass. Anat; Endocrine Ass; British Ass; British Med. Ass; Scottish Micros. Soc; fel. Royal Soc. Edinburgh. Experimental physiology; anatomy and physiology of the central nervous system; body temperature; bile secretion; electro-physiology of secreting glands; pancreatic secretions; parathyroid; pituitary; milk secretion.
- Simpson, Prof. T(homas) McN(ider)**, Jr, Ashland, Va. *Mathematics*. Ettrick, Va, Jan. 12, 82. A.B., Randolph-Macon, 01; A.M., Virginia, 07; Ph.D., Chicago, 17. Acting prof. math. and physics, St. Stephen's, 05-06; *prof. math.*, Converse, 07-15; instr., Texas, 17-18; *prof.*, *Randolph-Macon*, 19- Instr. astron, summer sch, Virginia, 09-17, 20- A.A; Astron. Soc; Math. Ass; Math. Soc. Relations between metric and projective theories of space curves; comet observations; standards for faint stars.
- Simpson, Prof. T(homas) M(arshall)**, University of Florida, Gainesville, Fla. *Mathematics*. Addison, Maine, Feb. 19, 81. A.B., Harvard, 05; A.M., Wisconsin, 10, Ph.D., 16. Instr. *math.*, Wisconsin, 08-18; *prof.*, *Florida*, 18- Math. Soc. Functional equations.
- Sinclair, Prof. Mary Emily**, Oberlin College, Oberlin, Ohio. *Mathematics*. Worcester, Mass, 78. A.B., Oberlin, 00; A.M., Chicago, 03, Ph.D., 08. Instr. *math.*, Nebraska, 04-07; *Oberlin*, 07-08, *asst. prof.*, 08- A.A; Math. Soc. Calculus of variations; theory of equations.
- Sinclair, Prof. W(illiam) J(ohn)**, Princeton University, Princeton, N. J. *Geology, Paleontology*. San Francisco, Calif, May 13, 77. B.S., Ph.D., California; fellow, Princeton, 04-05. Instr. *geol.*, *Princeton*, 05-16, *asst. prof.*, 16- Asst, U. S. Geol. Surv; collector, museum, California; geologist, Am. Museum Nat. Hist. A.A; Geol. Soc; Paleont. Soc. Vertebrate paleontology; anthropic, petrographic and stratigraphic geology; Vertebrata of Santa Cruz beds of Patagonia; Edentata of the California Pleistocene; non-marine Tertiary sedimentation and life conditions.
- Singer, Prof. Edgar A(rthur)**, Jr, University of Pennsylvania, Philadelphia, Pa. *Philosophy*. Philadelphia, Nov. 13, 73. A.B., Pennsylvania, 92, Ph.D., 94, senior fellow, 97-98; Harvard, 95-96. Asst, Harvard, 96; instr. *philos.*, *Pennsylvania*, 98-03, *asst. prof.*, 03-09, *prof.*, 09- Philos. Ass. The philosophy of nature; logic.
- Singer, Dr. H(arold) Douglas**, Illinois State Psychopathic Institute, Kankakee, Ill. *Psychiatry*. London, England, Jan. 7, 75. M.B., London, 98, M.R.C.S., L.R.C.P., 98, M.D., 00, M.R.C.P., 01. House physician, St. Thomas' Hosp, Lon-

- don, 98, asst. supt, clin. lab, 99; junior and later senior res. med. officer, Nat. Hosp. Queen Square, 00-02; res. asst. physician, St. Thomas' Hosp, 02-04; assoc. prof. mental and nervous diseases, Creighton, 04-06; asst. supt, Nebr. Hosp. for Insane, 06-07; *director, Ill. State Psychopathic Inst*, 07- Lecturer psychiat, Nebraska, 06-07; Ill. Pellagra Commission, 10-12; Bristowe medal, London, 99. A.A.; Psychol. Ass.; Psychopath. Ass.; Neur. Ass.; Am. Med. Ass.; Chicago Neur. Soc. (v. pres, 12, pres, 14); fel. Royal Soc. Med; London Neur. Soc; London Path. Soc. Bacteriology of emphysematous gangrene; periodic paralysis; acute myelitis; pellagra; etiology of mental disorders; defensive ferments in the blood.
- Singewald, Prof. Joseph T(heophilus), Jr**, Johns Hopkins University, Baltimore, Md. *Geology*. Baltimore, Sept. 25, 84. A.B, Hopkins, 06, fellow, 07-08, Ph.D. 09. Junior geologist, U. S. Bur. Mines, 10-20; *assoc. prof. econ. geol*, Hopkins, 13- Geologist, Md. Geol. Surv, 13. Mem. Williams Mem. expd. to S. Am, 19- A.A.; Geol. Soc; Min. Eng; Wash. Geol. Soc. Mineral mining; geology of South America.
- Sinnott, Prof. Edmund W(are)**, Storrs, Conn. **Botany*. Somerville, Mass, Feb. 5, 88. A.B, Harvard, 08, A.M, 10, Sheldon traveling fellow in Australasia, 10-11. Ph.D. 13. Instr. wood technol, Harvard, 13-15; *prof. bot. and genet*, Conn. Col, 15- A.A; Soc. Nat; Bot. Soc. (treas, 17-); Ecol. Soc. Plant morphology and embryology; plant morphogenesis; paleobotany; ecology; wood technology.
- Sisam, Prof. Charles H(ershel)**, Colorado College, Colorado Springs, Colo. **Mathematics*. Cedar Rapids, Iowa, Sept. 8, 79. A.B, Michigan, 02; A.M, Cornell, 03, fellow, 03-04, Ph.D. 06. Instr. *math*, U. S. Naval Acad, 04-06; *assoc.* Illinois, 06-09, asst. prof, 09-18; *prof*, Colo. Col, 18- Math. Soc; Math. Ass. Ruled surfaces; surfaces generated by conics; surfaces whose asymptotic lines are cubics.
- Sisson, Prof. Septimus**, Ohio State University, Columbus, Ohio. *Anatomy*. Gateshead, England, Oct. 2, 65. B.S, Chicago, 98; V.S, Ont. Vet. Col, 91. Demonstrator anat, Ont. Vet. Col, 91-98; *prof. vet. science and zool*, Kansas State, 98-99, zool, 99-00; *assoc. prof. vet. med*, Ohio State, 00-03, *prof. comp. anat*, 03- A.A; Ass. Anat. Anatomy of the domesticated animals.
- Sittenfield, Dr. M(aurice) J(oseph)**, 73 E. 90th St, New York, N. Y. *Pathology*. Germany, 77. M.D, Bellevue Med. Col, 98. *Assoc. path*, Columbia, 09- A.A; Ass. Path. and Bact; Soc. Exp. Biol; Ass. Cancer Research; Am. Med. Ass; Harvey Soc; fel. N. Y. Acad. Med. Cancer research; immunity; tissue transplantation; histo-pathology.
- Skeels, H(omer) C(ollar)**, U. S. Department of Agriculture, Washington, D. C. *Botany*. Grand Rapids, Mich, July 31, 73. B.S, Mich. Agr. Col, 98. Gardener, bot. garden, Mich. Agr. Col, 98-99; *botanist*, Forest of Arden, Joliet, Ill, 00-06; *gardener*, Dellwood Park, 06-08; scientific asst, U. S. Dept. Agr, 08-14, bot. asst, 14-19, *botanist*, 19- A.A; Bot. Soc; Wash. Bot. Soc.
- Skinner, Alanson (Buck)**, American Museum of Natural History, New York, N. Y. *Anthropology*. Buffalo, N. Y, Sept. 7, 86. Columbia. Asst. anthropologist, *Am. Museum Nat. Hist*, 06-15, *asst. curator*, 15-; mem. scientific staff, museum Am. Indian, Heye Foundation, 16-20; *asst. curator anthrop*, Milwaukee Pub. Museum, 20- Asst. archeologist, Am Museum Nat. Hist. expedition to Long Island, 01; Peabody Museum expd. to New York, 04; head, expd. to N. Y. State, 07; James Bay, 08, 09; Winnebago and Menominee, Wis, 10; Florida, 10; Menominee of Wis, 10-12, 13, 19; Plains, Cree and Ojibway, 13; Iowa, Ponca, Kansa and Sioux, 14; co-leader, Susquehanna River expd, 16; leader, expd. to Costa Rica, 16-17, 18-19; head archeol. explorations, N. Y. Iroquois region. Fel. Ethnol. Soc; Anthropol. Ass; Folk-lore Soc; life mem. Am. Mus. Nat. Hist; Staten Isl. Ass. Arts and Sci. (trustee and patron). Archeology and ethnology of North America; the New York coastal Algonkin Indians; ethnology of the northern Ojibway, eastern Cree, Menominee, and Florida Seminole Indians.
- Skinner, C(harles) E(dward)**, Westinghouse Electric and Manufacturing Co, East Pittsburgh, Pa. *Engineering*. Redfield, Ohio, May 30, 65. Ohio (Athens), 84-85; M.E, Ohio State, 90. Connected with lab, *Westinghouse Elec. and Mfg. Co*, 90-95, elec. engineer, 95-06, engineer in charge, research div, 06-19, *manager, research dept*, 19- Delegate, Int. Cong. Soc. Test. Mat, Brussels, 06; special representative Elec. Eng, Committee on Elec. Standards, London, 15; chairman Am. delegation, Int. Elec. Cong, Brussels, 20; mem. Eng. Council. A.A; Elec. Eng. (manager, 14-19, v. pres, 19-); Physical Soc; Electrochem. Soc; Franklin Inst; Soc. Test. Mat; West. Pa. Eng. Soc; Pittsburgh Acad. High tension and high frequency phenomena; insulating materials as applied to electrical apparatus; aging of iron and steel in dynamos and motors; effect of temperature on insulating materials.
- Skinner, Prof. Clarence A(urelius)**, Kensington, Md. **Physics*. Loudon Co, Va, Jan. 6, 71. B.S, Nebraska, 93; Ph.D, Berlin, 99. Demonstrator *physics*, Nebraska, 99-01, adj. prof, 01-03, asst. prof, 03-09; *prof. and head of dept*, 06-19; *chief, optics div*, Bur. Standards, 19- A.A; Physical Soc; (mem. council, 10-13, ed. board, 13); Optical Soc; Wash. Acad; Wash. Philos. Soc. Passage of electricity through gases; relation of the voltaic series to the electrode drop in gases; atomic ions in gases; optical properties of magnetic metals; plane double refraction normal to magnetic field in liquids; phase change by reflection from substances possessing selective absorption; electrode polarization in gases.
- Skinner, Prof. E(rnest) B(rown)**, University of Wisconsin, Madison, Wis. *Mathematics*. Redfield, Ohio, Dec. 12, 63. A.B, Ohio (Athens), 88; Clark, 91-92; Ph.D, Chicago, 00. Prof. *math*, Amity, 88-91; instr, Wisconsin, 92-95, asst. prof, 95-10, assoc. prof, 10-20, *prof*, 20- Director, McCormick Theol. Sem, 07-; mem. Madison Sch. Board, 19- A.A; Math. Soc; Wis. Acad. (past sec'y, and ed, 'Trans,' 00-05). Finite groups of linear transformations; algebraic numbers.

- Skinner, Dr. Glenn S(eymour)**, University of Wisconsin, Madison, Wis. *Chemistry*. Columbus, Kans, June 1, 90. A.B. State Manual Training Nor. Sch, Pittsburg, Kans, 13; A.M., Illinois, 15, Ph.D, 17. Asst. chem, Illinois, 14-17; Pittsburg, 17; instr. Illinois, 19; Oberlin, 19-20; Wisconsin, 20- State Manual Training Nor. Sch, Pittsburgh, Kans, summers, 13, 17; with A.E.F., 17-18. Organic chemistry; molecular rearrangements in camphor series; optical isomerism.
- Skinner, Dr. Henry**, Narberth, Pa. *Entomology*. Philadelphia, Pa, March 27, 61. Certificate in chem, Pennsylvania, 81, M.D, 84; Sc.D, Pittsburgh, 10. *State entomologist, Pa*, 94- Prof. entom. Acad. Nat. Sciences, Phila, 95-00, asst. to curators, 01-, special curator, 20-; prof. entom. Pa. Hort. Soc., 02-; ed, 'Entom. News,' 90-10, emer. ed, 10- Mem. exec. committee, Int. Entom. Cong, 10-; mem. committee on nomenclature, Int. Zool. Cong, 13. A.A; Entom. Soc. (pres, 16-); Ass. Econ. Entom; Pa. Hort. Soc; Phila. Acad. (v. pres, 18); N. Y. Entom. Soc; Phila. Geog. Soc. Lepidoptera.
- Skinner, Dean John Harrison**, Purdue Experiment Station, La Fayette, Ind. *Animal husbandry*. Romney, Ind, March 10, 74. B.S.A, Purdue, 97. Farm manager, 97-99; asst. agron, Purdue Exp. Sta, 99-01; instr. *animal husbandry*, Illinois, 01-02; head of dept, Purdue, 02-, prof. *animal husbandry and dean, sch. agr*, 07- Soc. Prom. Agr. Sci; Soc. Animal Nutrition. Cattle, sheep and swine feeding.
- Skinner, Dr. J(oshua) J(ohn)**, U. S. Department of Agriculture, Washington, D. C. *Biochemistry*. Hertford, N. C, June 30, 82. B.S, North Carolina, 03, M.S, 04; Ph.D, American, 17. Scientist, bur. soils, U. S. Dept. Agr, 04-14, *biochemist, bur. plant indust*, 14- Longstreth medal, Franklin Inst, 19. Chem. Soc. (asst. ed, 'Abstracts,' 18-); Bot. Soc. (ed, 'Abstracts,' 19-); Soc. Agron; Wash. Acad. Biochemistry of plants, soils and fertilizers; fertilizer requirements of soil types.
- Skinner, Dr. W(illiam) W(oolford)**, U. S. Department of Agriculture, Washington, D. C. *Chemistry*. Baltimore, Md, 74. B.S, Md. Col, 95, Sc.D, 18; M.S, George Washington, 97. Asst. chemist, Md. Col, 95-99; assoc. chemist, Arizona, 99-04; food inspection chemist, *bur. chem*, U. S. Dept. Agr, 04-08, chief, *water lab*, 08- Regent, Maryland; sec'y, Md. State Board of Agr. A.A; Chem. Soc; Agr. Chem. (referee). Forage products; range forages; volatilization of certain elements in ashing plant materials; copper in irrigating waters; mineral springs of the United States; manufacture of salt; dissolved oxygen; soft drinks; lithia iodids, bromids and chlorids in mineral waters and brines.
- Skirrow, Dr. F(rederick) W(illiam)**, 49 Maple Ave, Shawinigan Falls, Que. *Chemistry*. Lancaster, England. B.Sc, Victoria (Eng), 97, M.Sc, 00; Ph.D, Leipzig, 02. Chemist, Nat. Physical Lab, London, 02-03; research chemist, Hardman and Holden Ltd, 03-12; asst. prof. chem, Utah, 14-15; McGill, 15-19; chief chemist, *Shawinigan Water and Power Co*, 19- Lecturer physics, Colorado, 13-14. Physical and industrial chemistry; gas works by-products; ferrocyanids; phenols; pyridin; acetylene.
- Slack, Dr. Francis H(erve)**, 227 Summit Ave, Brookline, Mass. *Bacteriology*. W. Abington, Mass, Jan. 7, 75. M.D, Tufts, 98. *Director Sias Laboratories, Brookline, Mass; instr. pub. health lab. methods, Mass. Inst. Tech. Soc. Bact; Am. Med. Ass; Pub. Health Ass.*
- Sladen, Dr. F(rank) J(oseph)**, 2209 Seminole Ave, Detroit, Mich. *Internal medicine*. West Point, N. Y, Jan. 6, 82. A.B, Yale, 02; M.D, Hopkins, 06. Asst. med, Hopkins, 06-08, instr, 08-10, assoc. and res. physician, Hopkins Hosp, 10-13; chief, med. clinic, Detroit Gen. Hosp, 14-15; *physician in chief, Henry Ford Hosp*, 15- Major, M.C, 18-19. A.A. Coagulation of blood; infectious jaundice; epidemic cerebrospinal meningitis; internal hydrocephalus; vagatony and sympatheticotony; influenza.
- Slagle, Pres. Robert L(incoln)**, University of South Dakota, Vermilion, S. Dak. *Chemistry*. Hanover, Pa, March 17, 65. A.B, Lafayette, 87, A.M, 90; Ph.D, Hopkins, 94. Asst. to Prof. Atwater, Wesleyan, 94-95; prof. chem, S. Dak. Col, 95-97; S. Dak. Sch. Mines, 97-99, *pres*, 99-06; S. Dak. State Col, 06-15; *South Dakota*, 14- A.A; Chem. Soc. The double halids of tin with anilin and toluidin.
- Slate, Prof. F(rederick)**, 2231 College Ave, Berkeley, Calif. **Mathematical physics*. London, England, Jan. 21, 52. B.S, Brooklyn Polytech, 71; Berlin, 77-78; Strasbourg, 78-79. Instr. chem, *California*, 74-77, prof. *physics*, 91-18, emer. prof, 18- Analytic mechanics.
- Slater, Prof. James B(odenburg)**, College of Puget Sound, Tacoma, Wash. *Zoology*. Cairo, N. Y, June 11, 90. Litt.B, Rutgers, 13; A.M, Syracuse, 17. Principal, Flintstone Agr. High Sch, Md, 13-14; Leland, 14-15; teaching fellow, Syracuse, 16-17; *prof. biol, Puget Sound*, 19- Capt. Inf, 17-19. Ecol. Soc. Amphibians.
- Slater, W(illis) A(ppleford)**, Bureau of Standards, Washington, D. C. *Civil engineering*. Polo, Ill, Oct. 14, 78. B.S, Illinois, 06, fellow, 08-10, M.S, 10, C.E, 12. Asst. to city engineer, Elgin, Ill, 06; engineer, Ely Townsite Co, Nev, 07; asst, eng. exp. sta, Illinois, 10-15, research asst. prof. applied mech, 15-17; *engineer physicist, Bur. Standards*, 19- In charge struct. lab. investigations, concrete ship sect, Emergency Fleet Corp, 17-19. Civil Eng; Soc. Test. Mat; Concrete Inst. Structural engineering; materials of construction; reinforced concrete.
- Slaughter, Prof. H(erbert) E(llsworth)**, 5548 Kenwood Ave, Chicago, Ill. *Mathematics*. Watkins, N. Y, July 21, 61. A.B, Colgate, 83, A.M, 86, Sc.D, 11; fellow, Chicago, 92-94, Ph.D, 98. Prof. math, Peddie Inst, 83-89, principal, 89-92; asst, assoc. instr. and later asst. prof. *math, Chicago*, 94-07, assoc. prof, 07-13, *prof*, 13- Ed, 'Am. Math. Monthly,' 12-16. A.A; Math. Soc. (sec'y, Chicago sect. 06-16); Math. Ass. (pres, 19); *Circolo Mat. di Palermo*. Cremona transformation groups; mathematical pedagogy.
- Slaymaker, Prof. S(amuel) R(obert)**, 25 E. Washington St, Chicago, Ill. *Medicine*. Davenport, Iowa, Dec. 29, 64. A.B, Beloit, 86; M.D,

- Rush Med. Col, 92. *Prof. med, Rush Med. Col, 96*— Attending physician, Cook Co. Hosp, 00-20. A.A.; Am. Med. Ass; Chicago Soc. Internal Med; Chicago Inst. Med; Chicago Path. Soc. Internal medicine.
- Sleator, Dr. W(illiam) W(arnar)**, 1522 Geddes Road, Ann Arbor, Mich. *Physics*. Dexter, Mich, May 24, 83. A.B, Michigan, 09, A.M, 11, Ph.D, 17. Instr. *physics, Michigan*, 09-17, *asst. prof, 17*—
- Slemons, Prof. Josiah Morris**, 284 Orange St, New Haven, Conn. *Gynecology*. *Salisbury*, Md, Nov. 9, 76. A.B, Hopkins, 97, M.D, 01; Berlin, 05; hon. A.M, Yale, 15. Instr, assoc, and later assoc. prof. obstet, Hopkins, 01-13; *prof. gynec. and obstet*, California, 13-15; *Yale*, 15— Director, obstet. surv. of France, Red Cross, 17; major, M.C, 18-19. A.A; Gynec. Soc. (councilor, 17); Col. Surg. (mem. board governors, 18); Soc. Clin. Invest. (councilor, 16-19). Obstetrics; physiology of pregnancy; nutrition of the fetus; placentation; puerperal infection.
- Slichter, Prof. Cha(rles) S(umner)**, 636 Frances St, Madison, Wis. **Mathematics*. St. Paul, Minn, April 16, 64. Northwestern, 85, A.M, 86, Sc.D, 16. Instr. math, Chicago Athenaeum, 85-86; *Wisconsin*, 86-92, *asst. prof*, 89-92, *prof. applied math*, 92—, *dean grad. sch*, 20— Asst. hydrographer for work on ground water, U. S. Geol. Surv, 97-02; commissioner and sec'y, Wis. Geol. and Nat. Hist. Surv, 99-02; consulting engineer, U. S. Reclamation Service, and engineer in charge of investigation of motion of underground waters, 03-11. A.A; Math. Soc; Wis. Acad. (pres, 99-02); Circolo Mat. di Palermo. Theoretical investigations on the motions of ground water and other work in hydrodynamics; theoretical and field work.
- Slichter, Prof. Walter I(rvine)**, Columbia University, New York, N. Y. *Electrical engineering*. St. Paul, Minn, May 7, 73. Col. City of N. Y, 88-90; E.E. Columbia, 96. Student and asst. to C. P. Steinmetz, *Gen. Elec. Co*, 97-05, engineer, *Ey. and traction dept*, 05-09, *consulting engineer*, 09—; *prof. elec. eng*, Columbia, 10— Elec. Eng; Mech. Eng. Alternating currents, motors and systems; design of electrical machinery.
- Slipher, E(arl) C(arl)**, Lowell Observatory, Flagstaff, Ariz. *Astronomy*. Mulberry, Ind, March 25, 83. A.B, Indiana, 06, A.M, 08. Fellow, *Lowell Observatory*, 06-08, *astronomer*, 08— Mem. eclipse exped. to Spain, 05; Lowell exped. to the Andes to observe Mars, 07; eclipse exped. to Kans, 18. Medal, Soc. Astron. de Mex, 11. A.A; Astron. Soc. Planetary investigations.
- Slipher, Dr. V(esto) M(elvin)**, Flagstaff, Ariz. **Astronomy*. Mulberry, Ind, Nov. 11, 75. A.B, Indiana, 01, A.M, 03, Ph.D, 09. Astronomer, *Lowell Observatory*, 01-15, *asst. director*, 15— Lalande prize, Paris Acad, 19. A.A; Astron. Soc; Am. Acad; for. assoc. Royal Astron. Soc; Soc. astron. de France. Spectroscopy; spectra of planets, novae, stars, nebulae and aurora; discovery of rotation of nebulae and phenomenal velocities of spiral nebulae.
- Sloan, Earle**, South Carolina Geological Survey, Charleston, S. C. *Geology*. Cherry Hill Plantation, S. C, Oct. 18, 58. Virginia, 78-83. Asst. geologist, U. S. Geol. Surv, 86; *state geologist*, S. C, 01— Consulting mining and chem. engineer. A.A; Geol. Soc. Economic geology and stratigraphy; clays, mineral localities, underground waters, marls and other coastal plain formations of South Carolina; paleontology of South Carolina.
- Sloane, Dr. T(homas) O'Conor**, South Orange, N. J. *Physics*. New York, N. Y, Nov. 24, 51. A.B, St. Francis Xavier, 70, A.M, 72; E.M, Columbia, 72, Ph.D, 76. Prof. nat. sciences, Seton Hall; lecturer scientific subjects; *inventor and scientific expert*, 76— Mem. ed. staff, 'Plumber and Sanitary Engineer,' 'Scientific American' and 'Youth's Companion,' Chem. Soc. Electricity; the determination of all the sulphur in illuminating gas; self-registering coal gas photometer.
- Slobin, Prof. Hermon L(ester)**, Durham, N. H. *Mathematics*. Moscow, Russia, June 19, 83. A.B, Clark, 05, Ph.D, 08. Instr. *math*, Mich. Agr. Col, 08-09; Minnesota, 09-14, *asst. prof*, 14-19; *prof*, N. H. Col, 19— Math. Soc; Circolo Mat. di Palermo. Plane quintic curves; algebraic and transcendental curves and numbers; infinite series; algebraic fundamental equations.
- Slocum, Arthur W(are)**, Walker Museum, University of Chicago, Chicago, Ill. *Invertebrate paleontology*. Milford, Mass, Nov. 8, 60. Chicago. Paleontologist, Ward's Nat. Science Establishment, 98-99; Milwaukee Pub. Museum, 00-01; *asst. curator* invert. paleont, Field Museum Nat. Hist, 01-14; *Walker Museum*, 14— A.A; Paleont. Soc; Ill. Acad. Fossil erinoids and echinoids; trilobites.
- Slocum, Prof. Allison W(ing)**, 295 Maple St, Burlington, Vt. *Physics*. Dartmouth, Mass, April 22, 66. A.B, Haverford, 88, A.M, 89; A.M, Harvard, 90, Tyndall scholar, 91, Morgan scholar (Berlin), 92. Teacher math, West Chester State Nor. Sch, Pa, 92-93; *prof. physics*, Vermont, 93— A.A; Physical Soc. Dichroism of crystals for ultra-red rays.
- Slocum, Prof. Frederick**, Wesleyan University, Middletown, Conn. **Astronomy*. Fairhaven, Mass, Feb. 6, 73. A.B, Brown, 95, A.M, 96, Ph.D, 98. Instr. math, Brown, 95-00, *asst. prof*, astron, 00-09; instr. astrophysics, Chicago, and astronomer, Yerkes Observatory, 09-11, *asst. prof*, astron, 11-14; *prof*, astron, Wesleyan, and director, Van Vleck Observatory, 14-18; *prof*, naut. science, Brown, 18-20; *prof. astron*, Wesleyan, and director, Van Vleck Observatory, 20— Mem. solar eclipse exped. to Va, 00; acting director, Ladd Observatory, 04-05; research asst, Yerkes Observatory, summer, 07; lecturer math, N. Y. Univ, summer, 08; volunteer asst, Royal Astrophys. Observatory, Potsdam, 08-09; instr. Navigation, U. S. Shipping Board, 17-18. A.A; Astron. Soc; Am. Acad; Royal Astron. Soc; Astron. Gesell. Nautical science; sun spots; solar prominences; solar observations with the spectro-heliograph; stellar parallax.
- Slocum, Dr. S(tephen) E(lmer)**, University of Cincinnati, Cincinnati, Ohio. *Mathematics*. Glenville, N. Y, June 5, 75. B.E, Union, 97; Ph.D, Clark, 00. Instr. civil eng, Cincinnati, 00-01, applied math, 01-04, *asst. prof*, 04-05;

- math, Illinois, 05-06; *prof. applied math, Cincinnati*, 06- Math. Soc; Eng. Educ; Automotive Eng; Naval Eng. Lie's theory of continuous groups; strength of materials; teaching of mathematics; applied mechanics.
- Slonaker, Dr. J(ames) Rollin**, Stanford University, Calif. *Zoology, Physiology*. Farmland, Ind, June 17, 66. B.S, Wisconsin, 93; Ph.D, Clark, 96. Asst. prof. zool, Indiana, 96-01; research asst. neur, Chicago, 01-02, assoc, 02-03; *asst. prof. physiol, Stanford*, 03- A.A; Soc. Nat; Physiol. Soc; West. Soc. Nat; fel. Calif. Acad; fel. Ind. Acad. Anatomy and physiology of the eyes of vertebrates; the eyes of the mole; accommodation in the eye of the bird; the optic tracts in the brain of a congenitally blind pigeon; the daily activity of the white rat from birth to natural death; the influence of food on the growth and activity of the white rat.
- Slosson, Prof. Edwin E(mery)**, 1701 Massachusetts Ave, Washington, D. C. *Chemistry*. Sabetha, Kans, June 7, 65. B.S, Kansas, 90, M.S, 92; Ph.D, Chicago, 03. Asst. chem, Kansas, 90-91; prof, Wyoming, and chemist, Wyo. Exp. Sta, 91-04; assoc. ed, 'The Independent,' 04-21; ed, *Science Service*, 21- Assoc. sch. of journalism Columbia, 12- A.A; Chem. Soc. Soils; petroleum; foods; halogen acyl amines.
- Sluder, Dr. Greenfield**, 3542 Washington Ave, St. Louis, Mo. *Medicine*. St. Louis, Aug. 30, 65. M.D, Washington (St. Louis), 88; Vienna, 96-97; Berlin, 00; London hospital, 05. Instr. urinol. and clin. med, *Washington (St. Louis)*, 91-96, lecturer *laryngol*, 96-06, *clin. prof*, 06-, *director, dept. laryngol. and rhinol.* Ass. Anat; Am. Med. Ass; Laryngol. Ass. Laryngology; diseases of the nose; relation of sphenopalatine ganglion to the nose; headache and eye disorders of nasal origin; tonsillectomy.
- Slye, Maud**, 5836 Drexel Ave, Chicago, Ill. *Pathology*. Minneapolis, Minn, Feb. 8, 79. A.B, Brown, 99; Chicago, 06, fellow, 08-11. Prof. psychol. and pedag, R. I. State Nor. Sch, 99-05; *mem. staff, Sprague Mem. Inst, Chicago*, 11-, *instr. path, Chicago*, 19- Gold medal, Am. Med. Ass, 14; Ricketts prize, 15. A.A; Ass. Cancer Research; Am. Med. Ass. Heredity and evolution; cancer; tumors.
- Smail, Dr. L(loyd) L(eroy)**, 2121 E. 55th St, Seattle, Wash. *Mathematics*. Columbus, Kans, Sept. 23, 88. A.B, Washington (Seattle), 11, A.M, 12; Ph.D, Columbia, 13. *Instr. math, Washington (Seattle)*, 13- A.A; Math. Soc. Summability of divergent series.
- Small, Dr. John K(unkel)**, New York Botanical Garden, Bronx Park, New York, N. Y. **Botany*. Harrisburg, Pa, Jan. 31, 69. A.B, Franklin and Marshall, 92, Sc.D, 12; fellow, Columbia, 92-94, Ph.D, 95. Curator, herbarium, Columbia, 95-98; *museums and herbarium*, N. Y. Bot. Garden, 98-06, *head curator*, 07- Special agent, Ga. Geol. Surv. Silver medal, Atlanta Expos. A.A; Torrey Bot. Club. Flora of south-eastern United States; flora of North America; flora of Patagonia; morphology of the Spermatophyta; genera and families of flowering plants; regional botany.
- Small, Dr. Maurice H(erman)**, Appleton, Wis. *Psychology, Pedagogy*. Wilton, Maine, March 18, 61. A.B, Colby, 87; Clark, 95-97, fellow, 97-98, Ph.D, 05. Principal, high sch, Norway, Maine, 87-92; Westbrook, Maine, 92-95; Passaic, N. J, 98-02; chairman, dept. pedag, State Nor. Sch, Oshkosh, Wis, 03-20; *supt. schools*, 20- Wis. Acad. The suggestibility of children; methods of manifesting the instinct for certainty; some psychological aspects of society and solitude; considerations antecedent to the making of courses in manual arts.
- Small, Dr. Willard Stanton**, 1330 Irving St, Washington, D. C. *Psychology*. North Truro, Mass, Aug. 24, 70. A.B, Tufts, 94, theol. sch, 94-96, A.M, 97; Ph.D, Clark, 00. Prof. English, Lombard, 96-97; lecturer psychol. and educ, Oread Inst, Worcester, 99-01; *acting prof. psychol*, Mich. State Nor. Col, Ypsilanti, 01-02; prof. pedag. and supervisor, training sch, Los Angeles State Nor. Sch, 02-04; *supt. schools*, San Diego, 04-05; principal pub. sch, Paterson, 05-06; high sch, Washington, D. C, 06-18; specialist sch. hygiene, U. S. Bur. Educ, 18-20; *supt. field service, educ. research and development fund, U. S. Interdept. Social Hygiene Board*, 20- Lecturer child psychol, sch. hygiene and sch. administration, George Washington, 07-20; special agent financial statistics schools, U. S. Census, 10-12; U. S. Bur. Educ, 14-18. The mental processes of the white rat; the development of altruism; educational hygiene.
- Smallwood, Prof. W(illiam) M(artin)**, 525 Euclid Ave, Syracuse, N. Y. **Zoology*. Warsaw, N. Y, April 30, 73. A.B, Syracuse, 96, A.M, 97; Ph.D, Harvard, 02. Instr. biol, Syracuse, 96-98; prof. biol. and geol, Allegheny, 98-02; assoc. prof. zool, *Syracuse*, 03-07, *prof. comp. anat*, 07- A.A; Soc. Zool; Ecol. Soc; N. Y. State Sci. Teachers Ass. (pres, 09). Embryology of Opisthobranchia; nudibranchs; cytology of nerve cells; maturation of Hydraechnia and Penaria; starvation in Necturus and Amia; diseases of fishes; restocking waters with fish.
- Smeltz, Dr. George Washington**, William Penn Hotel, Pittsburgh, Pa. *Psychopathology*. Bryan, Ohio, Feb. 7, 84. M.D, Ohio Med. Univ, 07. Chief res. physician, psychopathic ward, St. Francis Hosp, Pittsburgh, 10-12; physician-in-charge, Markleton Sanitarium, Pa, 13-17; *mem. faculty, med. dept, Pittsburgh*; *asst. mem. staff, St. Francis Hosp*. Capt, U.S.A. Am. Med. Ass; Psychopath. Ass.
- Smiley, Miss Edwina M(aria)**, Bailey Hall, Ithaca, N. Y. *Plant pathology*. Providence, R. I, March 27, 93. A.B, Wellesley, 16; A.M, Cornell, 19. Asst. *plant path, Cornell*, 16-17, *instr*, 17- Collector fungi in south. states for Prof. George F. Atkinson, 18. Phytopath. Soc.
- Smiley, Prof. Frank Jason**, Occidental College, Los Angeles, Calif. *Botany*. Piqua, Ohio, July 1, 80. A.B, Stanford, 13; A.M, Harvard, 15, Ph.D, 17. Asst. bot, Stanford, 13-14; asst, Gray Herbarium, Harvard, 15; *instr, California*, 15-16; asst. prof. bot. and geol, Occidental, 16-19; asst. prof. econ. bot, California, 19-20; *prof. bot. and geol, Occidental*, 20- A.A; Bot.

- Soc; Ecol. Soc; fel. Am. Geog. Soc. Geographic botany.
- Smirnow, Dr. M(ax) R(uskin)**, 862 Howard Ave, New Haven, Conn. *Bacteriology*. Elizabethgrad, Russia, March 13, 81. M.D., Yale, 06; Hopkins, 07; Harvard, 10; Berlin, Vienna, 11. Med. supt. Denver and Baltimore, 06-09; *instr. bacter. and path*, Yale, 09- On med. staff, Phipps Inst, 07-09; Keese prize, Yale, 06. Int. Cong. Tuber, Rome, 11. A.A.; Am. Med. Ass; Soc. Bact; Ass. Path. and Bact; Am. Med. Soc. of Vienna. Pathology.
- Smith, Prof. Albert**, 500 University St, West Lafayette, Ind. *Civil engineering*. Tucola, Ill, 73. B.S., Dartmouth, 98, C.E., Thayer Sch. Civil Eng, 03. Structural engineer, Ill. Steel Co, 03-05; asst. prof. *structural eng*, *Purdue*, 05-08, assoc. prof, 08-11, *prof*, 11- Civil Eng; Mil. Eng; West. Soc. Eng; Ind. Acad; Ind. Soc. Eng. Engineering construction; steel structures.
- Smith, Prof. Albert W(illiam)**, Cornell University, Ithaca, N. Y. *Mechanical engineering*. Westmoreland, N. Y., Aug. 30, 56. B.M.E., Cornell, 78, M.M.E, 86, fellow, 86-87. Asst. prof. mech. eng, Cornell, 87-91; prof. machine design, Wisconsin, 91-92; mech. eng, Stanford, 92-04; director, *Sibley Col*, Cornell, 04-15, *dean*, 15-, *acting pres*, 20- Mech. Eng.
- Smith, Prof. Albert W(illiam)**, 11333 Bellflower Road, Cleveland, Ohio. **Chemistry*. Newark, Ohio, Oct. 4, 62. Ph.C, Michigan, 85; B.S, Case, 87; Ph.D, Zürich, 91. Instr, later asst. prof. and prof. metal. and head, dept. mining and metal, Case, 87-11, *prof. chem. and head dept. chem. eng*, 11- Chemist, Ohio Dairy and Food Commission, 92-96. A.A.; Chem. Soc; Min. Eng; Electrochem. Soc; Chem. Eng; Soc. Chem. Indust; Soc. de Chim. indust. Heat value of fuels; water supply of Ohio; heat conductivity of refractive materials; specific heat of refractive materials.
- Smith, Prof. Alexander**, Columbia University, New York, N. Y. **Chemistry*. Edinburgh, Scotland, Sept. 11, 65. B.S, Edinburgh, 86, LL.D, 12; Ph.D, Munich, 89. Asst. chem, Edinburgh, 89-90; prof. chem. and miner, Wabash, 90-94; asst. prof. chem, Chicago, 94-98, assoc. prof, 98-03, dean, junior colleges, 99-11, prof. chem. and director, laboratories of gen. and physical chem, 04-11; *head, dept. chem*, Columbia, 11- Keith prize and medal, Royal Soc. Edinburgh. Nat. Acad; A.A.; Chem. Soc. (pres, 11); Am. Acad; fel. Royal Soc. Edinburgh. 1:3 and 1:4 diketones; synthesis by means of KCN; amorphous sulphur; vapor pressures; constitution of calomel vapor.
- Smith, Prof. Alfred**, University of California, Berkeley, Calif. *Agronomy*. Hazleton, Pa, Jan. 4, 88. A.B, Wittenberg, 07, A.M, 10. Consulting chemist, 07-09; instr. chem, Wittenberg, 09-10; chem. and geol, Pomona, 10-13; *asst. prof. soil technol*, California, 13- A.A. Physical properties and structure of soils; soil surveys in California.
- Smith, Dr. Allen J(ohn)**, University of Pennsylvania, Philadelphia, Pa. *Pathology*. York, Pa, Dec. 8, 63. A.B, Pennsylvania Col, 83, A.M, 86, Sc.D, 10; M.D, Pennsylvania, 86; LL.D, McGill,
11. Asst. demonstrator path, Pennsylvania, 87-91; *prof*, Texas, 91-03; *Pennsylvania*, 03-10, *comp. path*, 10- Pathologist to various hospitals; major, M.C, 17-19, lieut. col, M.C, O.R.C, 19- A.A; Ass. Path. and Bact; Am. Med. Ass; Philos. Soc; Tex. Acad; Phila. Path. Soc; Phila. Col. Physicians; Phila. Acad; cor. mem. Madrid Soc. Hygiene. Pathology and allied subjects; parasitology.
- Smith, Dr. Alpheus W(ilson)**, 306 E. 16th Ave, Columbus, Ohio. *Physics*. Philippi, W. Va, Jan. 15, 76. A.B, West Virginia, 00; A.M, Harvard, 03, Ph.D, 06. Instr. *physics*, Haverford, 06-07; Wisconsin, 07-09; asst. prof, *Ohio State*, 07-17, *prof*, 17- Physical Soc. Expansion and compressibility of ether and of alcohol in the neighborhood of their boiling points; variation of Hall effect in metals with change of temperature; the Hall and Leduc effects and allied effects in metals and alloys; reversal of Corbino effect in iron; magnetic susceptibility of mixtures of liquids; infra-red absorption in glasses.
- Smith, Mrs. Annie Morrill**, 78 Orange St, Brooklyn, N. Y. *Botany*, *Genealogy*. Brooklyn, Feb. 13, 56. Packer Col. Inst, 74. A.A; Fern Soc; Torrey Bot. Club; Brooklyn Inst; Sullivant Moss Chapter (see'y and treas, pres, 20); Wild Flower Preservation Soc. Mosses.
- Smith, Arthur G**, Concrete, Wash. *Chemistry*. Winchester, Ill, Oct. 1, 80. Ph.C, Michigan, 02. Chief chemist, Dickman, Mackenzie and Potter, Chicago, 02-03; city chemist, Seattle, Wash, 03-05; *gen. manager and chief chemist*, Wash. Portland Cement Co, 05- Chem. Soc; Soc. Chem. Indust. Portland cement.
- Smith, Prof. A(rthur) W(hipple)**, Hamilton, N. Y. *Mathematics*. Hamilton, Nov. 25, 76. B.S, Chicago, 98, M.S, 00, Ph.D, 04. Instr. *math*, Colgate, 02-07, asst. prof, 07-08, assoc. prof, 08-20, *prof*, 20- Math. Soc; Math. Ass; Ass. Teachers Math. Middle States and Md. Differential geometry.
- Smith, Prof. Arthur W(hitmore)**, University of Michigan, Ann Arbor, Mich. *Physics*. Hartford, Vt, May 11, 74. B.S, N. H. Col, 93; Cornell, 93-94; M.S, Wesleyan, 95; fellow, Hopkins, 02-03, Ph.D, 03. Physical asst, U. S. Dept. Agr, 94-99; asst. physics, Wesleyan, 95-96, 98-99; instr. physics and elec. eng, Tulane, 00-01; *prof. elec. and elec. eng*, Mississippi, 01-02; *physics*, Michigan, 03- Int. Elec. Cong, St. Louis, 04. A.A; Physical Soc. Calorimetric determinations of energy of foods; energy losses in condensers; heat of fusion of ice; resistance of voltaic cells; heat of evaporation of water; measurement of magnetic permeability; time lag in magnetization; demagnetization and neutral magnetization in iron; magnetic testing of short bars; chemical constitution and the magnetic properties of steel.
- Smith, Bernard H(oward)**, Garrett and Co, Brooklyn, N. Y. *Chemistry*. Middlefield, Mass, Dec. 16, 78. B.S, Mass. Col. and Boston, 99; M.S, George Washington, 02; LL.B, National Univ, 05. Asst. bur. chem, U. S. Dept. Agr, 02-05, chief, Boston Food Inspection Lab, 05-12; *supt. and chemist*, Baker Extract Co, 12-19; *Garrett and Co*, 19- Chem. Soc. (chairman, Conn. Valley sect, 18). Food chemistry; min-

- eral waters; detection of formaldehyde and formic acid; flavoring extracts.
- Smith, Prof. Bertram G(arnier)**, Michigan State Normal College, Ypsilanti, Mich. *Zoology*. Painesville, Ohio, Oct. 7, 76. A.B., Michigan, 07; Ph.D., Columbia, 12. Asst. zool., Michigan, 04-06; instr. biol., Lake Forest, 07; zool., Syracuse, 07-09; Wisconsin, 09-11; asst. prof., *Mich. State Nor. Col.*, 12-16, *assoc. prof.*, 16- Instr. zool., Woods Hole, summer, 12. A.A.; Soc. Zool.; Mich. Acad. (chairman, zool. sect., 13). Embryology; cytology; genetics; amphibians and fishes.
- Smith, Dr. Burnett**, Skaneateles, N. Y. *Paleontology*. Skaneateles, June 28, 77. B.S., Pennsylvania, 00, Ph.D., 05. Asst. geol. and miner., Pennsylvania, 02-05, Harrison research fellow, 05-06, instr. and later *prof. geol.*, *Syracuse*, 07- A.A.; Geol. Soc.; Paleont. Soc.; Phila. Acad.
- Smith, Carl D.**, Box 1136, Tulsa, Okla. *Geology*. Stephens, Ark., Feb. 28, 78. A.B., Arkansas, 02. Junior geologist, U. S. Geol. Surv., 07-08, asst. geologist, 08-15; *consulting oil and gas geologist*, 15- Geol. Soc.; Ass. Petrol. Geol. Cretaceous and Tertiary stratigraphy and lignite deposits in North Dakota and Montana; stratigraphy, oil and gas in northern Oklahoma; Mississippian and Pennsylvanian contact in deep wells in Oklahoma.
- Smith, Charles Campbell**, Dominion Observatory, Ottawa, Can. *Astronomy*. Brampton, Ont., Dec. 31, 73. B.A., Toronto, 02. Can. geol. surveys, 02-08; observer, Dominion Observatory, 08-12; Can. geol. surveys, 13-19; *astronomer*, *Dominion Observatory*, 19- A.A.; Royal Astron. Soc. Can. (treas., Ottawa Center, 11-13). Meridional astronomy.
- Smith, Charles Henry**, 5517 Cornell Ave., Chicago, Ill. *Physics*. Mexico, N. Y., Nov. 4, 61. M.E., Cornell, 85. Principal, pub. schools, New Haven, N. Y., 85-86; asst. principal, acad., Mexico, N. Y., 86-87; supt., Tillitson Inst., 87-89; *head, dept. physics*, *Hyde Park High Sch.*, Chicago, 90-, *asst. principal*, 10- Consulting mech. engineer, 85-; ed., 'Sch. Science and Math'; director, Camp Roosevelt Mil. Summer High Sch., Muskegon, Mich., 19- A.A.; assoc. Physical Soc.; Cent. Ass. Sci. and Math. Teachers (past pres); Ill. Acad. Science teaching.
- Smith, Prof. C(harles) M(arquis)**, 152 Sheetz St., West Lafayette, Ind. *Physics*. Racine, Wis., Sept. 28, 72. B.S., Wisconsin, 96; Munich, 00-01. Instr. *physics*, Wisconsin, 98-00; *Purdue*, 01-03, asst. prof., 03-13, *assoc. prof.*, 13- Asst. physicist, Bur. Standards, summer, 18. A.A.; assoc. Physical Soc.; Astron. Soc.; Soc. Test. Mat.; Ass. Prof.; fel. Ind. Acad. Variation of the ratio of the specific heats of gases with temperature; electrical and magnetic measurements; correlation of magnetic and mechanical properties.
- Smith, Prof. Charles Piper**, 354 S. Tenth St., San José, Calif. *Botany*. St. Catharines, Ont., April 25, 77. B.S., Purdue, 03; A.M., Stanford, 08. Forester, Monterey Co. Water Works, Calif., 06-07; acting asst. prof. zool., Utah Col., 08-09, asst. prof., bot., 09-12, *assoc. prof.*, Md. Col., 12-14; seed inspection officer, State Board of Agr., Md., 12-19; *teacher, high sch.*, San José, Calif., 19- Bot. Soc.; Torrey Bot. Club; Ind. Acad.
- Smith, Dr. Clara E(liza)**, Wellesley College, Wellesley, Mass. *Mathematics*. Northford, Conn. A.B., Mt. Holyoke, 02; Ph.D., Yale, 04. Acting instr. *math*, Wellesley, 06-07; instr., Western Col. for Women, 07-08; asst., *Wellesley*, 08-09, instr., 09-14, *assoc. prof.*, 14- Exchange prof., Goucher, 18-19. A.A.; Math. Soc.; Math. Ass. Theory of functions of real variables.
- Smith, Dr. Clarence A(lbert)**, Jefferson Medical College, Philadelphia, Pa. *Physiological chemistry*. Northampton, Mass., Oct. 14, 88. B.S., Mass. Col., 11; M.S., Jefferson Med. Col., 14, Ph.D., 16. Instr. agr. chem., Pa. State, 11-13; demonstrator, *Jefferson Med. Col.*, 13-20, *assoc.*, 20- A.A.; Chem. Soc. Nutrition; metabolism; digestion.
- Smith, C(larence) B(eaman)**, U. S. Department of Agriculture, Washington, D. C. *Agriculture*. Howardsville, Mich., Sept. 21, 70. B.S., Mich. Agr. Col., 94, M.S., 95; Halle, Bonn. Hort. ed., 'Exp. Sta. Record,' *U. S. Dept. Agr.*, 97-07, research in farm management, 08-13, *chief, office exten. work*, 14- Farm Management Ass.; Wash. Bot. Soc. Farm management.
- Smith, Dr. C(layton) S(idney)**, 710 N. Park St., Columbus, Ohio. *Biological chemistry*. Newark, N. J., April 23, 87. B.S., Rutgers, 09, M.S., 12; Ph.D., Columbia, 13; M.D., Northwestern, 20. Asst. biol. chem., Columbia, 10-12; pharmacologist, bur. chem., U. S. Dept. Agr., 12-14; instr. *physiol. chem.*, dept. med., Illinois, 14-18; *assoc. physiol.*, Northwestern, 18-20; *asst. prof. physiol. chem. and pharmacol.*, *Ohio State*, 20- A.A.; Chem. Soc. Effect of cold storage upon chemical composition of fish; saponins; poisonous mushrooms; tartrates.
- Smith, Prof. David Eugene**, Teachers College, Columbia University, New York, N. Y. **Mathematics*. Cortland, N. Y., Jan. 21, 60. Ph.B., Syracuse, 81, Ph.M., 84, Ph.D., 87, LL.D., 05. Teacher math, State Nor. Sch., Cortland, N. Y., 84-91; prof., Mich. State Nor. Col., Ypsilanti, 91-98; principal, State Nor. Sch., Brockport, N. Y., 98-01; *prof. math*, *Teachers Col.*, *Columbia*, 01- Lecturer history and teaching of math, summer sch., Harvard, 00-03; math. ed., 'New Int. Encyclopedia'; v. pres, Int. Committee on Teaching Math, 12-20. A.A.; Math. Soc. (ed., 'Bul.' librarian, 02-); Math. Ass. (pres, 19); Math. Verein; Circolo Mat. di Palermo. History and teaching of mathematics.
- Smith, Prof. Donald P(ritchard)**, Princeton, N. J. *Physical chemistry*. Helena, Mont., 79. A.B., Williams, 02; Ph.D., Göttingen, 07. Instr. *physical chem.*, *Princeton*, 08-11, *asst. prof.*, 11- Chem. Soc.; Min. and Metal. Eng.; Electrochem. Soc. Metallurgy; occlusion; electrode processes.
- Smith, Earl B(renton)**, U. S. Bureau of Public Roads, Washington, D. C. *Mechanical engineering*. Seranton, Iowa, June 13, 78. B.S., Missouri, 03, M.E., 05. Asst. prof. exp. eng., Drexel Inst., 04-14; *assoc. mech. eng.*, bur. pub. roads, *U. S. Dept. Agr.*, 14-16, mech. engineer, bur. soils, 16-19, *senior asst. testing engineer*, bur. *pub. roads*, 19- Engineer of construction, U. S. Kelp-Potash Plant, Calif. A.A.; Soc. Test. Mat. Strength of materials; power engineering.

- Smith, Prof. Edgar F(ahs)**, University of Pennsylvania, Philadelphia, Pa. **Chemistry*. York, Pa., May 23, 54. B.S., Pennsylvania Col, 74, LL.D., 06; Ph.D., Göttingen, 76; hon. Sc.D., Pennsylvania, 99, LL.D., 06; Dublin, 14; Yale, 14; Wisconsin, 04; Franklin and Marshall, 10; Rutgers, 11; Pittsburgh, 12; North Carolina, 12; Princeton, 13; Wittenberg, 14; Brown, 14; Allegheny, 15; Queen's (Can), 19; L.H.D., Muhlenberg, 11; Chem.D., Pittsburgh, 15; Litt.D., Swarthmore, 19; M.D., Pennsylvania, 20. Instr. chem., Pennsylvania, 76-81; prof., Muhlenberg, 81-83; Wittenberg, 83-88; Pennsylvania, 88-20, vice-provost, 99-11, provost, 11-20, pres, Wistar Inst, 11-20. Mem. jury of awards, Columbian Expos, 93; U. S. Assay Commission, 95, 01-05; adviser chem., Carnegie Institution, 02; trustee, Carnegie Foundation, 14-20. Elliott Cresson medal, Franklin Inst, 14. Nat. Acad.; A.A. (v. pres, 98); Chem. Soc. (pres, 98); Philos. Soc. (pres, 02-07); Chem. Gesell. Electrochemistry; separations of the rare earths; atomic weights; new series of complex inorganic acids; history of chemistry.
- Smith, E(dward) Eggleston**, 47 Parliament St, London, England. *Geology*. Sioux City, Iowa, Aug. 12, 83. Chicago, 02-06. Field asst, U. S. Geol. Surv, 06, topographic aid, 06-07, junior geologist, 07-09, asst. geologist, 09-10; geologist oil exploration in Venezuela, Gen. Asphalt Co, 10-11; oil exploration in Morocco, S. Pearson and Son, 12-13, Algeria, 13-15, *geologist and Algerian manager*, 15-18; *Sté d'Etudes, de Recherches et d'Exploitation des Pétroles en Algérie*, 19- A.A. Stratigraphic and economic geology.
- Smith, Prof. Edwin E(aymond)**, State College, Pa. *Mathematics*. Danville, Ill, Jan. 13, 79. A.B., Illinois, 05; A.M., Wisconsin, 08; Ph.D., Munich, 11. Instr. *math*, Wisconsin, 05-09; asst. prof., *Pa. State*, 11-14, assoc. prof. and director, summer session, 14-20, *prof*, 20- *Math. Soc.* Series; difference equations; statistics.
- Smith, E(li) Victor**, University of Washington, Seattle, Wash. *Physiology*. Brussels, Ont, May 24, 67. Ph.B., Ill. Wesleyan, 07; A.M., Washington (Seattle), 09; Ph.D., Northwestern, 11. Teaching fellow, Northwestern, 09-11; *asst. prof. zool*, *Washington (Seattle)*, 11- A.A.; Ecol. Soc. Sensory ganglia of birds; hybridization among salmon; pisciculture.
- Smith, E(lias) A(nton) Cappellen**, Guggenheim Brothers, 120 Broadway, New York, N. Y. *Metallurgy*. Trondhjem, Norway, Nov. 6, 73. Grad, Polytech. Col, Trondhjem, 93. Asst. chemist, Armour and Co, 93-95; Chicago Copper Ref. Co, 95-96; Anaconda Copper Ref. Co, 96-01; *metal. engineer*, Baltimore Copper Ref. Co, 01-10; *Guggenheim Bros*, 10-; v. *pres*, *Chile Explor. Co*; *Braden Copper Co*. Gold medal, Min. and Metal. Soc, 20. Min. Eng; Min. and Metal. Soc; Electrochem. Soc; London Soc. Chem. Indust. Metallurgy of copper.
- Smith, Prof. Elizabeth A(nita)**, University of Wisconsin, Madison, Wis. *Zoology*. Lancaster, Ky, Nov. 6, 89. A.B., Cincinnati, 10; A.M., Wisconsin, 12, Ph.D., 15. Asst. bot., Cincinnati, 09-10; teacher, pub. schools, 10-11; asst. *zool*, *Wisconsin*, 11-14, instr., 14-19, *asst. prof*, 19- A.A.; Soc. Zool. Cytology, embryology.
- Smith, Miss Elizabeth H(ight)**, University of California, Berkeley, Calif. *Plant pathology*. Brookline, Mass, Jan. 12, 77. A.B., Smith, 00; M.S., Mass. Col, 05. Asst. bot., Mt. Holyoke, 01; science and math, high sch., Torrington, Conn, 02-03; Spencer, Mass, 04; asst. *plant path*, *California*, 05-10, instr., 10-15, *asst. prof*, 15-, *asst. plant pathologist*, *Exp. Sta*, 05- *Phytopath. Soc.* Diagnosis of plant diseases.
- Smith, Elliott**, Cincinnati Observatory, Cincinnati, Ohio. *Astronomy*. Blue Earth Co, Minn, 75. A.B., Minnesota, 03; fellow, Lick Observatory, California, 05-06; Ph.D., Cincinnati, 10. Asst. astron., Minnesota, 02-03; Lick Observatory, California, 03-05; asst., *Cincinnati Observatory*, 07-11, *astronomer*, 11- A.A.; Astron. Soc; Pacific Astron. Soc. Micrometric, photographic and meridian circle observations of position; meridian circle observation of position of all stars of known proper motion.
- Smith, Prof. E(rastus) G(ilbert)**, 649 Harrison Ave, Beloit, Wis. *Chemistry*. South Hadley, Mass, April 30, 55. A.B., Amherst, 77, A.M., 81; Ph.D., Göttingen, 83. Instr. *chem*, Williston Sem, Easthampton, Mass, 78-81; *prof*, *Beloit*, 81- A.A.; Chem. Soc; Wis. Acad. (v. pres, 01, 19); Chem. Gesell. Minerals; waters; water supply; bacteriology.
- Smith, Dr. E(rnest) E(rlsworth)**, 50 E. 41st St, New York, N. Y. *Physiology, Chemistry*. New Haven, Conn, Dec. 20, 67. Ph.B., Yale, 88, Ph.D., 91; M.D., Bellevue, 98. Asst. *physiol. chem*, Yale, 88-91; chief chemist, private research laboratories of Dr. Herter, New York, 91-95; *specialist*, 98-; *prof. physiol. and org. and biol. chem. sch. med*, Fordham, 06-11. Pathologist, West Side Disp, New York; consulting pathologist, Jamaica Hosp, L. I.; Somerset Hosp, Somerville, N. J. A.A.; Chem. Soc; Soc. Chem. Indust; Soc. Med. Juris. (trustee); Urol. Ass; Am. Med. Ass; N. Y. Acad. Med; Greater N. Y. Med. Soc. (sec'y); N. Y. Path. Soc; fel. N. Y. Acad. (pres, 18). Digestive proteolysis; uric acid excretion; uremic intoxications; intestinal toxemias; influence of baking-powders in food; serology; metabolism; healthfulness of food adjuncts; toxicology; absorption of wood alcohol; composition of roasted cereals; detection of pyramidon.
- Smith, Dr. Erwin F(rink)**, U. S. Department of Agriculture, Washington, D. C. **Plant pathology, Bacteriology*. Gilberts Mills, N. Y., Jan. 21, 54. B.S., Michigan, 86, Sc.D., 89; hon. Sc.D., Wisconsin, 14. Special agent, later asst. pathologist and pathologist in charge, lab of plant path, *bur. plant indust*, *U. S. Dept. Agr*, 86- Assoc. ed, 'Centralblatt für Bakter,' 2 Abt; contributor, 'Standard Diet, first edition'; trustee, Woods Hole. Certificate of merit, Am. Med. Ass, 13. U. S. delegate, Int. Hort. Conf, London, 06; Int. Bot. Cong, Brussels, 10; invited to make exhibit of plant tumors, 17th Int. Med. Cong, London, 13. Nat. Acad. (chairman, bot. sect, 19-); A.A. (sec'y, G, 98, v. pres, 05); Soc. Nat; Philos. Soc; Soc. Bact. (mem. committee on unification of methods, pres, 06); Bot. Soc. (pres, 10); life mem. Pomol. Soc; Phytopath. Soc. (pres, 16);

- Ass. Tuber; Ass. Cancer Research; Am. Acad; Wash. Biol. and Bot. Societies. Bacteria in relation to plant diseases; Pasteur.
- Smith, Dr. Eugene A(llen)**, University, Ala. **Geology*. Washington, Ala, Oct. 27, 41. A.B, Alabama, 62, LL.D, 06; A.M, Ph.D, Heidelberg, 68; LL.D, Mississippi, 99. *Prof. miner. and geol. Alabama*, 71-; *state geologist, Ala*, 73- Asst. state geologist, Miss, 68-71; hon. commissioner, Paris Expos, 78; special agent on cotton culture, tenth census, 86; mem. Am. committee, Int. Geol. Congresses, 84-89; mem. jury of awards, Atlanta Expos, 95; Nashville Expos, 97; La. Purchase Expos, 04. A.A. (sec'y, E, 84, v. pres, 04); Geol. Soc. (mem. council, 92-95, v. pres, 06, pres, 13). Geology of Alabama.
- Smith, Eugene R(andolph)**, 2331 Mondawmin Ave, Baltimore, Md. *Mathematics*. Oswego, N. Y, March 18, 76. A.B, Syracuse, 96, A.M, 98. Instr. math, Syracuse, 96-97; head, dept. math, Cazenovia Sem, 97-98; instr. math, Syracuse, 98-99; head, dept. math, high sch, Montclair, 99-08; Polytech. Prep. Sch, Brooklyn, 08-12; *headmaster, The Park Sch*, 12- Instr, Hopkins, summers, 15, 18; lecturer, Edgewood Sch. for Teachers, 19; Teachers College, Columbia, summer, 19; assoc. ed, 'The Math. Teacher.' A.A; Math. Soc; Fed. Teachers Math. and Nat. Sci. (sec'y-treas, 10-12); Nat. Soc. Study Educ; Ass. Adv. Progressive Educ. (chairman exec. committee, 19-); Ass. Math. Teachers Middle States and Md. (sec'y, 07-10, pres, 13-15, chairman, N. Y. sect, 10-12, southern sect, 16-18). Mathematical pedagogy.
- Smith, Prof. F(rances) Grace**, Northampton, Mass. *Botany*. Springfield, Mass, Dec. 27, 71. A.B, Smith, 93, A.M, 00; Ph.D, Chicago, 06. Asst. bot, Smith, 00-03, instr, 05-11, *assoc. prof*, 11- A.A; Bot. Soc; Ecol. Soc. Morphology and anatomy of cycads.
- Smith, Prof. Francis H(enry)**, University, Va. *Physics*. Leesburg, Va, Oct. 14, 29. Wesleyan, 47-49; A.M, Virginia, 51; LL.D, Hampden-Sidney; Randolph-Macon; Emory and Henry; D.C.L, Sewanee. Instr. math, Virginia, 51-53, *prof. nat. philos*, 53- A.A; Physical Soc. Sounding flames; Foucault's pendulum; the harmonic curves; latitude without astronomical observation; refractive index of gases and mixed liquids by aid of new appliances.
- Smith, Francis P(itt)**, 131 E. 23d St, New York, N. Y. *Chemical engineering*. New York, Sept. 9, 67. Ph.B, Columbia, 88. Chemist, Tiffany Chem. Co, 88-89; Wm. H. Swift and Co, 89-90; Health Dept, N. Y. City, 90-91; Consol. Gas Co, 92-93; U.S.N. Dept, 93-95; Harrison Bros. and Co, 95-96; asst. manager, Eidoloscope Co, 96-97; asst. and instr. chem, col. physicians and surg, Columbia, 97-99; chemist, Aleatraz Co, 97-01; British Paving Co, 01-03; Union Oil Co, 03-05; A. L. Barber Asphalt Co, 05-07; *partner, Dow and Smith*, 07- Lecturer highway eng, Columbia; assoc. ed, 'Highway Eng. Pocket Book.' Delegate, third Int. Road Cong, London, 13. Chem. Eng; Chem. Soc; Soc. Chem. Indust; Soc. Test. Mat. (chairman committee on waterproofing, 19); Civil Eng; Soc. Munic. Improv; Wood Preservers Ass; Road Ass; Can.
- Good Roads Ass. Bituminous highway and pavement construction; refining of asphalt and petroleum; testing of bituminous materials.
- Smith, Prof. Frank**, University of Illinois, Urbana, Ill. **Zoology*. Winneconne, Wis, Feb. 18, 57. Ph.B, Hillsdale, 85; A.M, Harvard, 93. Prof. chem. and biol, Hillsdale, 86-92; instr. biol, Trinity (Conn), 92-93; instr. and later asst. prof. zool, Illinois, 93-06; assoc. prof, 06-13, *prof*, 13- A.A; Soc. Nat; Soc. Zool; Ecol. Soc; assoc. Ornith. Union; Wash. Biol. Soc. Embryology of Scyphomedusae; variation in Necturus; Oligochaeta of United States; bird migration; fresh-water sponges.
- Smith, Prof. Franklin O(rlion)**, University of Montana, Missoula, Mont. *Psychology*. Macon Co, Ill, 67. M.Di, Iowa State Teachers Col, 03; A.M, Iowa, 07, Ph.D, 12. Prof. psychol. and educ, Woodbine Nor. Sch, Iowa, 07-10; asst. prof, Utah, 12-15; *prof. psychol, Montana*, 15- A.A; Psychol. Ass. Measurement of intelligence; mental survey in schools.
- Smith, Prof. G(eorge) E(dson) P(hilip)**, University of Arizona, Tucson, Ariz. *Irrigation engineering*. Lyndonville, Vt, Dec. 29, 73. B.S, Vermont, 97, C.E, 99; Wisconsin, 10-11. Instr. civil eng, Vermont, 97-00; prof, Arizona, 00-06, *prof. irrig. eng, and irrig. engineer, Exp. Sta*, 06- Consulting engineer and reporter on irrigation projects. Civil Eng. Groundwater geology; cement pipe.
- Smith, Prof. George H(athorn)**, Yale University, New Haven, Conn. *Bacteriology*. Maine, Sept. 25, 85. A.B, Bates, 09; A.M, Brown, 10, Ph.D, 15. Research immunologist, H. K. Mulford Co, 12-17; *asst. prof. bacter. and path, Yale*, 17- A.A; Soc. Bact; Ass. Immunol; Pub. Health Ass. Immunology; preventive medicine; pneumonic infection; gonococcus strains; anti-bacterial sera.
- Smith, Prof. G(eorge) McP(hail)**, University of Washington, Seattle, Wash. *Chemistry*. Nashville, Tenn, Nov. 15, 78. B.S, Vanderbilt, 00; Berlin, 00-01; Geneva, 01-02; Ph.D, Freiburg, 03. Instr. qual. analysis, Mich. Col. Mines, 03-04; anal. chem. and metal, N. C. Col, 04-05; chem, Illinois, 05-09, assoc. 09-14, asst. prof, 14-19; *prof. inorg. chem, Washington (Seattle)*, 19- A.A; Chem. Soc. (chairman, illum. sect, 15). Amalgams; diffusion in aqueous and in mercurial solutions; equilibrium between aqueous and metallic solutions; diffusion of strong electrolytes; determination of titanium and halogens.
- Smith, Prof. G(eorge) M(ilton)**, 111 Buckingham St, Waterbury, Conn. *Surgery*. Hongkong, China, July 5, 79. A.B, Yale, 01; M.D, Columbia, 05. Intern, Presb. Hosp, N. Y. City, 05-07; instr. clin. surg, Columbia, 09; assoc. prof. path, Washington (St. Louis), 13, director Barnard Cancer Hospital, 15; *attending surgeon, Waterbury Hosp*, 16- Capt, M.R.C, 17-19. A.A; Ass. Path. and Bact; Ass. Anat. Morphology of tissues after transplantation; experimental gastric ulcer.
- Smith, Dr. Geo(rge) Otis**, U. S. Geological Survey, Washington, D. C. **Geology*. Hodgdon, Maine, Feb. 22, 71. A.B, Colby, 93, A.M, 96, LL.D, 20; Ph.D, Hopkins, 96. Asst. geologist, U. S. Geol.

- Surv.* 96-01, geologist, 01-07, *director*, 07-A.A.; Geol. Soc.; Min. Eng.; Wash. Acad. (v. pres, 08); Wash. Geol. Soc. (pres, 09). Areal geology in Michigan, Washington, Utah and New England.
- Smith, Prof. Gilbert M(organ)**, University of Wisconsin, Madison, Wis. *Botany*. Beloit, Wis, Jan. 6, 85. B.S., Beloit, 07; Ph.D., Wisconsin, 13. Asst. bot., Wisconsin, 09-10; instr., Pomona, 10-11; asst., Wisconsin, 11-12, instr., 12-17, asst. prof., 17-19, *assoc. prof.*, 19- A.A.; Bot. Soc.; Micros. Soc. Fresh-water algae.
- Smith, Dr. Guy W(atson)**, 1420 Ohio St, Lawrence, Kans. *Mathematics*. Castle Rock, Colo, Oct. 7, 85. B.S.(E.E), Colorado, 08, M.S., 09; Ph.D., Illinois, 17. Instr. eng. math, Colorado, 09-13; asst. math, Illinois, 13-16; instr. math. and physics, Beloit, 17-18; Kentucky, 18-20; *asst. prof. math, Kansas*, 20- A.A.; Math. Soc.; Math. Ass. Linear associative algebra.
- Smith, Harlan I(ngersoll)**, Geological Survey of Canada, Ottawa, Can. *Anthropology*. East Saginaw, Mich, Feb. 17, 72. Michigan, 91-93. Asst. anthrop., Columbian Expos, 91-93; Am. Museum Nat. Hist, 95-99, asst. curator, 00-10, *assoc. curator*, 10-11; *archeologist, Can. Geol. Surv.*, 11- In charge anthrop. collection, Michigan, 91-93; explored for Archeol. Inst. of Am, 94; archeologist, Jesup North Pacific exped, 97-07; lecturer, N. Y. Board of Educ, 98-11; hon. curator, Am. Museum Nat. Hist, 12-13; Pratt Inst, Brooklyn, 06-07. A.A. (sec'y, H, 97, 02); Anthrop. Ass; fel. Ethnol. Soc. (treas); Ass. Mus; Mich. Acad; hon. mem. Wis. Nat. Hist. Soc; cor. mem. Wash. Anthrop. Soc; cor. mem. Soc. d'Anthrop. de Paris; cor. mem. Swedish Soc. Anthrop. and Geog. Archeology of Michigan, southern Ohio, Kentucky, Wyoming, North Pacific Coast of America, and Canada; museum methods.
- Smith, Prof. Harold B(abbitt)**, Polytechnic Institute, Worcester, Mass. *Electrical engineering*. Barre, Mass, May 23, 69. M.E., Cornell, 91, 91-92. Adj. prof. elec. eng, Arkansas, 92; elec. engineer and head designer, Elektron Mfg. Co, 93; director, sch. elec. eng, Purdue, 93-96; *prof. and director, elec. eng. dept, Worcester*, 96- Consulting engineer, 93-; engineer and designer, Westinghouse Elec. and Mfg. Co, 05-13, consulting engineer, 13-; study and travel in Europe, Africa and Asia, 11-13; *assoc. mem.* Naval Con. Board, and consulting engineer, special board, antisubmarine service, U.S.N., 17-19; chairman elec. eng. group, jury awards, La. Purchase Expos, 04. A.A.; Elec. Eng. (manager, 20-); Mech. Eng.; Eng. Educ; British Inst. Elec. Eng. Design of direct current generators and motors and alternating current transformers; alternating current phenomena of high potential and low frequency; dielectric phenomena and losses at high potentials.
- Smith, Prof. Harrison W(illard)**, Springfield, Maine. *Electrical engineering*. Dorchester, Mass, Dec. 29, 72. A.B., Harvard, 95; B.S., Mass. Inst. Tech, 97. Asst. elec. eng, Mass. Inst. Tech, 98-01, instr, 01-05, asst. prof, 05-07, *assoc. prof.*, 07-16, research *assoc.*, 16-17. With Mass. Inst. Tech, eclipse expeditions to Washington, Ga, 00; Sumatra, 01. Assoc. Elec. Eng; Physical Soc;
- Astron. Soc; Nat. Elec. Light Ass. Comparison of heat of vaporization of two liquids; methods of measuring the frequency of alternating currents; photographic work of Sumatra eclipse expedition.
- Smith, Prof. Harry E(aton)**, U. S. Naval Observatory, Washington, D. C. *Mathematics*. Fremont, Ohio, Dec. 28, 69. Grad, U. S. Naval Acad, 91. All grades from ensign to captain, U.S.N., 91-07; *prof. math*, U. S. Naval Acad, 06-12, head, dept. math. and mech, 12-15; with U. S. Naval Observatory, 15-20. Strength of materials; theoretical mechanics.
- Smith, Harry S(cott)**, State Department of Agriculture, Sacramento, Calif. *Entomology*. Aurora, Nebr, Nov. 29, 83. A.B., Nebraska, 07, A.M., 08. Asst. state entomologist, Nebr, 08; expert, bur. entom., U. S. Dept. Agr, 08-12; *supt, insectary div, Calif. State Commission Hort*, 13-19; *entomologist in charge of pest control, Calif. State Dept. Agr*, 19- A.A.; Ass. Econ. Entom.; Wash. Entom. Soc; Cambridge Entom. Soc; Calif. Acad. Sphecoidea of Nebraska; Ceratinidae of North America; parasitic insects; use of entomophagous insects to control insect pests.
- Smith, Henry Lee**, 2701 N. Calvert St, Baltimore, Md. *Medicine*. Ashland, Va, March 23, 68. M.D., Maryland, 94; hon. A.M., St. John's (Md), 10. Res. physician, Hosp. for Women of Md, 95-96; instr. bacter. and later *prof. pediat. and med, Woman's Med. Col. of Baltimore*, 99-06; *asst. med, Hopkins*, 06-09, *instr. and physician, Hopkins Hosp*, 09- A.A.; Am. Med. Ass; fel. Royal Soc. Arts. Bacteriology of milk; synesthesia; buckwheat poisoning; agglutination of colon bacilli; thoracic aneurism; percussion; lipodystrophia progressiva.
- Smith, Prof. H(enry) Monmouth**, 25 Cotswold Road, Brookline, Mass. *Chemistry*. Middletown, Conn, Aug. 31, 68. A.B., Wesleyan, 91, A.M., 94; Ph.D., Heidelberg, 98. Assoc. prof. physical science, Hampden-Sidney, 98-99; instr. chem, Syracuse, 99-00, *assoc. prof.*, 00-02, *prof.*, 02-13; research *assoc.*, nutrition lab, Carnegie Institution, 13-20; *prof. chem, Mass. Inst. Tech*, 20- Asst. chemist, Storrs Exp. Sta, 91-92; Conn. Exp. Sta, 92-93; special agent nutrition investigations, U. S. Dept. Agr, 95. A.A.; Chem. Soc; Am. Acad. Metabolism during exercise.
- Smith, Prof. Herbert (Johnson)**, Agricultural College, Miss. *Physical chemistry*. Kosciusko, Miss, 82. B.S., Miss. Agr. Col, 06; Ph.D., Chicago, 17. Anal. chemist, Miss. Stato Lab, 06-09; asst. *prof. chem*, Clemson, 11-12; *assoc. prof, Miss. Agr. Col*, 12-20, *prof*, 20- Chem. Soc. Equilibrium in the systems of metallic carbonates, carbon dioxide and water.
- Smith, Prof. H(erbert) S(tearns) S(quier)**, Princeton, N. J. *Civil engineering*. Elizabeth, N. J, May 31, 57. C.E., Princeton, 78. Prof. astron, physics and civil eng, Kansas, 79-83; instr. civil eng, Princeton, 83-87, asst. *prof*, 88-99, *prof. applied mech*, 99-05, *civil eng*, 05- A.A.; *assoc. Civil Eng*; Eng. Educ; Franklin Inst.
- Smith, H(erman) Lyle**, 812 Chandler St, Madison, Wis. *Mathematics*. Pittwood, Ill, July 7, 92. B.S., Chicago, 14, M.S., 15. Instr. math, North-

- western, 15-16; Princeton, 16-18; Cornell, 19; *Wisconsin*, 19- Math. Ass; Circolo Mat. di Palermo. General mathematical analysis; analysis situs.
- Smith, Horace T(ilden)**, Columbia Graphophone Co, Bridgeport, Conn. *Chemistry*. East Bridge-water, Mass, June 11, 77. B.S. Mass. Inst. Tech, 98. Chemist, Farist Steel Co, 99-16; physicist and steel expert, Union Metallic Cartridge Co, 16-18; chief chemist and metallurgist, Am. Tube and Stamping Co, 18; *chemist*, *Columbia Graphophone Co*, 18- Chem. Soc. (chairman, New Haven sect, 17); Soc. Test. Mat. Tool steels; low carbon steel ingots; electrotyping.
- Smith, Dr. Howard D(exter)**, 669 Westford St, Lowell, Mass. *Chemistry*. N. Scituate, R. I, July 27, 81. B.S. R. I. Col, 01; Ph.B. Brown, 03, A.M., 04; Ph.D. Tufts, 06. Instr. chem, Beloit, 06-09; Lowell Textile Sch, 09-18; *research chemist*, *Carleton and Hovey Co*, 13- A.A.; Chem. Soc. Organic chemistry.
- Smith, Prof. H(oward) R(emus)**, 374 Exchange Building, Union Stock Yards, Chicago, Ill. *Animal husbandry*. Addison, Mich, April 16, 72. B.S. Mich. Agr. Col, 95; Wisconsin, 99-00. Teacher science, Tilford Collegiate Acad, Vinton, Iowa, 95-97; chem. and physics, high sch, Rock Island, Ill, 97-99; acting prof. agr, Missouri, 00-01; prof. animal husbandry, Nebraska, 01-12; Minnesota, 12-15; live-stock specialist, James J. Hill interests, 15-17; *live-stock commissioner tuber. eradication*, *Chicago Live Stock Exchange*, 17-
- Smith, Dr. Hugh M(cCormick)**, U. S. Bureau of Fisheries, Washington, D. C. **Ichthyology*. Washington, Nov. 21, 65. M.D. Georgetown, 88; LL.D. Dickinson, 08. Asst. U. S. Fish Commission, 86-92, in charge, div. of fisheries, 92-96, in charge of scientific inquiry, 97-03; deputy U. S. Commissioner of Fisheries, 03-13, *commissioner*, 13- Prof. nor. histol, med. dept, Georgetown, 95-02; co-special agent in charge of fisheries, tenth census; director, biol. lab. U. S. Fish Commission, Woods Hole, 01-02. Fourth Int. Fishery Cong. (sec'y-gen), Washington, 08. A.A.; Soc. Nat; assoc. Ornith. Union; Fisheries Soc. (pres, 08); Soc. Ichthyol. and Herp; Ass. Geog; Wash. Aquarium Soc. (hon. pres, 16); Wash. Biol. Soc. (pres, 19); Wash. Acad. Ichthyology; commercial fisheries of the United States and of foreign countries; aquatic resources.
- Smith, Huron H(erbert)**, Public Museum, Milwaukee, Wis. *Botany*. Danville, Ind, July 26, 83. B.S. De Pauw, 05; Cornell, 05-07. Asst. bot, De Pauw, 04-05; phanerog. bot, Cornell, 05-07; dendrologist, Field Museum Nat. Hist, 07-17; *curator bot*, *Pub. Museum, Milwaukee*, 17- Lecturer dendrol, summer sch. forestry, Georgia, 09. A.A.; Forestry Ass; Wis. Acad; Wis. Archeol. Soc; Chicago Geog. Soc. Dendrology; periodic growth in woody plants; timber diseases; fungi of Milwaukee region.
- Smith, Prof. Isabel S(eymour)**, Illinois College, Jacksonville, Ill. *Botany*. Hillsdale, Mich, Oct. 22, 64. A.B. Oberlin, 01; Woods Hole, 03, 10; M.S. Chicago, 05, 13-14, summers, 15, 17, 18. Teacher, high sch, Fremont, Ohio, 91-95; asst. bot, Oberlin, 97-02; instr. *biol*, *Illinois Col*, 03-05, asst. prof, 05-09, *prof*, 09- A.A.; Ass. Prof; Ill. Acad. (mem. publication committee, v. pres, 19). Nutrition of the egg in *Zamia*; native trees of Morgan County, Illinois; anatomy of *Nelumbo lutea*.
- Smith, J(ames) Brookes**, Greensboro, N. C. *Mathematics*. Lexington, Ky, March 11, 85. A.B. A.M. Virginia, 06, fellow, 09-10. Adj. prof. math, Ga. Tech, 06-07; head, dept. *math*, high sch, Richmond, Va, 07-09; asst. prof, Hampden-Sidney, 10-11, prof, 11-18; lieut, Q.M.C, 18-19; *asst. actuary*, *Jefferson Standard Life Ins. Co*, 19- A.A.; Math. Soc. Continuous groups.
- Smith, Prof. Ja(me)s Perrin**, Stanford University, Calif. **Paleontology*. Cokesburg, S. C, Nov. 27, 64. A.B. Wofford, 84, LL.D, 16; A.M. Vanderbilt, 86; Ph.D. Göttingen, 92. Teacher science, high sch, Nashville, Tenn, 86-88; asst. chemist and geologist, Ark. Geol. Surv, 88-90; *prof. paleont. and miner*, *Stanford*, 92-05, *paleont*, 05- Asst. geologist, U. S. Geol. Surv, 95-06, geologist, 06- Geol. Gesell. Stratigraphy; Triassic paleontology; Tertiary stratigraphy, conchology and climatology; morphology of marine invertebrates; upper Triassic marine faunas; stratigraphy of California.
- Smith, Jared G(age)**, Napoopoo, Hawaii. *Agriculture*. Scottsburg, N. Y, Sept. 13, 66. B.S. Nebraska, 88, A.M. 92. Asst. agriculturist, Nebr. Exp. Sta, 88-90; instr. bot, Washington (St. Louis), 92; bot. asst, Mo. Bot. Garden, 92-95; asst. agrostologist, U. S. Dept. Agr, 95-99, asst. botanist, seed and plant introduction, 00-01, special agent in charge, Hawaii Exp. Sta, 01-08; with Kona Tobacco Co, 08-13; editorial dept, 'Pacific Commercial Advertiser,' 13-19; prof. agr, Col. of Hawaii, 16; *tobacco planter*, 17- A.A.; assoc. Bot. Soc. Systematic botany; Alismaceae; Gramineae; Sagittaria; Lophotocarpus; Sitanion; Agropyron; Hordeaceae.
- Smith, J(ohn) C(harles)**, 131 Carondelet St, New Orleans, La. *Zoology*. New Orleans, May 8, 50. Louisiana, 69-71. *Merchant*. A.A.; Micros. Soc; La. Soc. Nat. Protozoa; Rotifera; Pseudo-Neuroptera; protozoan fauna of brackish water of Lake Pontchartrain.
- Smith, Capt. John Donnell**, 505 Park Ave, Baltimore, Md. *Botany*. Baltimore, June 5, 29. A.B. Yale, 47; admitted to bar, Baltimore, 51. Capt. artillery, U.S.A, 64-65; assoc. bot, Smithsonian Inst. Trustee, Peabody Inst, Baltimore, 88-09. Am. Acad; cor. Phila. Acad; fel. London Linnean Soc. Botany of Central America.
- Smith, Prof. John E(liphalet)**, Iowa State College, Ames, Iowa. *Geology*. Polk Co, Oregon, Jan, 78. B.S. Oregon Col, 02; Chicago, summers, 08-10; M.S. Iowa State, 11; fellow, Missouri, 11-12. Teacher science, high sch, Salem, Oregon, 05-08; instr. *geol*, North Carolina, 12-17; *asst. prof*, *Iowa State*, 17- Field asst, Iowa Geol. Surv, 11; geologist, N. C. Geol. Surv, 13-17. A.A.; fel. Am. Geog. Soc; N. C. Acad. (chairman, exec. committee, 17); Iowa Acad. Agricultural geology.
- Smith, Prof. J(ohn) Hammond**, University of Pittsburgh, Pittsburgh, Pa. *Civil engineering*. Wellsville, Ohio, Oct. 14, 67. E.E. Pittsburgh, 98. *Prof. math. and drawing*, *Pittsburgh*, 98-

- 09, *civil eng.*, 09- A.A.; Eng. Educ; Soc. Test. Mat; West. Pa. Eng. Soc. Sculpturing by means of photography; geographic position and photographic proofs; improvements in surveying instruments.
- Smith, Prof. J(ohn) Warren**, U. S. Weather Bureau, Washington, D. C. *Meteorology*. Grafton, N. H., Sept. 21, 63. B.S., N. H. Col., 88, M.S., 00; Lawrence Sci. Sch., Harvard, 91-92; grad., summer sch. agr., Ohio State, 02. *With U. S. Weather Bur.*, 88-, director, New England sect., 98-09, dist. forecaster, St. Louis, 09-10, director, Ohio sect., 10-16, *chief, div. agr. meteorol.*, 16- Special lecturer meteorol., Ohio State, 98-10, prof. meteorol. science, 10-16; ed., 'Sect. Bul.' A.A.; Meteorol. Soc.; Ass. Geog.; Ecol. Soc.; Ohio Acad. (pres, 15); Wash. Acad.; Wash. Philos. Soc. Phenology; meteorology; agricultural physics; geography; agricultural meteorology.
- Smith, Dr. J(onas) Waldo**, 2224 Municipal Building, New York, N. Y. *Civil engineering*. Lincoln, Mass., March 9, 61. B.S., Mass. Inst. Tech., 87; hon. D. Eng., Stevens, 18; hon. Sc.D., Columbia, 18. *Chief engineer*, E. Jersey Water Co., 00-03; aqueduct commissioner, N. Y. City, 03-05, *board of water supply*, 05- Civil Eng; Mech. Eng; Pub. Health Ass; Water Works Ass; New Eng. Water Works Ass; Franklin Inst; Boston Soc. Civil Eng. Hydraulics; water supply.
- Smith, Prof. J(oseph) Russell**, Columbia University, New York, N. Y. *Geography*. Lincoln, Va., Feb. 3, 74. B.S., Pennsylvania, 98, Ph.D., 03; Leipzig, 01-02. Instr. science and hist., Abington Friends Sch., Pa., 95-96; hist., George Sch., 96-97, 98-99; econ. investigator, Isthmian Canal Commission, 99-01; instr. commerce, Wharton Sch. Finance and Commerce, Pennsylvania, 03-06, asst. prof. geog. and industry, 06-07, industry, 07-08, *prof.*, 09-19; *econ. geog.*, Columbia, 19- Special trade expert, bur. research, W.T.B., 18; mem. Nat. Research Council, 19- Ass. Geog. (v. pres, 16); Northern Nut-Grower's Ass. (pres, 16). Economic geography; soil conservation; ocean commerce; tree crop agriculture in western Mediterranean countries and in the United States; influence of the great war on shipping; the world's food resources.
- Smith, Prof. K(eith) K(uenzi)**, 2123 Maple Ave., Evanston, Ill. *Physics*. Spencerville, Ind., Oct. 10, 87. A.B., Northwestern, 10; fellow, Princeton, 14-15, Ph.D., 15. Asst. physics, Princeton, 10-11; instr. science, high sch., Coshocton, Ohio, 11-12; *physics*, Princeton, 12-14; *asst. prof.*, Northwestern, 15- Assoc. Physical Soc. Thermionic currents from tungsten; galvanomagnetic and thermomagnetic effects in bismuth and other metals.
- Smith, Prof. Leonard S(ewall)**, 939 University Ave., Madison, Wis. *Civil engineering*. East Troy, Wis., Feb. 14, 64. B.C.E., Wisconsin, 90, C.E., 95. Instr. civil eng., Wisconsin, 94-96, asst. prof. topog. and geod. eng., 97-05, *prof.*, 05-20, *city planning*, 20- Temporary aid, U. S. Coast and Geod. Surv., 96-00; topographer, U. S. and Mexico Int. Boundary Surv., 92-94; hydrographer in charge, Wis. Nat. Hist. and Geol. Surv., 97-05; engineer, State Levee Commission, 01-05; U. S. Geol. Surv., 06-09. A.A.; assoc. mem. Civil Eng; Eng. Educ; Wis. Acad; Wis. Eng. Soc. (sec'y, 16-20). Accuracy of stadia measurements; water powers of Wisconsin.
- Smith, Dr. L(ivingston) W(addell)**, Lexington, Va. *Mathematics*. Lexington, Va., May 30, 76. A.B., Washington and Lee, 96, A.M., 98, Ph.D., 02; Hopkins, 03. Instr. chem., Mass. Inst. Tech., 04-06; *prof.*, Washington and Lee, 06- A.A.
- Smith, L(oren) B(artlett)**, Virginia Truck Experiment Station, Norfolk, Va. *Entomology*. Truro, N. S., March 24, 90. B.S., Cornell, 14. Asst., N. S. Agr. Col., 09-10; Cornell, 14; asst. state entomologist, Va., 14-18, assoc. state entomologist, 18; *entomologist*, Va. Truck Exp. Sta., 16- Entom. Soc.; Ass. Econ. Entom. Truck crop insects; insect carriers of plant diseases; plant breeding; Aphididae.
- Smith, Prof. Louie H(enrie)**, University of Illinois, Urbana, Ill. *Agronomy*. Crystal Lake, Ill., 72. B.S., Illinois, 97, M.S., 99; Ph.D., Halle, 07. Asst. chemist, Ill. Exp. Sta., 99-03, chief asst. chem. and plant breeding, 03-05, asst. chief and asst. prof. plant breeding, Illinois, 05-11; chief and prof., 11-20, *chief soil survey in charge of publications*, 20-, acting head, dept. agron., 13-14, 18-19. A.A.; Soc. Nat; Soc. Agron. 13-14, 18-19. A.A.; Soc. Nat; Soc. Agron. (treas., 10, asst. ed., 'Jour.', 13-); Chem. Soc.; Ill. Acad. Corn breeding; improvement of farm crops in chemical composition and in productiveness; transmission of plant characters by heredity.
- Smith, Dr. Margaret K(eiver)**, New Paltz, N. Y. *Psychology*. Amherst, N. S., 56. Stoy's Sch. and Jena, 85-87; Göttingen, 96-97; Ph.D., Zürich, 00; hon. fellow, Clark, 00-01. Teacher, Oswego, N. Y., 87-96; director psychol. and geog., State Nor. Sch., New Paltz, N. Y., 01-09; supervisor of education of a family, 09-18; *with dept. languages*, State Nor. Sch., New Paltz, N. Y., 18- A.A.; Soc. Nat; Psychol. Ass. Psychology of rhythm and work; physical condition of normal school students as indicated by reaction-time, skin sensitivity and acuteness of sight and touch; retarded development in a child; psychological value of Latin as a subject of instruction.
- Smith, M(arion) R(ussell)**, Delta Laboratory, Tallulah, La. *Entomology*. Pendleton, S. C., June 19, 94. B.S., Clemson, 15; M.S., Ohio State, 17. Asst. entom., Clemson, 16; scientific asst., bur. entom., U. S. Dept. Agr., 17-18; asst. entom., Clemson, 18-19; exten. entomologist, N. C., 19-20; *field entomologist*, bur. entom., U. S. Dept. Agr., 20- Entom. Soc.; Ass. Econ. Entom.; N. C. Acad. Formicidae; insecticides.
- Smith, Dr. Maurice I(sadore)**, Hygienic Laboratory, Washington, D. C. *Pharmacology*. B.S., Col. City of N. Y., 09; M.D., Cornell, 13. Instr. pharmacol., Michigan, 14-17; prof., Nebraska, 17-20; *pharmacologist*, U. S. Pub. Health Service, 20- A.A.; Soc. Pharmacol.; Am. Med. Ass. Synergism of morphin and scopolamin; optochin; stovain; anaphylactic fever; nicotin tolerance; elimination of strychnin; anaphylaxis.
- Smith, Prof. Merlin G(rant)**, 624 N. Locust St., Greenville, Ill. *Mathematics*. Delta, Ohio, Aug.

- 26, 94. A.B, Greenville, 15; A.M, Illinois, 16, Ph.D, 18. Instr. math, Northwestern, 18-19; prof. and head of dept, Greenville, 19- Differential equations; boundary problems in one dimension.
- Smith, Prof. N(ewland) F(arnsworth)**, The Citadel, Charleston, S. C. *Physics*. Downer's Grove, Ill, Jan. 28, 70. Ph.B, Northwestern, 92; Ph.D, Chicago, 09. Acting prof. physics, Grinnell, 00-01; prof, Olivet, 01-09; Centre, 09-19; head of dept, *The Citadel*, 19- Teacher physics, Chicago, summers. A.A; Physical Soc. Effect of tension and torsion on electrical conductivity; effect of magnetic fields on thermal conductivity.
- Smith, Oberlin, Bridgeton, N. J.** *Mechanical engineering*. Cincinnati, Ohio, March 22, 40. Phila. Polytech, 60; West Jersey Acad, 62. *Engineer and pres, Ferracute Machine Co, Bridgeton, N. J.*, 63- Commissioner from N. J, Pan-Am. Expos, 01. A.A; Mech. Eng. (pres, 89, manager); Civil Eng; Min. Eng; Elec. Eng; Acad. Polit. and Social Sci; Health League; Franklin Inst; Royal Soc. Arts. Machine design; pressing and stamping of metals; strength of materials; flow of cold metals under pressure.
- Smith, Prof. Orrin H(arold)**, Cornell College, Mt. Vernon, Iowa. *Physics*. Iveyville, Iowa, Sept. 1, 84. A.B, Knox, 08; A.M, Illinois, 09, Ph.D, 14. Instr. physics, high sch, Champaign, Ill, 09-10; asst, Illinois, 10-14; prof, Cornell, (Iowa), 14- Physical Soc; Iowa Acad. Retrograde rays from the cold cathode.
- Smith, Prof. Percy F(ranklyn)**, 330 Willow St, New Haven, Conn. **Mathematics*. Nyack, N. Y, Aug. 21, 67. Ph.B, Yale, 88, Ph.D, 91; Göttingen, Berlin and Paris, 94-96. Instr. math, *Sheffield Sci. Sch, Yale*, 88-94, asst. prof, 95-00, prof, 00- A.A; Math. Soc. (v. pres, 07); Conn. Acad. Analytic spherical geometry; transformation theory; differential geometry.
- Smith, Prof. Philip E(dward)**, University of California, Berkeley, Calif. *Anatomy*. DeSmet, S. Dak, Jan. 1, 84. B.S, Cornell, 08, M.S, 10, Ph.D, 12. Asst. anat, Cornell, 10-11; instr, 11-12; California, 12-17, asst. prof, 17- A.A; Soc. Exp. Biol; Ass. Anat; Entom. Soc. Neurology; experimental embryology.
- Smith, Dr. Philip S(idney)**, U. S. Geological Survey, Washington, D. C. *Geology*. Medford, Mass, July 28, 77. A.B, Harvard, 99, A.M, 00, Ph.D, 04. Asst. Harvard, 02-04, instr, 04-06; geologist, U. S. Geol. Surv, 06- A.A; Geol. Soc; Ass. Geog; Min. Eng; Wash. Acad; Wash. Geol. Soc. Physiography; areal and economic geology.
- Smith, Prof. Ralph E(llott)**, University of California, Berkeley, Calif. *Plant pathology*. Boston, Mass, Jan. 9, 74. B.S, Mass. Col, 94; Munich, 98. Instr. bot, Mass. Col, 94-95; asst. prof, 95-03; plant path, California, 03-08; assoc. prof, 08-09, prof, 09- Phytopath. Soc. Vegetable pathology; dust spraying.
- Smith, R(alph) I(ngram)**, 6 Beacon St, Boston, Mass. *Entomology*. Leverett, Mass, Sept. 16, 82. B.S, Mass. Col, 01. Asst. entomologist, dept. hort, Md. Col, 02-03; Ga. State Board Entom, 03-04, state entomologist, 04-07; asst. prof. entom. and zool, Clemson, and entomologist, Exp. Sta, 07-11; prof. entom, P. R. Col, 12-15; quarantine inspector, fed. hort. board, U. S. Dept. Agr, 15- A.A; Entom. Soc; Ass. Econ. Entom. San José scale; the cotton bollworm and insects injurious to grain and truck crops; peach, apple, and pear insects; remedial measures; garden insects.
- Smith, Dr. R(aymond) S(tratton)**, Agricultural Building, Urbana, Ill. *Agronomy*. Andover, Ohio, April 9, 80. B.S, Pomona, 07; Illinois, 13; Ph.D, Cornell, 18. Instr, Pa. State, 13-14, asst. prof, 14-16; assoc. soil physics, Illinois, 18- A.A; Soc. Agron; Ill. Acad. Soil technology.
- Smith, Prof. R(obert) Wilson**, McMaster University, Toronto, Can. *Botany*. Ontario, Can, Oct. 30, 60. B.A, McMaster, 95; fellow, Chicago, 96-99, Ph.D, 99. Master science, Woodstock (Can), 91-96; lecturer biol, McMaster, 99-00, prof, 00- Bot. Soc; Bot. Cent. States; Int. Ass. Bot. Morphology of the sporangia of Isoetes; cytology of various sporangia.
- Smith, Dr. Roger C(etus)**, Kansas State Agricultural College, Manhattan, Kans. *Entomology*. Dayton, Ohio, June 7, 88. A.B, Miami, 11; A.M, Ohio State, 15; Ph.D, Cornell, 17. Principal, Fairview High Sch, Dayton, Ohio, 12-14; asst. entom, Cornell, 15-17; assoc. lecturer nat. hist, pub. museum, Milwaukee, 17-18; scientific asst, bur. entom, U. S. Dept. Agr, 18-20; asst. prof. entom, Kansas State, 20- First Walker prize, 19. A.A; Entom. Soc; Ass. Econ. Entom; Fla. Entom. Soc. Neuropteroids; control of corn-ear worm.
- Smith, Prof. R(oy) B(urnett)**, Colgate University, Hamilton, N. Y. *Chemistry*. Jackson, Mich, March 25, 75. Heidelberg, 95-96; B.S, Michigan, 99; M.S. Colgate, 03, Göttingen, 12-13. Instr, high sch, Ann Arbor, Mich, 94-95, 96-99; instr. chem, Colgate, 03-06, asst. prof, 06-09, assoc. prof, 09- A.A; Chem. Soc; London Soc. Chem. Indust.
- Smith, Dr. R(uby) G(reen Bell)**, 15 East Ave, Ithaca, N. Y. *Entomology, Plant breeding*. Knightstown, Ind, Jan. 6, 78. A.B, Stanford, 02, A.M, 04; Ph.D, Cornell, 14. Asst. entom. Stanford, 02-03; teacher biol. and English, high sch, Stockton, Calif, 04; instr. entom. and bionomics, Stanford, 04-05; urban leader, U. S. Dept. Agr, 17-18; asst. director, bur. conservation, N. Y. State Food Commission, 18-19; state leader, N. Y. Home Bureaus, Cornell, 19- Lecturer, Chautauqua Inst, summers, 13, 14; home econ, Cornell. Entom. Soc.
- Smith, Prof. Sarah E(ffie)**, Mt. Holyoke College, South Hadley, Mass. *Mathematics*. Falls, N. H, Nov. 15, 63. B.S, Mt. Holyoke, 89; Mass. Inst. Tech; Michigan; Chicago; Berlin. Inst. math, Mt. Holyoke, 86-90, prof, 90- Math. Soc; New Eng. Ass. Math.
- Smith, Prof. Sidney I(rving)**, 147 Whalley Ave, New Haven, Conn. **Biology*. Norway, Maine, Feb. 18, 43. Ph.B, Yale, 67, hon. A.M, 87. Asst. and instr. zool, Yale, 67-75, prof. comp. anat, 75-06, emer. prof, 06- Zoologist, U. S. Lake Surv, 71; U. S. Fish Commission, 71-87. Nat. Acad; Soc. Nat; Soc. Zool. American marine invertebrate zoology, especially crustaceans and their post-embryonal stages; insects.

Smith, Prof. Stevenson, University of Washington, Seattle, Wash. *Psychology*. Philadelphia, Pa, April 29, 83. B.S. Pennsylvania, 04, Ph.D, 09; Heidelberg, summer, 04; Columbia, 04-05. Asst. psychol, Columbia, 05-06; prof. philos. and psychol, Hampden-Sidney, 06-11; asst. prof. psychol, Washington (Seattle), 11-13, assoc. prof, 13-15, *prof*, 15- Instr, Columbia, summers, 11-14. Psychol. Ass. Animal behavior; mental tests.

Smith, Prof. Theobald, Princeton, N. J. **Comparative pathology*. Albany, N. Y, July 31, 59. Ph.B, Cornell, 81; M.D, Albany Med. Col, 83; hon. A.M, Harvard, 01, LL.D, 10; Chicago, 08; hon. M.D, Breslau, 11; LL.D, Washington (St. Louis), 16; Princeton, 16; Yale, 17. In charge investigation of infectious animals diseases, bur. animal indust, U. S. Dept. Agr, 84-95; prof. bacter, George Washington, 86-95; comp. path, Harvard, 96-15; *director, dept. animal path, Rockefeller Inst, 15-* In charge, antitoxin and vaccine lab, Mass. State Board of Health, 95-14; mem. board of directors, Rockefeller Inst, 01-; Harvard exchange prof, Berlin, 11. Mary Kingsley medal, Liverpool Sch. Tropical Med, 07; Flattery medal, Harvard, 20. Nat. Acad; A.A; Soc. Nat; Philos. Soc; Soc. Exp. Path; Soc. Pharmacol; Ass. Path. and Bact; Am. Physicians; Soc. Bact; Soc. Exp. Biol; Am. Acad; hon. fel. London Soc. Trop. Med. and Hygiene; hon. mem. Soc. de Path. exotique. Etiology of Texas cattle fever and other infectious animal diseases; relation between human and bovine tuberculosis; parasitism and immunity.

Smith, Prof. T(hodore) Townsend, University of Nebraska, Lincoln, Nebr. *Physics*. Charleston, S. C, Nov. 9, 84. A.B, Harvard, 07, A.M. 08, Ph.D, 16. Instr. physics, Kansas, 10-13, asst. prof, 13-19; *prof. exp. physics, Nebraska, 19-* Physical Soc; Optical Soc. Magnetization in hematite; optical instruments.

Smith, Prof. T(homas) Berry, Central College, Fayette, Mo. *Chemistry, Physics*. Pike Co, Mo, Dec. 7, 50. A.B, Pritchett, 73, A.M, 79; Sheffield Sci. Sch, Yale, 75-76; Chicago, 08; LL.D, Central Wesleyan (Mo), 14. Instr. sciences, Pritchett, 73-75; *prof. chem. and geol, N. Mo. State Nor. Sch, 77-78*; chem. and physics, Carleton, 79-80; nat. science, Pritchett, 82-86; chem. and physics, Central (Mo), 86-15, *chem, 15-* Acting pres, Central (Mo), 01-03; voluntary observer, U. S. Weather Service, 83-19; sec'y-treas, Mo. Col. Union, 07-; mem. Mo. Library Commission, 16-19. Mo. State Teachers Ass.

Smith, T(odd) O(rin), Durham, N. H. *Chemistry*. Carrollton, Ohio, Oct. 27, 85. A.B, Indiana, 10; M.S, N. H. Col, 16. Asst. chemist, N. H. Exp. Sta, 10-17, *research chemist, 17-* A.A; Chem. Soc. Quantitative rare earth separations; distribution of food materials in the apple tree at different periods of vegetation; potassium requirements of plants; adhesiveness of spray materials.

Smith, Prof. W(arren) D(u Pré), University of Oregon, Eugene, Oregon. *Geology*. Leipzig, Germany, May 12, 80. B.S, Wisconsin, 02, Ph.D, 08; A.M, Stanford, 04; fellow, Chicago, 04-05. Field asst, Wis. Geol. Surv, 01-03; asst,

geol. lab, Stanford, 04; geologist, Mining Bur, Manila, 05-06, chief, div. mines, Bur. Science, P. I, 07-14; *prof. geol. and head of dept, Oregon, 14-* U. S. delegate from Philippines, Int. Geol. Cong, Toronto, 13. A.A; Geol. Soc. (councilor, Cordilleran sect, 18); Am. Geog. Soc; Ass. Mus. (v. pres, Pacific sect, 19); Philippine Eng. Soc. (pres, 13). Geology of Philippines, Oregon and the Pacific.

Smith, Prof. W(arren) R(ufus), Lewis Institute, Chicago, Ill. *Chemistry*. Litchfield, Maine, July 10, 69. A.B, Bowdoin, 90; Ph.D, Chicago, 94. Asst. chem, Bowdoin, 94-95; instr, high sch, New Bedford, Mass, 95-96; *Lewis Inst, Chicago, 96-01*, asst. prof, 01-05, *prof. 05-* A.A; Chem. Soc; Soc. Chem. Indust. General inorganic chemistry.

Smith, Dr. Warren S(locum), General Chemical Co, 25 Broad St, New York, N. Y. *Geology*. Seattle, Wash, July 11, 91. B.S, Washington, 12; A.M, Columbia, 13, Ph.D, 15. *Geologist, Gen. Chem. Co, 15-* Min. Eng; N. Y. Acad. Economic sources of various minerals.

Smith, Prof. Wilbur C(leveland), Tulane University, New Orleans, La. *Anatomy*. Independence, Kans, Aug. 9, 84. M.D, Kansas City Med. Col, 08. Instr. anat, Univ. and Bellevue Hosp. Med. Col, 11-13; prof, Wake Forest, 13-16; asst. prof, Tulane, 16-18, *prof. gross anat, 18-* Conus arteriosus in teleosts; left vena cava superior in man; pyorrhea alveolaris.

Smith, Prof. W(illiam) B(enjamin), Tulane University, New Orleans, La. **Mathematics*. Stanford, Ky, Oct. 26, 50. A.B, Transylvania, 70, A.M, 71, LL.D, 04; Ph.D, Göttingen, 79; LL.D, Kentucky, 09. Prof. math, Central (Mo), 81-85; physics, Missouri, 85-88, math, 88-93; *Tulane, 93-06, philos, 07-15, emer. prof, 15-* U. S. delegate, First Pan-Am. Sci. Cong. A.A; Soc. astron. de France; Kant-Gesell; Circolo Mat. di Palermo. New Testament criticism; Christian origins; dreams and the nature of reality.

Smith, W(illiam) B(radford), Armour and Co, Kansas City, Mo. *Chemistry*. Somerville, Mass, Oct. 19, 76. George Washington, 05-06; B.S, Bellevue, 10. Asst. chemist, bur. chem, U. S. Dept. Agr, 05-06; in charge, U. S. Meat Inspection Lab, Kansas City, Mo, 10-18; *chemist, Armour and Co, 18-* Chem. Soc. (sec'y, Kansas City sect, 13-16); Agr. Chem. (referee, 12, 13). Biological and food chemistry; meat products; oils and fats.

Smith, Prof. W(illiam) M(ackey), Lafayette College, Easton, Pa. *Mathematics*. Oxford, Pa, May 18, 81. Ph.B, Lafayette, 03; fellow, Columbia, 10-11, Ph.D, 11. Instr. math, Lafayette, 05-09, 11-12; asst. prof, Oregon, 12-13, *prof, 13-15; assoc. prof. math. and registrar, Lafayette, 15-* Instr. astron, Columbia, summers, 11, 12. A.A; Math. Soc. Geometrical aspects of differential equations.

Smith, Dr. W(illiam) S(idney) Tangier, 640 Tenneyson Ave, Palo Alto, Calif. *Geology*. Stockton, Calif, April 2, 69. B.L, California, 90, fellow, 95-97, Ph.D, 96; Hopkins, 90-91. Prof. math. and nat. science, Occidental, 94-95; math, State Nor. Sch, Chico, Calif, 97-98; asst. miner, California, 99-00; asst. geologist, U. S.

- Geol. Surv, 00-07; assoc. prof. geol. and miner, Nevada, 06, prof, 07-13; *consulting geologist*, 12- Asst. chem, California, 98; field asst, U. S. Geol. Surv, 96, 97, 98. A.A.; Geol. Soc. (councilor, 13); Min. and Metal. Eng. Metamorphism and physiography; petroleum geology; stereographic projection; ore deposition.
- Smith, Dr. Winford H(enry)**, Johns Hopkins Hospital, Baltimore, Md. *Medicine*. Westbrook, Maine, July 11, 77. A.B, Bowdoin, 99, Sc.D, 18; M.D, Hopkins, 03. Res. gynecologist, Lakeside Hosp, Cleveland, 03-05; hosp. physician, N. Y. Dept. of Health, 05-06; med. supt, Hartford Hosp, 06-09; gen. med. supt, Bellevue and allied hospitals, N. Y. City, 09-11; *med. supt, Hopkins Hosp*, 11- Consultant hosp. administration, California; China Med. Board; Chicago; Vanderbilt; Rochester; Yale; assoc. ed, 'Modern Hosp. Jour.' Am. Med. Ass. (chairman, hosp. sect, 14); Am. Hosp. Ass. (pres, 16); Md. Med. and Chirurg. Faculty. Hospital construction and administration.
- Smither, Frederick W**, Bureau of Standards, Washington, D. C. *Chemistry*. Hampton, Va, Aug. 11, 76. B.S, Va. Polytech, 95; Virginia, 95-97. Chemist with Dr. H. Froehling, 97-98; druggist, 99; *chemist*, Lucius P. Brown Co, 99-07; U. S. Dept. Agr, 07-14; *Bur. Standards*, 14- Chem. Soc; Soc. Test. Mat; N. Y. Chemists Club. Chemical reagents; metals of the platinum group.
- Smock, J(ohn) C(onover)**, Hudson, N. Y. *Geology*. Near Holmdel, N. J, Sept. 21, 42. A.B, Rutgers, 62; Berlin, 69-70. Asst. geologist, N. J. Geol. Surv, 64-85; asst. in charge, N. Y. State Museum, 85-90; state geologist, N. J, 90-00. Tutor chem, Rutgers, 65-67; mem. board of managers, N. J. Geol. Surv. A.A.; Geol. Soc; Min. Eng; Forestry Ass; Philos. Soc; London Soc. Arts.
- Smulyan, Dr. M(arcus) T(homas)**, Gipsy Moth Laboratory, Melrose Highlands, Mass. *Entomology*. Lithuania, May 1, 84. B.S, Mass. Col, 09, Ph.D, 14. Asst. entomologist, Va. State Crop Pest Commission, 14-17; *specialist, Gipsy Moth Lab*, 17- A.A; Entom. Soc; Ass. Econ. Entom. Teuthredella; a dipterous pest attacking Compositae; aphids infesting the apple.
- Smyth, Prof. C(harles) H(enry), Jr**, Princeton University, Princeton, N. J. *Geology, Mineralogy*. Oswego, N. Y, March 31, 66. Ph.B, Columbia, 88, Ph.D, 90; Heidelberg, 90-91. *Prof. geol. and miner*, Hamilton, 91-05; *geol, Princeton*, 05- A.A. (sec'y, E, 97); Geol. Soc; Philos. Soc; N. Y. Acad; Wash. Acad. Pre-Cambrian and chemical geology and petrology.
- Smyth, Prof. Ellison A(dger), Jr**, Blacksburg, Va. *Biology*. Summerton, S. C, Oct. 26, 63. A.B, Princeton, 84, A.M, 87; law sch, Columbia, 84-85; Virginia, 87; LL.D, Alabama, 06. Adj. prof. *biol*, South Carolina, 89-91; *prof, Va. Polytech. Inst*, 91- Dean of faculty, Va. Polytech. Inst, 03-06. A.A; Entom. Soc; assoc. Ornith. Union; N. Y. Entom. Soc. Life histories of Lepidoptera; spermatogenesis in insects.
- Smyth, Dr. F(rederic) Hastings**, Geophysical Laboratory, Washington, D. C. *Physical chemistry*. Clinton, N. Y, Sept. 28, 88. A.B, Hamilton, 09, A.M, 10; Berlin, 09-10; M.S, Mass. Inst. Tech, 14, Ph.D, 15. Instr. chem, Mass. Inst. Tech, 15-17; capt, C.W.S, 18; *physical chemist, geophysical lab, Carnegie Institution*, 19- Chem. Soc; Wash. Philos. Soc. Electrolysis of metallic ammonia solutions; dissociation of copper oxide.
- Smyth, Prof. Henry Lloyd**, Harvard University, Cambridge, Mass. **Geology*. Near St. Mary's, Ont, Jan. 11, 62. A.B, Harvard, 83, C.E, 85. Instr. *mining and metal, Harvard*, 93-95, asst. prof, 95-00, *prof*, 00- Geol. Soc; Min. Eng; Min. and Metal. Soc; Am. Acad. Economic geology.
- Smyth, Dr. Lumina C(otton) R(iddle)**, Munden, Kans. *Biology*. Woodstock, Ohio, March 18, 71. B.S, Ohio State, 97, M.S, 98, Ph.D, 05. Asst. bot, Ohio State, 97-98; teacher, science and math, Akeley Inst, Grand Haven, Mich, 99-00; nat. hist, Washburn, 01, 03-04; Atchison Co. High Sch, Kans, 01-02; asst. curator, Kans. State Museum, 06-13, curator, 13-15; teacher math. and nor. training, high sch, Altoona, Kans, 17-18, *supt*, 18-19; *schools, Munden, Kans*, 19- Ohio Acad. (v. pres, 03); Kans. Acad; Britton-Brown Bot. Club (sec'y, 02-). Embryology of *Alyssum macrocarpum*; algae and Protozoa of Sandusky Bay and of Kansas; unusual color marking in prairie mole; life history and parasites of Poxoptera graminea; trees of Kansas.
- Sneed, Prof. M. Cannon**, University of Minnesota, Minneapolis, Minn. *Chemistry*. Nashville, Tenn, Jan. 2, 86. A.B, Cincinnati, 11, A.M, 13, Ph.D, 16. Asst. prof. *chem*, Cincinnati, 16-17; *assoc. prof, Minnesota*, 18- Chem. Soc. Inorganic chemistry; qualitative analysis; Beckman's rearrangement of hydroxamic acids.
- Snell, Prof. J(ohn) F(erguson)**, Macdonald College, Quebec, Can. *Chemistry*. Brampton, Ont, Oct. 14, 70. B.A, Toronto, 94; Ph.D, Cornell, 98. Asst. chem, Cornell, 94-95, 96-98; Wesleyan, 98-99; nutrition investigations, U. S. Dept. Agr. (Middletown, Conn), 98-01; *instr. chem*, Cincinnati, 01-04, asst. prof, 04-07; *Macdonald*, 07-09, *prof*, 09- Asst. chemist, Storrs Exp. Sta, 00-01. A.A; Chem. Soc. (sec'y, Cincinnati sect, 02, pres, 04); Soc. Chem. Indust; fel. Can. Inst. Chem; Can. Soc. Tech. Agr. Phase rule study of system water, acetone and potassium chlorid; method for determining heats of combustion; heats of combustion of oils; variations of temperature in the human body; methods in analytical chemistry; cadmium iodid; household ammonia; maple sap products; malic acid.
- Snell, Dr. Walter Henry**, Brown University, Providence, R. I. *Plant pathology*. West Bridgewater, Mass, May 19, 89. A.B, Brown, 13, A.M, 15; Ph.D, Wisconsin, 20. Forest pathologist, *bur. plant indust, U. S. Dept. Agr*, 18-20, *collaborator*, 20-; asst. prof. *bot*, Brown, 20- Phytopath. Soc. Forest pathology.
- Snelling, Prof. Cha(rlie)s M(ercer)**, Athens, Ga. *Mathematics*. Richmond, Va, Nov. 3, 62. Va. Mil. Inst; hon. A.M, Georgia, 92; Göttingen and Berlin, 93-94; hon. Sc.D, Pittsburgh, 10. Asst. prof. *math*, Va. Mil. Inst, 84-85; prof, Southern Georgia, 86-88; adj. prof, *Georgia*, 88-97, *prof*, 97-, *pres, Franklin Col*, and *dean, univ*, 03-

- Snelling, Dr. Walter O(theman)**, Allentown, Pa. *Chemistry*. Washington, D. C., Dec. 13, 80. B.S. George Washington, 04, Ph.D., 07; B.S. Harvard, 05; M.S., Yale, 06. Chemist, U. S. Geol. Surv., 07; chemist in charge, explosives chem. lab., U. S. Bur. Mines, 08-12, research, 12-16; *director of research, Trojan Powder Co*, 17- Asst. chem., George Washington, 06, 07, instr., 07. A.A.; Chem. Soc.; Min. Eng.; Electrochem. Soc.; Franklin Inst.; Soc. Chem. Indust.; Chem. Gesell. Military and mining explosives; prevention of accidents.
- Snider, Dr. L(uther) C(rock)**, Empire Gas and Fuel Co, Bartlesville, Okla. *Geology*. Mt. Summit, Ind., Sept. 13, 82. A.B., Indiana, 08, A.M., 09; Ph.D., Chicago, 15. Asst. director, Okla. Geol. Surv., 09-15; geologist, Pierce Oil Corp., 15-16; Cosden Oil and Gas Co, 16-17; asst. chief geologist, *Empire Gas and Fuel Co*, 17-19, *chief geologist*, 19- A.A.; Ass. Petrol. Geol.; Min. and Metal. Eng.
- Snoddy, Prof. George S(amuel)**, 352 University St., Salt Lake City, Utah. *Psychology*. Emporia, Kans., April 21, 82. A.B., B.S., Kansas, 12, A.M., 13; Ph.D., Clark, 15. Assoc. prof. *psychol*, Utah, 15-17, *prof. and head of dept*, 17- A.A.; Psychol. Ass.; Utah Acad. Physiological psychology; voluntary control; human learning; dementia precox; neurasthenia.
- Snodgrass, Prof. J(ohn) M(cBeath)**, University of Illinois, Urbana, Ill. *Mechanical engineering*. Coldspring, Wis., Sept. 1, 74. B.S., Illinois, 02. With various railroads, 02-06; engineer, Am. Locomotive Co., 06-08; instr., asst. prof. and later *prof. and head, dept. railway eng*, Illinois, 08- Mech. Eng. Railway engineering; steam locomotive testing; stresses in cast iron car wheels.
- Snodgrass, R(obert) E(vans)**, 1465 Chapin St., Washington, D. C. *Entomology*. St. Louis, Mo., July 5, 75. A.B., Stanford, 01. Asst. prof. entom., Wash. State, 01-03; instr., Stanford, 03-05; expert, *bur. entom*, U. S. *Dept. Agr*, 06-10, *preparator entom. charts*, 17- Insect anatomy; illustrations of insect life histories.
- Snook, Prof. H(omer) Clyde**, 463 West St., New York, N. Y. *Physics*. Antwerp, Ohio, March 25, 78. A.B., Ohio Wesleyan, 00, M.S., 10; A.M., Allegheny, 02; Pennsylvania, 03-08. Asst. astron., Ohio Wesleyan, 98-00, physics, 99-00; prof. physics and chem., Ohio Soldiers' and Sailors' Orphan Home, Xenia, 00-01; asst. chem., Allegheny, 01-02; pres., Snook Roentgen Mfg. Co., 03-16; v. pres., Victor Elec. Corp., 16-18; *elec. engineer in charge physical lab, eng. dept, Western Elec. Co*, 18- Longstreth medal, Franklin Inst., 19. A.A.; Physical Soc.; Radio Eng.; Electrochem. Soc.; Elec. Eng.; Roentgen Ray Soc.; Phila. Eng. Club. Röntgen and Hertzian radiation; stereoscopic effects in Röntgen radiation; electrophysics.
- Snook, T(homas) E(dward)**, 261 Broadway, New York, N. Y. *Mathematics, Architecture*. Brooklyn, N. Y., Oct. 23, 63. E.M., Columbia, 84. Engineer for John B. Snook, architect, 84-87; *architect*, 87- Math. Soc.; Civil Eng. Architectural engineering; number and size of elevators for buildings of various heights and areas.
- Snow, Prof. Benjamin W(arner)**, 612 Howard Place, Madison, Wis. **Physics*. Henry, Ill., Aug. 15, 60. B.S., Cornell, 85, fellow, 85-86; Göttingen, 87-88; Strasbourg, 88; Ph.D., Berlin, 92. Instr. *physics*, Ohio State, 86-87; Cornell, 88-90; *prof*, Indiana, 92-93; *Wisconsin*, 93- A.A. (sec'y, B., 94); Physical Soc. Radiation; infra-red metallic spectra.
- Snow, Prof. Charles H(enry)**, University Grounds, Morris Heights, New York, N. Y. *Civil engineering*. New York, March 24, 63. C.E., N. Y. Univ., 86; hon. Sc.D., Pittsburgh, 98. *Prof. civil eng*, N. Y. Univ., 91-, *dean, col. eng*. Practising civil engineer, 86-; civilian director, nat. army training detachment, and sect. B., S.A.T.C., N. Y. Univ., 18; appraisal expert, service at large, Bur. Aircraft Production, 19. Civil Eng.; Min. Eng. (director, 05-10). Materials of construction; economic woods.
- Snow, Dr. Chester**, Bureau of Standards, Washington, D. C. *Physics*. Salt Lake City, Utah, June 1, 81. A.B., Harvard, 06; fellow, Wisconsin, 12-14, Ph.D., 14. Prof. physics, Brigham Young, 06-11; assoc. prof. math., Idaho, 14-16, prof., 16-20; *physicist*, Bur. Standards, 20- Physical Soc. Mathematics; magneto-optics.
- Snow, Prof. Julia (Warner)**, Northampton, Mass. *Botany*. La Salle, Ill., Aug. 30, 63. B.S., Cornell, 88, fellow, 88-89, M.S., 89; fellow, Ass. Col. Alumnae, 91-92; Ph.D., Zürich, 93; Basel, 96-97. Teacher science, Am. Col. for Girls, Constantinople, 94-96; asst. bot., Michigan, 97-98, instr., 98-00; teacher biol., Rockford, 00-01; asst. *bot*, Smith, 01-02, instr., 02-06, *assoc. prof*, 06- A.A.; Bot. Soc. Fresh-water algae.
- Snow, Prof. Laetitia M(orris)**, Wellesley College, Wellesley, Mass. *Botany*. Baltimore, Md., March 31, 74. A.B., Goucher, 95; Baltimore Ass. Adv. Educ. Women fellow, Chicago, Ph.D., 04. Instr. science, Girls' Latin Sch., Baltimore, 97-99, 00-01; head, dept. biol., State Nor. Sch., Farmville, Va., 04-08; instr. *bot*, Wellesley, 08-11, *assoc. prof*, 11- A.A.; Bot. Soc.; Ecol. Soc.; Pub. Health Ass. Plant ecology; root-hair development; coastal vegetation; bacterial diseases of plants.
- Snow, Prof. Perry Gardner**, 1031 S. 14th East St., Salt Lake City, Utah. *Anatomy*. Manti, Utah, Dec. 24, 78. A.B., Utah, 09; M.D., Rush Med. Col., 14. Instr. *anat*, Utah, 08-10, *prof*, 11-, acting dean, *sch. of med*, 13-14, *dean*, 14- Ass. Anat. Microscopic anatomy; the orbital glands of Anura.
- Snow, Dr. William F(reeman)**, 105 W. 40th St., New York, N. Y. *Public health*. Quincy, Ill., July 13, 74. A.B., Stanford, 96, A.M., 97, M.D., 00. Instr. *physiol. and biol*, Stanford, 01-02, asst. prof. hygiene, 02-03, assoc. prof., 03-09, prof. hygiene and pub. health, 09-20; sec'y and exec. officer, Calif. State Board of Health, 09-14; *gen. director, Am. Social Hygiene Ass*, 14-; *lecturer, sch. hygiene and pub. health*, Hopkins, 20- Pres. Conf. State and Provincial Boards of Health, 13; major, lieut. col. and col., M.R.C., on active duty, 17-19. A.A.; Am. Med. Ass.; Pub. Health Ass.; Soc. Trop. Med.; Statist. Ass.; Mil. Surg. Epidemiology; communicable diseases.
- Snowdon, Dr. Ralph C(uthbert)**, The Hooker Electrochemical Co, Niagara Falls, N. Y.

Chemistry. Pittston, Pa, Feb. 3, 82. A.B., Cornell, 04, A.M., 06, Ph.D., 09. Asst. chem., Cornell, 04-05, instr., 05-09; chemist, The Nitrogen Co., Ossining, N. Y., 09-11; *expert*, *Hooker Electrochem. Co.*, 11- Chem. Soc.; Electrochem. Soc. Electrochemistry; inorganic chemistry; the electrolytic reduction of nitrobenzene.

Snyder, Prof. C(harles) D(avid), Johns Hopkins Medical School, Baltimore, Md. *Physiology*. Pickaway Co., Ohio, April 30, 77. A.B., Stanford, 96; M.S., California, 04, Ph.D., 05; Columbia table, Naples Zool. Sta., 06; fellow, Hopkins, 07-08. Instr. nat. sciences, high schools, Calif., 96-05; instr. *physiol. med. sch.*, Hopkins, 08-09, assoc., 09-11, *assoc. prof.*, 11- Acting prof. *physiol.*, Nevada, 95. A.A.; Physiol. Soc.; Am. Med. Ass.; Ass. Prof. Experimental morphology; temperature coefficients of biologic processes; electrophysiology; blood pressure; tonus in organs of mixed musculature; heat production and metabolism in smooth and cardiac muscles; nature of mechanism at point of transfer of nervous impulse into motor response.

Snyder, Prof. Harry, 1800 Summit Ave., Minneapolis, Minn. **Chemistry*. Cherry Valley, N. Y., Jan. 26, 67. B.S., Cornell, 89. Asst. chem., Cornell, 88-91, and Cornell Exp. Sta., 89-91; chemist, Minn. Exp. Sta., 91-09; prof. agr. chem., Minnesota, 92-09, soils, 07-09. Investigations on nutrition, U. S. Dept. Agr., 95-07; chemist, Russell-Miller Co., Minneapolis. A.A.; Chem. Soc.; Agr. Chem. (pres., 08); Soc. Prom. Agr. Sci. Human food and soil investigations; flour, wheat and cereals.

Snyder, Prof. J(ohn) O(tterbein), Stanford University, Calif. *Zoology*. Butler, Ind., Aug. 14, 67. Indiana, 90-91; A.B., Stanford, 97, A.M., 99. Supt. schools, Pullman, Wash., 93-94; asst. zool., Stanford, 97-99, instr., 99-03, asst. prof., 03-11; *assoc. prof.*, 11- Asst. U. S. Fish Commission, 97, 99, 02, 04, 06, 09; naturalist, 'Albatross' exped. to Hawaii, Alaska and Japan, 02, 06; instr. Hopkins marine lab, 07, 08; expert ichthyologist, U. S. Nat. Museum, 14; fisheries expert, Calif. Fish and Game Commission, 19-Calif. Acad. (cor. sec'y, 20-). Geographical distribution and classification of fishes of Mexico, Japan and Hawaii; origin and relationships of fish faunas of rivers and lakes of western America; life history of salmon.

Snyder, Prof. Monroe B(enjamin), Philadelphia Observatory, Philadelphia, Pa. *Astronomy*. Quakertown, Pa., March 13, 48. Pennsylvania Col., 67-69; A.B., Michigan, 72, A.M., 75. Asst. astron. and math. *Cent. High Sch.*, Phila., 73-80, in charge, observatory, 73-97, *prof. astron. and math.*, 80-, head, dept. math., 97-; director, *Philadelphia Observatory*, 97- Pres., board of examiners, Elec. Exh., Franklin Inst., 84; sec'y, Nat. Elec. Commission, 84; sec'y, Nat. Conf. Electricians, Phila., 84; director, Phila. Observatory solar eclipse exped., 00; author of astron. articles, 'Encyclopaedia Americana.' A.A.; Astron. Soc.; Math. Soc.; Philos. Soc.; fel. Royal Astron. Soc.; Astron. Gesell. Astrophysics; volcanism.

Snyder, Dr. Robert M(iffin), East Lansing, Mich. *Bacteriology*. Pittsburgh, Pa., May 20, 93. B.S., Mich. Agr. Col., 14; Ph.D., Cornell, 18. Asst.

bacter., Mich. Exp. Sta., 19- Soc. Agron.; Soc. Bact.; Chem. Soc. Soil technology; soil colloids; symbiotic nitrogen fixation.

Snyder, Prof. Virgil, 214 University Ave., Ithaca, N. Y. **Mathematics*. Dixon, Iowa, Nov. 9, 69. B.S., Iowa State, 89; Cornell, 90-92, fellow, 92-93; Ph.D., Göttingen, 94. Instr. *math.*, Cornell, 94-03, asst. prof., 03-10, *prof.*, 10- A.A.; Math. Soc.; Am. Acad.; Math. Verein; Circolo Mat. di Palermo. Geometry of the line and sphere; configurations of ruled surfaces; birational transformations.

Sollmann, Prof. Torald (Hermann), Western Reserve Medical College, Cleveland, Ohio. **Pharmacology*. Coburg, Germany, Feb. 10, 74. Private study in pharmacy, chem. and med., U. S. and Paris, 87-94; M.D., Western Reserve, 96. Demonstrator *physiol.*, *Western Reserve*, 95-98, lecturer *pharmacol.*, 98-01, asst. prof. *pharmacol. and mat. med.*, 01-03, *assoc. prof.*, 03-04, *prof.*, 04- Prof. *mat. med.*, Cleveland Sch. Pharmacy, 09-16. A.A.; Physiol. Soc.; Am. Physicians; Soc. Exp. Biol.; Soc. Pharmacol.; Soc. Biol. Chem.; Am. Med. Ass.; Pharmaceut. Ass. Physiology.

Solomon, Dr. H(arry) (Caesar), 483 Beacon St., Boston, Mass. *Psychiatry*. Hastings, Nebr., Oct. 25, 89. B.S., California, 10; M.D., Harvard, 14. Intern, Psychopathic Hosp., Boston, 14-15, asst. physician, 15, chief of staff, 16-17; *instr. psychiat. and neuropath.*, *Harvard Med. Sch.*, 15-; *investigator*, *Mass. Dept. Mental Diseases*, 15-; *neurologist*, *Beth Israel Hosp.*, 16-; *psychiatrist*, *New England Home for Little Wanderers*, 17- Contract surgeon, instr. *psychiat.*, M.C., 17-18, lieut., 18-19. A.A.; Ass. Path. and Bact.; Psychopath. Ass.; Medico-Psychol. Ass.; Am. Med. Ass. Neurosyphilis; spinal fluids.

Somers, Prof. Ransom Evarts, University of Pittsburgh, Pittsburgh, Pa. *Economic geology*. Waltham, Mass., July 28, 85. A.B., Harvard, 08, A.M., 10; Ph.D., Cornell, 15. Asst. prof. econ. geol., Cornell, 16-19; *prof. oil and gas geol.*, *Pittsburgh*, 19- Geol. Soc.; Min. and Metal. Eng.; Ass. Petrol. Geol. Oil and gas geology.

Somerville, Dr. A(ibert) A(lexander), 90 Morningside Drive, New York, N. Y. *Physics*. Milroy, Ind., Jan. 28, 83. Ph.D., Cornell, 10. Physicist, U. S. Rubber Co.; *v. pres. and manager*, rubber dept., *Vanderbilt Co.* A.A.; Physical Soc.

Sondern, Dr. Frederic Ewald, 20 W. 55th St., New York, N. Y. *Pathology*. Stuttgart, Germany, March 30, 67. M.D., Columbia, 89. *Prof. clin. path.*, N. Y. *Post-Grad. Med. Sch.*, 05- Director, laboratories, Lying-in-Hosp., New York. A.A.; Ass. Path. and Bact.; N. Y. Path. Soc.; N. Y. Acad. Med. Clinical pathology.

Soper, Dr. E(dgar) K(irke), Sinclair Consolidated Oil Corporation, 55 Liberty St., New York, N. Y. *Geology*. Calif., 86. A.B., Stanford, 08; A.M., Minnesota, 15, Ph.D., 17. Instr. econ. geol., Cornell, 08-10; Minnesota, 10-16; asst. prof. mining eng., Idaho, 16-17, *assoc. prof.*, 17; dean, Oregon Sch. Mines, 17-19; *geologist*, *Sinclair Consol. Oil Corp.*, 19- Field geologist, U. S. Geol. Surv., 11, geologist, 18; Minn. Geol. Surv., 12-16; Am. Smelting and Ref. Co., 13. Geol.

- Soc; Inst. Min. and Metal. Eng; Seismol. Soc; Soc. Econ. Geol. Economic geology; clay and shale deposits of Minnesota; peat deposits; mining districts of Idaho; petroleum geology.
- Soper, Dr. George A(ibert)**, 130 W. 57th St, New York, N. Y. *Sanitary engineering*. New York, Feb. 3, 70. B.S, Rensselaer, 95; A.M, Columbia, 98, Ph.D, 99. Transitman, west. div, Boston Water Works, 95; engineer, Cumberland Mfg. Co, 95-97; engineer in charge sanit. cleaning of Galveston, Tex, 99; sanit. engineer, Dept. Health, N. Y. City, 02; expert, Dept. Health, N. Y. State, 03; Williams Col, Cornell Univ, Watertown and Lawrence, N. Y, 04; *consulting sanit. engineer*. Mem. various commissions, 01-; pres, Metropolitan Sewerage Commission, N. Y. City, 08-; major, S.C, 18-19. A.A; Chem. Soc; Soc. Bact; Pub. Health. Ass; Civil Eng; Water Works Ass; Boston Soc. Civil Eng. Water and sewage purification; ventilation; epidemiology.
- Sosman, Dr. Robert B(rowning)**, Geophysical Laboratory, Washington, D. C. **Chemistry*. Chillicothe, Ohio, March 17, 81. B.S, Ohio State, 03; Mass. Inst. Tech, 04, Ph.D, 07. Lab. of A. D. Little, Boston, 06-08; asst. physicist, *geophys. lab, Carnegie Institution*, 08-11, *physicist*, 11-, acting director, 18-20. Investigator optical glass, W.I.B, 17-18; consulting chemist, nitrate div, *Ord. Dept*, 18. A.A; Chem. Soc. (pres, Wash. sect, 16); Ceramic Soc; Wash. Philos. Soc. (pres, 20); Wash. Geol. Soc; Wash. Acad. (cor. sec'y, 17-, ed, 19-); British Soc. Glass Tech. Electro-motive force of solutions; conductivity and ionization of aqueous solutions, 0°-300°; gas thermometer scale, 400°-1600°; specific volume of minerals at fusion temperatures; oxids; iron ores.
- Souchon, Dr. Edmond**, 2403 St. Charles Ave, New Orleans, La. *Anatomy, Surgery*. Opelousas, La, Dec. 1, 41. Intern, hospitals, Paris, 65; M.D, Louisiana, 67. Prof. *anat, Tulane*, and Tulane prof. *clin. surg, Charity Hosp, New Orleans*, 84-07, *emer. prof*, 07- Pres, La. State Board of Health, 98-; mem. board of administrators, Charity Hosp, 79. Ass. Anat; Surg. Ass. (v. pres, 98); Am. Med. Ass. (v. pres, 96). Sanitary science; the influence of mosquitoes on the transmission of yellow fever; subelavian aneurisms.
- Souder, Dr. Wilmer (Henry)**, Bureau of Standards, Washington, D. C. *Physics*. Salem, Ind, Feb. 21, 84. A.B, Indiana, 10, A.M, 11; Ph.D, Chicago, 16. Asst, Chicago, 14-17; asst. physicist, *Bur. Standards*, 17-18, *assoc physicist*, 18-20, *physicist*, 20- A.A; Physical Soc; Wash. Philos. Soc. Sound; photoelectric discharges; war instruments and materials; dental materials.
- Soule, Pres. Andrew M(cNaim)**, State College of Agriculture, Athens, Ga. *Agriculture*. Niagara Falls South, Can, July 8, 72. Grad, Ont. Agr. Col, 92; B.S, Toronto, 93; hon. Sc.D, Georgia, 10, LL.D, 16. Asst. to director, Mo. Exp. Sta, 94; asst. prof. agr, Tex. Col, 94-99; director, Tenn. Exp. Sta. and chairman, agr. faculty, Tennessee, 99-04; dean and director, col. of agr, and Exp. Sta, Va. Polytech, 04-07; *pres, Ga. Col*, 07- Food administrator for Ga, 17-
19. A.A; Soc. Prom. Agr. Sci; Ass. Agr. Col. (pres, sect. on extension teaching); Ass. Farmers' Inst. Workers (past pres); fel. Royal Soc. Arts. Cereal production in the south; influence of succulent foods on beef production; economic milk production; cotton seed and its by-products; education and the economic development of the south.
- Southall, Prof. James P(owell) C(ocke)**, Columbia University, New York, N. Y. **Physics*. Norfolk, Va, April 4, 71. Richmond, 86-88; A.M, Virginia, 93; Hopkins, fellow by courtesy, 98-99. Instr. physics, Virginia, 91-93; prof. physics and math, Miller Manual Training Sch, Albemarle, Va, 93-98; Prendergast prof. *physics*, Hobart, 99-01; prof, Ala. Polytech, 01-14; asst. prof, *Columbia*, 14-17, *assoc. prof*, 17-, *director courses in optics and optometry*, 14- Mem. faculty, California, 17; mem. Optical Munitions Board. A.A; Physical Soc; Optical Soc. (*assoc. ed*, 'Jour,' pres, 20); hon. mem. W. Va. Philos. Soc. Geometrical, physical and physiological optics; mirrors; prisms; lenses.
- Spaeth, Dr. Reynold A(lbrecht)**, 212 Longwood Road, Baltimore, Md. *Physiology*. Philadelphia, Pa, Nov. 22, 86. B.S, Haverford, 09; fellow, Harvard, 09-13, A.M, 10, Ph.D, 13, Sheldon fellow, Kiel and Naples, 13-14. Instr. biol, Clark, 14-15; Yale, 15-17, *embryol*, 18; *assoc. physiol, Sch. Hygiene and Pub. Health, Hopkins*, 18- Instr. *embryol*, Woods Hole, 15, 16; physiology, 20-; asst, hygienic lab, U. S. Pub. Health Service, 18. A.A; Physiol. Soc; Soc. Exp. Biol; Soc. Zool. Physiology of melanophores; pituitary standardization; fatigue.
- Spalding, Prof. Alfred B(aker)**, Lane Hospital, San Francisco, Calif. *Gynecology*. Atchison, Kans, July 19, 74. A.B, Stanford, 96; M.D, Columbia, 00. Prof. *obstet, California*, 09-12; *obstet. and gynec, Stanford*, 12- Gynec. Soc; Am. Med. Ass; Am. Acad. Med. Obstetrics; gynecological pathology and histology; anatomy of the female pelvic organs.
- Spalding, Prof. F(rederick) P(utnam)**, 901 Virginia Ave, Columbia, Mo. *Civil engineering*. Wyxos, Pa, April 7, 57. C.E, Lehigh, 80. Instrument man, S.P. R. 80-82; asst. engineer, Miss. River Improv, 82-85; instr. civil eng, Lehigh, 86-88; surveyor, Miss. River Commission, 88-90; engineer in charge street extensions, Washington, D. C, 90-91; asst. prof. civil eng, Cornell, 91-98; contractor for munic. works, 98-00; prof. *civil eng, Missouri*, 00- A.A; Civil Eng; Eng. Educ. (mem. exec. council, 03-06, 13-16, *treas*, 04-06); Soc. Test Mat. Properties and methods of testing cements, expansions of cement and concrete; theory of reinforced concrete.
- Sparrow, Prof. Carroll M(ason)**, University, Va. *Physics*. Baltimore, Md, Jan. 10, 80. A.B, Hopkins, 08, fellow, 09-10, Ph.D, 11. Aid, U. S. Coast and Geod. Surv, 02-04, asst, 04-07; instr. *physics*, Hopkins, 10-11; adj. prof, *Virginia*, 11-17, *assoc. prof*, 17-20, *prof*, 20- Capt, Air Service, 18-19; *assoc. ed*, 'Physical Rev.' A.A; Physical Soc; Math. Soc; Circolo Mat. di Palermo. Theory of spectroscopy.
- Spaulding, Dr. E(dward) G(leason)**, Princeton University, Princeton, N. J. *Philosophy, Psychol-*

- ogy. Burlington, Vt, Aug. 6, 73. B.S, Vermont, 94, LL.D, 20; A.M, Columbia, 98; Ph.D, Bonn, 00. Instr. math. and science, Cutler Sch, New York, 94-98; philos. and psychol, Col. City of N. Y, 00-05; asst. prof. philos, Princeton, 05-14, prof, 14- Lecturer, Woods Hole; Brooklyn Inst. Philos. Ass. (sec'y-treas, 09-16). Logic; systematic philosophy; philosophy and the history of science; the new realism; the new rationalism.
- Spaulding, Dr. Perley, U. S.** Department of Agriculture, Washington, D. C. *Forest pathology*. South Royalton, Vt, Sept. 19, 78. B.S, Vermont, 00; M.S, Washington (St. Louis), 03, Ph.D, 06. Asst. hort, Maine, 01; biol, Vermont, 01; scientific aid, bur. soils, U. S. Dept. Agr, 01, special agent, bur. plant indust, Miss. Valley Lab, 02-03, scientific asst, 03-07, pathologist, lab. forest path, 08-13, path. inspector, fed. hort. board, 13-14, pathologist, lab. forest path, 14- A.A; Bot. Soc; Phytopath. Soc. Bitter-rot of apples; damping off in tree seedlings; structure of wood cell wall; diseases of deciduous trees; white pine blister rust.
- Spear, Dr. E(lliwood) B(arker),** Goodyear Tire and Rubber Co, Akron, Ohio. *Chemistry*. Aurora, Ont, Feb. 22, 75. B.A, Manitoba, 99; Ph.D, Heidelberg, 07; Toronto, 99-02; Leipzig. Research asst, Mass. Inst. Tech, 06-07, instr. anal. chem, 07-08, inorg. chem, 08-10, asst. prof, 10-13, assoc. prof, 13-20; head, research lab, Goodyear Tire and Rubber Co, 20- Chem. Soc. Physical, inorganic and electrical chemistry; catalysis; qualitative analysis; electroanalysis of zinc; electrolytic deposition of copper; chemistry of colloids; precipitation of colloidal platinum; gas warfare; colloid chemistry of rubber.
- Speck, Prof. F(rank) G(ouldsmith),** University of Pennsylvania, Philadelphia, Pa. **Anthropology*. New York, N. Y, Nov. 8, 81. A.B, Columbia, 04, A.M, 05; fellow, Pennsylvania, 07-08, Ph.D, 08. Instr. and later asst. prof. anthrop, Pennsylvania, 08- Expeditions, Bur. Am. Ethnol, Am. Museum Nat. Hist. and Univ. Pennsylvania to Ind. Ter, Okla. and Que, 04-09. A.A; Anthropol. Ass; Folk-lore Soc; Ethnol. Soc. American Indian ethnology and linguistics.
- Speed, Dr. Kellogg,** 122 S. Michigan Ave, Chicago, Ill. *Surgery*. Cleveland, Ohio, Jan. 17, 79. B.S, Chicago, 01, M.D, Rush Med. Col, 04. Assoc. prof. surg, Northwestern, 04-19; asst. prof, Rush Med. Col, 20- Attending surgeon, various hospitals; lieut. col, M.C, A.E.F, 17-19. Surg. Ass; Col. Surg; Am. Med. Ass. Fractures; dislocations.
- Speidel, Dr. C(arl) C(askey),** University, Va. *Biology*. Washington, D. C, Oct. 26, 93. Ph.B, Lafayette, 14; Maule fellow, Princeton, 16-17, Ph.D, 18. Instr. zool, Akron, 17-18; acting prof. biol, St. Lawrence, 19-20; adj. prof. anat, Virginia, 20- Gland cells of internal secretion in the spinal cord of the skates.
- Speller, Frank N(ewman),** National Tube Co, Pittsburgh, Pa. *Metallurgy*. Toronto, Ont, Jan. 1, 75. B.A.Sc, Toronto, 94. Chief metal. engineer, Nat. Tube Co, 04- Lecturer applied chem, Toronto, 98. Min. Eng; Electrochem. Soc; Soc. Test. Mat; Am. Iron and Steel Inst; Gas Inst.
- Metallurgy of steel; prevention of corrosion of tubes and pipes.
- Spence, Prof. Bartholomew J(ohn),** Northwestern University, Evanston, Ill. *Physics*. Chicago, Ill, June 4, 83. B.S, Northwestern, 05; fellow, Princeton, 07-09, Ph.D, 09. Asst. physics, Wisconsin, 05-06; instr, Illinois, 06-07; Princeton, 09-10; asst. prof, North Dakota, 10-18, prof. and head of dept, 19-20; assoc. prof, Northwestern, 20- A.A; Physical Soc. Refractive indices of gold, platinum and silver; infra-red reflecting power of ice and of anilin dyes; thermal properties of clay; absorption spectra of alkalis; optical pyrometry.
- Spence, G(eorge) K(nox),** Johnsonburg, Pa. *Chemistry*. New York, N. Y, Dec. 10, 72. B.S, Pa. State, 95, M.S, 10. Asst. chemist, Ohio Steel Co, 95-98; chemist, N. Y. and Pa. Co, Paper Makers, 98-02, supt. pulp dept, 02-08; elec. bleach plant, 08-10; chief eng. chemist, 10- A.A; Chem. Soc. Preparation of wood pulp; utilization of by-products.
- Spencer, Dr. Arthur C(oe),** U. S. Geological Survey, Washington, D. C. **Geology*. Carmel, N. Y, Sept. 27, 71. B.S, Case, 92; Ph.D, Hopkins, 96. Asst. geologist, U. S. Geol. Surv, 96-02, geologist, 02- A.A; Geol. Soc; Min. Eng; Wash. Geol. Soc. (sec'y, 06). General geology and ore deposits in Virginia, Colorado, Wyoming, Alaska and Cuba; the zinc and iron deposits in the pre-Cambrian rocks of New Jersey; Triassic iron ores of Pennsylvania; pre-Cambrian of Texas, including iron ores; copper ores of Ely, Nevada.
- Spencer, Dr. Frank Clarence,** Monte Vista, Colo. *Education, Anthropology*. Polk, Ohio, Nov. 24, 66. B.S, Colorado, 94; Ph.D, Columbia, 99; hon. fellow, Clark, 99-00. Instr. math. and English, State Prep. Sch, Colorado, 93-94; supt. pub. schools, Monte Vista, Colo, 94-97; county supt. schools, 04-20; prof. math, Buena Vista, Colo, 20- Forest supervisor, U. S. Forest Service, 06- Primitive education; origin of primitive ideas.
- Spencer, Dr. G(uilford) L(awson),** Riverbank Court, Cambridge, Mass. *Chemistry*. La Fayette, Ind, Dec. 21, 58. B.S, A.C, Purdue, 79, Sc.D, 91; M.S, Michigan, 82; studied sugar mfg. in Europe, 82-83. Asst. chemist, U. S. Dept. Agr, 83-01, chief, sugar lab, bur. chem, 01-06; chemist, Cuban-Am. Sugar Co, 06- Reported on U. S. beet sugar indust. for twelfth census. Chem. Soc.
- Spencer, Dr. J(oseph) W(illiam) W(inthrop),** 6 Earl St, Toronto, Can. **Geology*. Dundas, Ont, March 26, 51. B.A.S, McGill, 74, A.M, 80; Ph.D, Göttingen, 77; A.M, King's Col, N. S, 75; LL.D, Alberta, 13; Manitoba, 19. With Can. Geol. Surv, 74; science master, Col. Inst, Hamilton, Ont, 77-80; prof. chem. and geol. and v. pres, King's Col, N. S, 80-82; prof. geol, Missouri, 82-87; state geologist, Ga, 88-93; Geol. Surv. of W. I. and Cent. Am, 94- Special commissioner for Niagara research, Can. Geol. Surv, 05-08. A.A; Geol. Soc; Can. Inst; fel. London Geol. Soc. Physical geology; paleontology; Niagara fossils, especially graptolites; origin and history of the Great Lakes; geological development of the West Indies and Central America; geog-

- raphy of submarine valleys; great changes of level of land and sea; evolution of the falls of Niagara and their relation to the Great Lakes; age of Ontario shore and modern St. Lawrence River.
- Spencer, Dr. John G(eorge)**, 646 Rose Building, Cleveland, Ohio. *Chemistry, Pharmacology*. Cleveland, Sept. 6, 64. M.D., Western Reserve, 84; Ph.D., Strassbourg, 93. Asst. chem., Adelbert, 84-87, instr. pharmacol. and prof. chem., Western Reserve, 94-96; prof. chem. and pharmacol., Cleveland Col. Physicians and Surg., Ohio Wesleyan, 96-10; legal chem., Western Reserve, 10-17. A.A.; Chem. Soc.; Am. Med. Ass.; Ohio Med. Ass.; Ohio Pharmaceut. Ass.; Cleveland Acad. Med., Chem. Soc. and Pharmaceut. Ass.; fel. London Chem. Soc.; Chem. Gesell. Unsaturated fatty acids; preparation of a carbohydrate from egg albumin; β -bromvalerianic acid, chemically and crystallographically considered; separation of vegetable poisons; delicacy of the tests for phenol; forensic identification of blood; sewage disposal.
- Sperr, Frederick William, Jr.**, Mellon Institute, Pittsburgh, Pa. *Chemistry*. Jefferson, Ohio, Dec. 27, 85. A.B., Ohio State, 06. Chemist, Westinghouse Elec. and Mfg. Co., 06-08; civil and mining engineer, 08-10; chemist, by-products coke plants, various commercial firms, 10-15; *chief chemist, Koppers Co.*, 15-, *senior fellow, Mellon Inst.*, 16- Chem. Soc.; Am. Gas Ass.; Soc. Test. Mat.; Franklin Inst. Coal carbonization; coke, gas and by-products.
- Sperry, Elmer A.**, 1505 Albemarle Road, Brooklyn, N. Y. *Electrical engineering*. Cortland, N. Y., Oct. 12, 60. Cornell, 79-80. Founder, Sperry Elec. Co.; Sperry Elec. Ry. Co; *pres, Sperry Gyroscope Co.*, 10- Mem. Naval Consulting Board, 15- Medal, Franklin Inst, 14; first prize, Aero Club, France, 15; grand prize, Panama-Pacific Expos, 15; Collier trophy, 16; 'Scientific Am.' medal, Am. Museum; decoration from Czar of Russia. A.A.; Elec. Eng. (founder); Mech. Eng.; Electrochem. Soc. (founder); Chem. Soc.; Naval Archit. and Marine Eng.; Automotive Eng.; Physical Soc.; N. Y. Elec. Soc. (past pres). Electric beacon construction; detinning and electrochemical processes; manufacture of fuse wire; electric carriage designing; gyrostatic apparatus.
- Sperry, Dr. Pauline**, 1421 Hawthorne Terrace, Berkeley, Calif. *Mathematics*. Peabody, Mass., March 5, 85. A.B., Smith, 06, A.M., 08; M.S., Chicago, 14, Ph.D., 16. Instr. math, Smith, 08-12; teaching fellow, Chicago, 15-16; asst. prof., Smith, 16-17; *instr, California*, 17- A.A.; Math. Soc.; Math. Ass. Projective differential geometry.
- Spier, Leslie**, American Museum of Natural History, New York, N. Y. *Anthropology*. New York, Dec. 13, 93. B.S., Col. City of N. Y., 15; Ph.D., Columbia, 20. Asst. dept. anthrop., Am. Museum Nat. Hist., 16-20; lecturer, California, 20; *instr. anthrop, Washington (St. Louis)*, 20- Asst. Archeol. and Geol. Surveys, N. J., 13; archeol. expeditions to southwestern U. S. A.A.; Anthropol. Ass.; fel. Ethnol. Soc. Antiquity of man in America; ethnology of southwestern Indians.
- Spiller, Dr. William G(ibson)**, 4409 Pine St., Philadelphia, Pa. *Medicine*. Baltimore, Md., Sept. 13, 63. M.D., Pennsylvania, 92. Asst. clin. prof. nervous diseases and asst. prof. neuropath., *Pennsylvania*, 01-03, prof. neuropath. and assoc. prof. neur., 03-15, *prof. neur.*, 15- Clin. prof., Woman's Med. Col., Pa.; neurologist, Phila. Hosp.; Neur. Ass. (pres, 05); Phila. Col. Physicians; Phila. Neur. Soc. (past pres); for. cor. mem. Soc. neur. de Paris. The symptomatology and pathology of nervous diseases.
- Spillman, Prof. W(illiam) J(asper)**, 506 Northbrook Court, Washington, D. C. *Agriculture*. Lawrence Co., Mo., Oct. 23, 63. B.S., Missouri, 86, M.S., 89, Sc.D., 10. Prof. science State Nor. Sch., Cape Girardeau, Mo., 87-89; Vincennes, Ind., 89-91; Oregon State Nor. Sch., 91-94; prof. agr., Wash. State, 94-01; agrostologist, *U. S. Dept. Agr.*, 02-05, agriculturist in charge farm management investigations, 05-18, *assoc. ed., 'The Farm Jour.'*, 18- A.A.; Soc. Prom. Agr. Sci.; Soc. Agron.; Farm Econ. Ass. Plant breeding; laws of heredity in hybrids; farm practise and underlying principles; economic agriculture.
- Spinden, Dr. H(erbert) J(oseph)**, American Museum of Natural History, New York, N. Y. **Anthropology*. Huron, S. Dak., Aug. 16, 79. A.B., Harvard, 06, A.M., 08, Ph.D., 09. Austin teaching fellow, Harvard, 06-09; *asst. curator, dept. anthrop, Am. Museum Nat. Hist.*, 09-, in charge, indust. and decorative art exhibit, 19. Angrand prize, 18. Anthropol. Ass.; Folk-lore Soc.; Ethnol. Soc.; Ecuatoriana de Estudios Hist. Am.; Paris Soc. des Américanistes; Maya Soc. Mandan and Nez Percé Indians; ethnology and archeology of Mexico, Central America and South America; historical developments in art; primitive agriculture; use of primitive art in modern industrial decorations.
- Spinney, Prof. L(ouis) B(avier)**, Ames, Iowa. *Physics*. Bradford, Ill., May 27, 69. B.M.E., Iowa State, 92, B.S., 93; Cornell, 93-94, 98-00; Berlin, 94-95; Zürich, 95-96. Asst. physics, *Iowa State*, 93-97, *prof. physics and elec. eng.*, 97-09, physics and illum. eng., 09-14, *physics*, 14- A.A.; Physical Soc.; Elec. Eng.; Eng. Educ. Elastic properties of glass; analysis of vowel sounds.
- Spitzka, Prof. Edw(ard) Anthony**, 63 E. 91st St., New York, N. Y. **Anatomy, Neurology*. New York, N. Y., June 17, 76. Col. City of N. Y., 94-98; M.D., Columbia, 02, fellow, 02-06. Demonstrator anat., Columbia, 04-06; prof. gen. anat., Jefferson Med. Col., 06-14; *private practise*, 14- Prosector and curator, Am. Anthropometric Soc.; lieut. col., M.C., 17-19, M.R.C., 19- A.A.; Philos. Soc. Human cerebral fissures; brain-weight; brains of eminent men; hereditary transmission of cerebral types; brains of races; comparative anatomy of the insula; brains of criminals; effects of death by electricity; morphology of ductless glands.
- Spoehr, Dr. Herman A(ugustus)**, Desert Laboratory, Tucson, Ariz. *Plant physiology*. Chicago, Ill., June 18, 85. B.S., Chicago, 06, fellow, 08-09, Ph.D., 09; Berlin, 06-07; Paris, 07-08. Assoc. chem., Chicago, 09-10; *staff mem. desert lab, Carnegie Institution*, 10- A.A.; Chem. Soc.;

Bot. Soc. Photosynthesis; plant respiration; carbohydrates.

Spofford, Prof. Charles M(ilton), 61 Colbourne Crescent, Brookline, Mass. *Civil engineering*. Georgetown, Mass, Sept. 28, 71. B.S., Mass. Inst. Tech, 93. Asst. *civil eng*, Mass. Inst. Tech, 96-97, instr, 97-03, asst. prof, 03-05; prof, Brooklyn Polytech, 05-09; *Hayward prof. and in charge civil and sanit. eng. dept*, Mass. Inst. Tech, 09- Designer and expert adviser on many bridges, warehouses and piers, 00-; mem. Boston Terminal Commission, 15-16; mem. firm, Fay, Spofford and Thorndike, 14- A.A.; Civil Eng; Eng. Educ; Am. Acad; Boston Soc. Civil Eng; Brooklyn Eng. Club. Theory of structures.

Sponsler, O(lenus) L(ee), 1013 High St, Palo Alto, Calif. *Forestry*. Akron, Ohio, June 17, 79. A.B., Michigan, 10; A.M., Nebraska, 12. Adj. prof. forestry and bot, Nebraska, 10-11, assoc. prof. in charge, 11-12; assoc. prof, Michigan, 12-17; wood technologist, forest products lab, U. S. Forest Service. Forest surveyor, Mich. Geol. Surv; Wis. State Board of Forestry. A.A.; Soc. Foresters. Silvics; dendrology.

Spooner, Dr. Lesley H(inkley), 520 Commonwealth Ave, Boston, Mass. *Bacteriology*. Hingham, Mass, Aug. 22, 81. A.B., Harvard, 03, M.D., 07. *Physician, out-patient dept*, Mass. Gen. Hosp, 15-; *gen. clinic and health clinic*, Boston Dispensary, 19- Instr. bacter, Harvard Med. Sch, 12-; consulting physician, Mass. Charitable Eye and Ear Infirmary, 15-; major, M.C, 17-19. Ass. Path. and Bact; Am. Med. Ass; Boston Med. Library. Practical application of bacteriology to medicine.

Spragg, Frank A(zor), East Lansing, Mich. *Plant breeding*. Near Hazelton, Iowa, Aug. 21, 74. B.S.A., Mont. Col, 02; M.S., Mich. Agr. Col, 06. *Research assoc. plant breeding*, Mich. Agr. Col, 06- In charge, Mont. Agr. Exhibit, La. Purchase Expos, 04. A.A.; Bot. Soc; Soc. Agron; Mich. Acad. (v. pres, sec'y agr, 19). Plant breeding in farm crops; mathematics of genetics.

Sprague, Frank (Julian), 165 Broadway, New York, N. Y. **Electrical engineering, invention*. Milford, Conn, July 25, 57. Grad, U. S. Naval Acad, 78. Officer, U.S.N, 78-84; asst. to T. A. Edison, 84; v. pres, Sprague Elec. Ry. and Motor Co, 84-90; consulting engineer, Edison Gen. Elec. Co, 90; pres. and v. pres, Sprague Elec. Elevator Co, 91-97; v. pres. and tech. director, Sprague Elec. Co, 98-01; *consulting engineer, Sprague Safety Control and Signal Corp*. Mem. and sec'y, jury, Crystal Palace Elec. Exhib, 82-83; mem. Terminal Commission for Elec. of N. Y. C. and H. R. R. R. Gold medal, Paris Exhib, 89; Elliot Cresson medal, Franklin Inst, 04; grand, prize, La. Purchase Expos, 04; Edison gold medal, 11. Elec. Eng. (pres, 92); Civil Eng; assoc. Naval Archit; Naval Inst; Consulting Eng. (pres, 14); Inventors Guild (pres); N. Y. Elec. Soc. (pres, 04); British Inst. Elec. Eng; British Inst. Civil Eng. Electricity; railway operation and power distribution; rapid transit; power transmission and utilization; stationary motors; pioneer modern trolley system; inaugurated high-speed electric elevators; invented multiple-unit system of electric rail-

ways; automatic train control; electrification of terminals of New York Central and Hudson River Railroad; Southern Pacific Company and Sierra Nevada electrification project.

Spraragen, William, National Research Council, 29 W. 39th St, New York, N. Y. *Electrical engineering*. Warwick, N. Y, May 20, 95. B.E., Union, 16. Testing engineer, Westinghouse Elec. and Mfg. Co, 16-17; instr. elec. eng, Okla. Col, 17-18; Washington (Seattle), 19-20; *sec'y, eng. div, Nat. Research Council*, 20- Ballistic inspector, War Dept, 18; asst. chairman, welding research committee, Nat. Research Council and Emergency Fleet Corp, 18-19. Elec. Eng. Welding; mathematics applied to engineering.

Spring, Prof. Samuel N(ewton), Cornell University, Ithaca, N. Y. *Forestry*. Sioux City, Iowa, Feb. 5, 75. A.B., Yale, 98, M.F., 03. Field asst, bur. forestry, U. S. Dept. Agr, 03; prof. forestry, Maine, 03-05; forest asst. and later asst. forest inspector and chief, office of exten, U. S. Forest Service, 05-09; state forester, Conn, and forester, Conn. Exp. Sta, 09-12; *prof. forestry, Cornell*, 12- A.A.; Forestry Ass; Soc. Foresters; N. East. Foresters Ass; N. Y. Forestry Ass. Silviculture.

Springer, Dr. Alfred, 312 E. Second St, Cincinnati, Ohio. **Chemistry, Physics*. Cincinnati, Feb. 12, 54. Ph.D., Heidelberg, 72. *Sole owner, Alex. Fries and Bro, Cincinnati*, 74- A.A. (sec'y, subsect. chem, 81, sec'y, C, 82, asst. gen. sec'y, 83, gen. sec'y, 84, v. pres, 92); Chem. Soc; cor. mem. British Ass. The torsion balance; aluminum sound boards; fermentation without combined nitrogen; anti-putrescent effects of copper salts.

Springer, Dr. Alfred, Jr, 312 E. Second St, Cincinnati, Ohio. *Physical chemistry*. Cincinnati, Nov. 1, 88. A.B., Yale, 09; Ph.D., Hopkins, 12; Göttingen, 12-13. *Chemist, Alex. Fries and Bro*, 13- Chem. Soc. Conductivity and dissociation of organic acids.

Springer, Frank, Smithsonian Institution, Washington, D. C. *Paleontology*. Wapello, Iowa, June 17, 48. Ph.B., Iowa State, 67; Sc.D., George Washington, 21. *Lawyer*, 68- Assoc. paleont, museum comp. zool, Harvard, 01; U. S. Nat. Museum, 12; state senator, N. M., 80, 01; regent, New Mexico, 98; state museum, N. M., 09-; pres, Maxwell L. G. Co, 90-; director, First Nat. Bank, Las Vegas, N. M.; mem. bar, U. S. Supreme Court, 82- A.A.; Geol. Soc; Paleont. Soc; for. cor. London Geol. Soc. Paleocerinoidea; North American Crinoidea camerata; a Trenton echinoderm fauna; the genus *Scyphocrinus*; Crinoidea flexibilia.

Springer, Prof. F(ranklin) W(esley), University of Minnesota, Minneapolis, Minn. *Electrical engineering*. Anoka, Minn, Jan. 18, 70. B.E.E., Minnesota, 93, E.E., 95. Instr. *elec. eng*, Minnesota, 95-99, asst. prof, 99-05, *prof*, 05- Elec. Eng; Eng. Educ. Gas engine ignition and two cycle design; electric spark recorder.

Sprunt, Dr. T(homas) P(eck), 1035 N. Calvert St, Baltimore, Md. *Medicine*. Augusta Co, Va, Feb. 16, 84. A.B., Davidson, 03; M.D., Hopkins, 09. Asst, instr. and later assoc. path, *Hopkins*,

- 09-12, instr. and later assoc. med, 13-18, *assoc. clin. med.*, 19- Ass. Path. and Bact; Am. Med. Ass. Internal medicine; pathology.
- Spurgeon, Prof. Charles H(addon)**, Tulane University, New Orleans, La. *Biology*. Hillisburg, Ind, Oct. 30, 80. A.B, Franklin (Ind), 06; A.M, Indiana, 12. Principal, high schools, Ind, 02-06; prof. biol. and physiol, Drury, 07-20; *asst. prof. anat, Tulane*, 20- City chemist and bacteriologist, Springfield, Mo, 14- A.A; Micros. Soc. Early embryology of the bat.
- Spurr, J(osiah) E(dward)**, Tenth Ave. and 36th St, New York, N. Y. **Geology*. Gloucester, Mass, Oct. 1, 70. A.B, Harvard, 93, A.M, 94; Berlin, 97. Asst. geologist, Minn. Geol. and Nat. Hist. Surv, 93; U. S. Geol. Surv, 94-97, geologist, 97-05; pres, Spurr and Cox, consulting mining engineers and geologists, 06-11; v. pres. and advising engineer, Tonopah Mining Co, 11-17; mem. committee on mineral imports, U. S. Shipping Board and W. T. B, 17-18; chief engineer, war minerals investigations, U. S. Bur. Mines, 18-19; *editor-in-chief*, 'Eng. and Mining Jour,' 19- Consulting mining expert to Sultan of Turkey, 01; geologist, Am. Smelting and Refining Co. and Guggenheim Explor. Co, 05-07, consulting geologist, 07-; consulting geol. engineer, Campbird Limited. Delegate, Int. Cong. Geol. St. Petersburg, 97. Geol. Soc; Min. Eng; Min. and Metal. Soc; Soc. Econ. Geol. Genesis of ore deposits; geology applied to mining; political, commercial and philosophical geology.
- Squier, Gen. George O(wen)**, U. S. A, U. S. War Department, Washington, D. C. **Electrical engineering*. Dryden, Mich, March 21, 65. Grad, U. S. Mil. Acad, 87; fellow, Hopkins, 92, Ph.D, 93, fellow by courtesy, 03. Second lieut, Artillery, 87-93, lieut, 93-98, capt. and lieut. col, vol. Sig. C, 98-99, lieut. Sig. C, 99-01, capt, 01-03, major, 03-17; *chief signal officer*, brig. gen. and *major gen.*, 17- Instr. dept. elec. and mines, U. S. Artil. Sch, Fortress Monroe, Va, 95-98; commander, U. S. Cableship 'Burnside,' Philippine Archipelago, 00-02; chief signal officer, Headquarters Dept. of Calif, 02; U. S. mil. attaché, London, England, 12-16. John Scott medal, Franklin Inst, 96; Elliott Cresson medal, 12. K.C.M.G, 19; D.S. medal. Nat. Acad; A.A; fel. Elec. Eng; Physical Soc; Radio Eng; Philos. Soc; Franklin Inst; Wash. Philos. Soc; London Physical Soc. Electrochemical effects due to magnetization; the polarizing photo-chronograph; the sine wave systems of telegraphy; multiplex telephony and telegraphy; tree telephony and telegraphy; the absorption of electromagnetic waves by living vegetable organisms.
- Stabler, Dr. Edward L(incoln)**, Central Leather Co, 17 Battery Place, New York, N. Y. *Mathematics*. Brooklyn, N. Y, April 20, 65. A.B, Columbia, 85, fellow, 85-88, A.M, 86, Ph.D, 88. Actuary, Manhattan Life Ins. Co, 89-98; *with Central Leather Co*, 02- A.A.
- Stafford, Prof. O(rin) F(letcher)**, University of Oregon, Eugene, Oregon. *Chemistry*. Hillsboro, Ohio, Feb. 7, 73. A.B, Kansas, 00, A.M, 02; Berlin, 08-09. Instr. chem, Oregon, 00-02, asst. prof, 02-06, *prof*, 06- A.A; Chem. Soc. Reactions between acid and basic amids in liquid ammonia solutions; dissociation of the sulphur vapor molecule; vapor pressures of sulphur; bactericidal action of ultra-violet rays; exothermic reactions in the pyrolysis of cellulose and wood.
- Stager, Dr. Henry W(alter)**, 4729 10th Ave, N. E, Seattle, Wash. *Mathematics*. Nutley, N. J, April 18, 79. A.B, Stanford, 02, A.M, 06; Ph.D, California, 09. Asst. math, Stanford, 01-02, 05-06; *prof*, Pacific (Calif), 06-07; teaching fellow math, California, 07-10; head, dept. math, Fresno Junior Col, Fresno, Calif, 10-16; with U. S. R. R. Ad, 17-20; *instr. math, Washington (Seattle)*, 20- A.A; Math. Soc; Math. Ass. Theory of numbers; factor tables; geometric transformations.
- Stagner, Dr. Bert Allen**, Mellon Institute, Pittsburgh, Pa. *Chemistry*. Chillicothe, Mo. A.B, Missouri, 09, A.M, 10; Ph.D, Chicago, 14. Head, dept. chem, Fresno Junior Col, 11-13, 14-17; *research chemist, Mellon Inst*, 17- Instr. chem, Missouri, summer, 10. A.A; Chem. Soc. Triarylhydroxylamin derivatives; keratin products; petroleum.
- Stahl, Dr. Karl F(riederich)**, 2318 Wharton St, S. Side, Pittsburgh, Pa. *Chemistry*. Zwiefalten, Germany, March 14, 55. D.Sc, Tübingen, 76. Supt, chem. works, James Irwin and Co, 90-99; *Gen. Chem. Co*, 99-14, *consulting chemist*, 14- Chem. Soc. (chairman, Pittsburgh sect, 16); Soc. Chem. Indust; West. Pa. Eng. Soc. (chairman, chem. sect, 02); Chem. Verein. Inorganic chemistry; hydrofluoric and hydrofluosilicic acids and their salts.
- Stakman, Dr. E(lvin) C(harles)**, Agricultural Experiment Station, St. Paul, Minn. **Plant pathology*. Algoma, Wis, May 17, 85. A.B, Minnesota, 06, A.M, 10, Ph.D, 13. Instr. *plant path*, Minnesota, 09-13, asst. prof, 13-16, *assoc. prof*, 16-18, *prof*, 18-, asst. plant path, *Exp. Sta*, 09-10, asst. plant pathologist, 10-13, *head, sect. plant path*, 13- Pathologist and agent, U. S. Dept. Agr, 18- A.A; Phytopath. Soc. (councilor, assoc. ed, 'Phytopath', 16, pres, 20-); Bot. Soc. Cereal smuts and rusts; the nature of the resistance and immunity of cereal rusts; grass rusts.
- Stalder, Walter**, Crocker Building, San Francisco, Calif. *Geology*. Oakland, Calif, April 6, 81. B.S, California, 04; M.S, 07. Chemist, San Francisco Chem. Co, 04-07; oil geologist for M. L. Requa, 09-14; *consulting oil geologist*, 14- Private expeditions to investigate petroleum in U. S. and Can. A.A; Chem. Soc; Inst. Min. and Metal. Eng. Geology and chemistry of petroleum.
- Staley, Homer F(rancis)**, U. S. Bureau of Standards, Washington, D. C. *Ceramics*. New Philadelphia, Ohio, April 3, 79. A.B, Ohio State, 04, 05; Columbia, 09. Supt, enameled iron plant, 05-09; asst. prof. ceramic eng, Ohio State, 09-12, prof, 12-13; tech. director, Standard Sanit. Mfg. Co, 12-13; prof, ceramic eng, Iowa State, 13-19; *metal. ceramist, Bur. Standards*, 19- Ceramic Soc. (ed, 'Trans,' volumes, 14, 15); Chem. Soc; Soc. Chem. Indust. Enamels; glazes; clays; glass.
- Standley, Paul C(arpenter)**, U. S. National Museum, Washington, D. C. *Botany*. Avalon, Mo,

- March 21, 84. Drury, 03-06; B.S., N. Mex. Col, 07, M.S., 09. Asst. bot., N. Mex. Col, and asst. botanist, Exp. Sta., 07-09; *asst. curator, div. plants, U. S. Nat. Museum*, 09- A.A.; Bot. Soc.; Wash. Acad.; Wash. Bot. Soc.; Wash. Biol. Soc. Systematic botany of North America.
- Stang, Dr. A(mbrose) H(enry)**, 7313 Mt. Vernon St., Pittsburgh, Pa. *Physics*. Auburn, Pa., July 10, 89. C.E., Syracuse, 10; A.M., Michigan, 15, Ph.D., 16. Instr. physics, Ohio Wesleyan, 10-14; asst., Michigan, 14-16; asst. prof., Oklahoma, 16-19; *assoc. physicist, Bur. Standards*, 19- Assoc. Physical Soc. Engineering materials; infra-red absorption spectrum of naphthalene; effect of sulphur and phosphorus on railway materials; pressure tanks.
- Stange, Dean Charles H.**, Iowa State College, Ames, Iowa. *Veterinary science*. Iowa, May 21, 80. D.V.M., Iowa State, 07. Prof. path., Iowa State, 07-09, *dean and director, div. vet. med.*, 09- Vet. Med. Ass.; Iowa Acad. Animal diseases; infectious diseases of cattle and swine.
- Stanley, Dr. Louise**, 13-12 Rosemary Lane, Columbia, Mo. *Chemistry*. Nashville, Tenn., June 8, 83. B.S., Peabody, 03; B.Ed., Chicago, 06; A.M., Columbia, 07; Ph.D., Yale, 11. Instr. *home econ.*, Missouri, 07-11, asst. prof., 11-14, *assoc. prof.*, 14-17, *prof.*, 17- Fed. agent, home econ. educ., 18-19. Chem. Soc.; Home Econ. Ass.; Child Hygiene Ass. Food chemistry; organic and inorganic phosphorus; purin enzymes; temperatures for baking.
- Stanley-Brown, J(oseph) S.**, 26 Exchange Place, New York, N. Y. *Geology*. Washington, D. C., Aug. 19, 58. A.B., Yale, 88. Stenographer to Major Powell, Geol. Surv. of Rocky Mt. Region, 77-79; private sec'y, Pres. Garfield, 80-81; mem. U. S. Geol. Surv., 82-85, asst. geologist, 88-90; expert, Bering Sea Arbitration, 91-93; gen. supt., N. A. Com'l Co. of Alaska, 94-99; asst. sec'y, U. P. S. P., and other railroad systems, 99-02; asst. to pres, Long Isl. R. R. Co., 02-04; in charge, railroad dept, Fish and Robinson, bankers, 05-15; *partner, Robinson and Co.*, 15- A.A.; Geol. Soc. (ed., 'Proceedings,' 92-); Wash. Geol. Soc.
- Stansfield, Prof. A(lfred)**, McGill University, Montreal, Can. *Metallurgy*. Bradford, England, March 18, 71. Bradford Tech. Col, 86-88; Royal Col. Science, London, 88-91; *assoc.*, Royal Sch. Mines, 91, D.Sc., 98. Instr. assaying, Royal Sch. Mines, 98-01; *prof. metal*, McGill, 01- Asst. to Sir W. Roberts-Austen in researches on alloys for London Inst. Mech. Eng., 91-98; Carnegie research scholar, 00-01. Min. Eng.; fel. Royal Soc. Can.; Can. Min. Inst.; Can. Inst. Civil Eng.; Electrochem. Soc.; fel. London Chem. Soc.; British Inst. Metals; British Inst. Min. and Metal; fel. London Soc. Arts; British Iron and Steel Inst.; British Ass. Thermoelectric pyrometer; alloys; interdiffusion of solid metals; electric smelting of ores.
- Stanton, Prof. C(harles) B(eecher)**, Carnegie Institute of Technology, Pittsburgh, Pa. *Civil engineering*. Springfield, Ill., Jan. 14, 81. C.E., Rensselaer, 03. Railroad engineer, 03-07; *assoc. prof. civil eng.*, Iowa State, 07-11; asst. prof., *Carnegie Inst. Tech.*, 11-17, *assoc. prof.*, 19- Capt. and major, corps eng., A.E.F., 17-19; asst. director, col. eng., A.E.F. Univ., Beaune, 19. Civil Eng.; Eng. Educ.; West. Pa. Eng. Soc.
- Stanton, Dr. T(imothy) W(illiam)**, U. S. Geological Survey, Washington, D. C. **Paleontology, Geology*. Monroe Co., Ill., Sept. 21, 60. B.S., Colorado, 83, M.S., 96; Hopkins, 88-89; Ph.D., George Washington, 97. Asst. state librarian, Colo., 85-88; asst. paleontologist, *U. S. Geol. Surv.*, 89-00, paleontologist, 00-03, *geologist in charge paleont. and stratig.*, 03- Custodian Mesozoic invertebrates, U. S. Nat. Museum, 93-; instr. paleont. and stratig. geol., George Washington, 95-03, asst. prof. paleont., 04. A.A.; Geol. Soc.; Paleont. Soc.; Wash. Acad.; Wash. Biol. Soc.; Wash. Geol. Soc. (v. pres, 10, pres, 12). Invertebrate fauna and stratigraphy of the Mesozoic; lower Cretaceous fauna of the Texan region; Mesozoic invertebrates and stratigraphy of North America.
- Starbuck, Prof. Edwin D(iller)**, University of Iowa, Iowa City, Iowa. **Psychology, Philosophy*. Bridgeport, Ind., Feb. 20, 66. A.B., Indiana, 90; A.M., Harvard, 95; Ph.D., Clark, 97. Teacher math. and Latin, high sch., Spiceland, Ind., 90-91; prof. math., Vincennes, 91-93; asst. prof. educ., Stanford, 97-04; *prof.*, Earlham, 04-06; *philos.*, Iowa, 06- Lecturer, Pacific Theol. Sem., 02-03; summer sch., Western Reserve, 03; Woodbrook Summer Sch., England, 03; Summer Sch. of the South, Knoxville, 04; psychol. adviser, Bacon Press, Boston, 12. A.A.; Philos. Ass.; Psychol. Ass.; Ass. Prof. (mem. council); Religious Educ. Ass. The psychology of religion; religious education of children; the after effects of kindergarten instruction; lines of growth in children as shown by psychophysical tests; the psychological content of religion; the physical basis of mental peculiarities; psychophysical studies of children; the lower senses in aesthetic appreciation.
- Starch, Prof. Daniel**, Harvard University, Cambridge, Mass. **Psychology*. La Crosse, Wis., March 8, 83. A.B., Morningside, 03; A.M., Iowa, 04, fellow, 04-06, Ph.D., 06; Harvard, 07-08. Instr. psychol., Iowa, summers, 05, 06, and 06-07; exp. psychol., Wellesley, 07-08; *psychol.*, Wisconsin, 08-12, asst. prof., 12-17; *assoc. prof.*, 17-21; *asst. prof.*, Harvard, 21- Lecturer applied psychol., Harvard, 19-20. Capt. aviation sect., O.R.C. A.A.; Psychol. Ass. Educational and applied psychology; educational tests; sound localization.
- Starin, Prof. W(illiam) A(lfred)**, Ohio State University, Columbus, Ohio. *Bacteriology*. Neta-waka, Kans., Feb. 25, 78. A.B., A.M., Kansas, 08. Asst. prof. *bacter.*, Okla. Col., 09-10; *Ohio State*, 10-18, *prof.*, 18- A.A. Immunity; filterable virus; canine distemper; antigenic properties of gelatin.
- Starks, Prof. Edwin Chapin**, Box 26, Stanford University, Calif. *Zoology*. Baraboo, Wis., Jan. 25, 67. Stanford, 93-97. Asst., U. S. Biol. Surv., 97-99; curator and asst. prof. *zool.*, Washington (Seattle), 99-01; curator, *Stanford*, 01-07, *asst. prof.*, 08- A.A.; Ass. Anat. (life mem); Calif. Acad. (cor. mem); London Zool. Soc. Ichthyology; osteology of fishes; fishes of the Pacific; relationships of fishes.

Starr, Dr. Anna M(orse), Mt. Holyoke College, South Hadley, Mass. *Botany*. Elyria, Ohio, 67. B.L, Ohio Wesleyan, 87; Bryn Mawr, 89-90; A.B, Oberlin, 05, A.M, 06; fellow, Chicago, 10-11, Ph.D, 11. Teacher, pub. schools; asst. bot. Oberlin, 05-08; instr. and later *assoc. prof.*, Mt. Holyoke, 11- A.A; Ecol. Soc; Bot. Soc. Ecological anatomy of dune plants.

Starr, Prof. Frederick, University of Chicago, Chicago, Ill. *Anthropology*. Auburn, N. Y., Sept. 2, 58. Rochester, 78-80; B.S, Lafayette, 82, M.S, Ph.D, 85, hon. Sc.D, 07. Teacher science, Wyman Inst, 82-83; science and hist, Cent. State Nor. Sch, Lockhaven, Pa, 83-84; biol. and geol, Coe, 84-87; registrar, Chautauqua, 87-89; curator ethnol, Am. Museum Nat. Hist, 89-91; asst. prof. *anthrop.*, Chicago, 92-95, *assoc. prof.*, 95- Prof. geol. and anthrop, Chautauqua, 85-92; dean, scientific dept, Pomona, 91. Museums medal, Holland, 00; Officier de l'Instruction Pub, 07; Officer Order Leopold II, Congo Free State, 07, Commander, 10; Knight Commander Order of African Redemption, Liberia, 14; Chevalier of the Crown of Italy, 09. A.A; Anthropol. Ass; Ethnol. Soc; hon. mem. Davenport Acad; cor. mem. Wis. Hist. Soc; cor. mem. Minn. Hist. Soc; cor. mem. Soc. Cient. Ant. Alz; cor. mem. Mex. Geog. y Estad; hon. mem. London Folk-lore Soc; hon. fel. Anthropol. Inst. Gt. Britain and Ireland; cor. mem. Soc. d'Anthrop. de Paris; hon. cor. mem. Soc. Ital. d'Anthrop, Etnol. e Psicol. comp; hon. mem. Soc. Imp. des Amis d'Hist. nat, d'Anthrop. et d'Ethnol. Anthropology and ethnology; anthropology and ethnology of south Mexican tribes; ethnography of central Africa, especially Congo Free State; ethnography of Japan and Korea.

Starr, John E(dwin), 50 Church St, New York, N. Y. *Mechanical engineering*. Utica, N. Y., Feb. 22, 63. Consulting engineer, 87-98; *pres.*, *Starr Engineering Co.*, 98- Medal, Franklin Inst, 96. U. S. delegate, Int. Cong. Refrig, Paris, 08. Mech. Eng; Refrig. Eng. (past pres. and past v. pres); Ass. Refrig. (v. pres); St. Louis Acad; London Cold Storage and Ice Ass. Heat transmission through insulated structures; properties of liquefiable gases; relation of pressure strength and temperature of aqua ammonia; cold storage; pipe-line refrigeration; production and use of ozone and oxygen on a commercial scale; theory and practise of refrigeration.

Starr, Dr. Louis, 1811 Walnut St, Philadelphia, Pa. *Medicine*. Philadelphia, April 25, 49. A.B, Haverford, 68, LL.D, 08; M.D, Pennsylvania, 71. Instr. physiol. and therapeut, Pennsylvania, 74-77, lecturer symptomat, 77-79; *consulting pediatricist*, *Maternity Hosp.*, 79-; lecturer diseases of children, Pennsylvania, 80-84; clin. prof, 84-90. Asst. physician, Children's Hosp, Phila, 74, visiting physician, 79; Episcopal Hosp, 75-84. Emer. mem. Am. Physicians; Pediat. Soc; hon. mem. Chicago Acad; Phila. Col. Physicians. Hygiene and diseases of infancy and childhood.

Starr, Prof. M(oses) Allen, 5 W. 54th St, New York, N. Y. **Neurology*. Brooklyn, N. Y., May 16, 54. A.B, Princeton, 76, A.M, 79, hon. Ph.D,

84, LL.D, 99; Berlin, 76-77; Heidelberg, 82; Vienna and Paris, 82-93; hon. Sc.D, Columbia, 04. Prof. nervous diseases, N. Y. Polyclinic, 84-88; diseases of mind and nervous system, Columbia, 88-17. Consulting physician, Presbyterian and St. Mary's Hospitals. A.A; emer. mem. Am. Physicians; Psychol. Ass; Neur. Ass. (pres, 96); N. Y. Neur. Soc. (pres, 94-97); N. Y. Acad. Med. (cor. sec'y, 88, v. pres, 03-06); N. Y. Med. and Surg. Soc; N. Y. Practitioner's Soc; fel. N. Y. Acad; for. mem. London Neur. Soc; cor. mem. Soc. de Neur. de Paris; Soc. de Psychiat. Surgery of the brain and spinal cord; nervous diseases.

Stauffer, Prof. Clinton R(aymond), University of Minnesota, Minneapolis, Minn. *Geology*. Polo, Ill, Oct. 2, 75. B.S, Ohio State, 03, A.M, 06; fellow, Chicago, 07-09, Ph.D, 09. Principal, high sch, Cuyahoga Falls, Ohio, 03-05; instr. *geol.*, Ohio State, 06-07; Western Reserve, 09-10; asst. prof, Sch. Mining, Kingston, Ont, 10-11; *assoc. prof.*, Western Reserve, 11-14; *Minnesota*, 14-17, *prof.*, 17- Geologist, Ohio Geol. Surv, 07-10; Can. Geol. Surv, 10-13; Ohio Geol. Surv, 13-17; petroleum geologist, The Greenwood Co, 17-19. A.A; fel. Geol. Soc; Ass. Petrol. Geol; Paleont. Soc; Ohio Acad. The middle Devonian of Ohio; geology of the Columbus region; the Devonian of southwestern Ontario; the Dunkard series of Ohio; geology of north-central Texas; Montana oil-bearing series.

Stearn, Dr. Allen Edwin, University of Missouri, Columbia, Mo. *Physical chemistry*. La Fayette, Ind, Sept. 14, 94. A.B, Stanford, 15, A.M, 16; M.S, Illinois, 17, Ph.D, 19. Instr. *physical chem.*, Illinois, 19-20; asst. prof. in charge of div, West Virginia, 20-21; *asst. prof. chem.*, *Missouri*, 21- Chem. Soc. Aqueous solutions; gases.

Stearns, Dr. A(lbert) Warren, 520 Commonwealth Ave, Boston, Mass. *Psychiatry*. Billerica, Mass, Jan. 26, 85. M.D, Tufts, 10; fellow, Harvard Med. Sch, 13-17. Intern, Boston City Hosp, 10; asst. physician, Danvers State Hosp, 11; asst. *neur.*, Tufts, 11-16, *asst. prof.*, 16- Physician and psychiatrist, various institutions. Gold medal, Panama-Pacific Expos, 15. Am. Med. Ass; Psychopath. Ass; Medico-Psychol. Ass; Inst. Criminal Law and Criminol. General and social psychiatry; criminology.

Stearns, Dr. T(heron) C(lark), 44 Montgomery St, Jersey City, N. J. *Chemistry*. Chicago, Ill, Nov. 14, 54. M.D, Northwestern, 76. Asst. chem. and in office of preceptor, med. dept, Northwestern, 69, 76; tutor, 72-74; practising physician, 76-81; *consulting chemist*, 81- Chemistry of aromatic compounds; the determination of odor; influence of correct food quantities upon human life.

Stebbins, Dr. James H., Clayton, N. Y. *Chemistry, Microscopy*. Brooklyn, N. Y., June 4, 57. B.S, Harvard, 78; M.S, Rutgers, 80; Ph.D, Omaha, 93. Chemist, various companies, 79-86; anal. and consulting chemist, 80-00; *chemist and pathologist*, 00- Pub. Health Ass. Chemistry of the azo-compounds; occurrence of haemosporidia in the blood of *Rana catesbiana*; photochemical action of light upon diazo-compounds; parasites in the blood of reptiles, turtles, etc;

desmids of Jefferson County, N. Y.; occurrence of *Trypanosoma* in the blood of *Rana clamata*.

- Stebbins, Prof. Joel**, University of Illinois Observatory, Urbana, Ill. **Astronomy*. Omaha, Nebr., July 30, 78. B.S., Nebraska, 99, 99-00; Wisconsin, 00-01, Sc.D. 20; fellow, Lick Observatory, California, 01-03, Ph.D. 03; Munich, 12-13. Asst., Washburn Observatory, Wisconsin, 00-01; instr. *astron.*, Illinois, 03-04, asst. prof., 04-13, *prof.*, 13- Lick Observatory eclipse exped. to Labrador, 05; Wyoming, 18. Rumford and Draper medals. Nat. Acad.; A.A. (v. pres, 20); Astron. Soc. (see'y, 18-); Physical Soc.; for. assoc. Royal Astron. Soc. Stellar photometry.
- Stebinger, Eugene, Jr.**, U. S. Geological Survey, Washington, D. C. *Geology*. Portland, Oregon, Oct. 19, 83. California, 02-05; B.S., Chicago, 07. Asst. U. S. Geol. Surv., 07-09; instr. geol., Hunter, 10-11; *assoc. geologist*, U. S. Geol. Surv., 11- A.A.; Geol. Soc.; Wash. Geol. Soc. Cretaceous and Tertiary stratigraphy and Pleistocene glaciation of the northern Great Plains and Rocky Mountains; coal fields of Montana and Wyoming.
- Stecher, Dr. Lorle I (da)**, Burkley Place, Iowa City, Iowa. *Psychology*. St. Louis, Mo, Jan. 1, 91. A.B., Bryn Mawr, 12, A.M., 13; Ph.D., Columbia, 16. Psychologist, N. Y. State Commission on Ventilation, 15-16; instr. psychol., Temple, 16-17; psychologist, Children's Hosp., Randall's Isl., N. Y. City, 17-18; lecturer psychol., Barnard, Columbia, 18-19; *research assoc.*, Iowa Child Welfare Research Sta., 19- Psychol. Ass.; Ass. Clin. Psychol. Experimental psychology; mental tests.
- Steckbeck, Prof. D (avid) Walter**, University of Pennsylvania, Philadelphia, Pa. *Plant physiology*. Lebanon, Pa., Aug. 14, 80. B.S., A.M., Pennsylvania, 11, Ph.D., 15. Asst. bot., Pennsylvania, 09-11, instr., 11-17, *asst. prof.*, 17- Lecturer bot., Pa. Sch. Hort., 14-18. A.A.; Bot. Soc. Taxonomy; sensitive plants; plant nutrition.
- Stecker, Prof. H (enry) Freeman**, State College, Pa. **Mathematics*. Sheboygan, Wis., June 3, 67. B.S., Wisconsin, 93, fellow, 93-95, M.S., 94, Ph.D., 97, hon. fellow, 97; Göttingen 00-01. Asst. *math.*, Wisconsin, 90-95, instr., Northwestern, 97-00; Cornell, 01-03; *assoc. prof.* and later *prof.*, Pa. State, 03- Math. Soc.; Math. Verein; London Math. Soc.; Soc. math. de France; Circolo Mat. di Palermo. Pure mathematics; geodetic lines; non-Euclidean geometry; foundations of geometry; line geometry; integral equations.
- Stedman, Dr. Henry R (ust)**, 48 Beacon St., Boston, Mass. *Mental disease*. Boston, Sept. 19, 49. A.B., Harvard, 71, M.D., 75. Asst. physician and acting supt., Danvers State Hosp., 79-84; res. physician in charge, 'Bournewood,' Brookline, Mass., 84-17; *practising physician*, 17- Med. house officer, Boston City Hosp.; surg. house officer, Mass. Gen. Hosp.; asst. physician, Edinburgh Royal Asylum; West Riding Asylum, Yorkshire, England; chairman board of trustees, State Hosp., Taunton, Mass. Neu. Ass. (pres, 05); Medico-Psychol. Ass.; New Eng. Soc. Psychiat. (past pres); N. Y. Psychiat. Soc.; Boston Soc. Psychiat. and Neur. (past pres); Boston Soc. Med. Improv. Dementia precox and its pathogeny; prognosis of mental disease; separate care and treatment of epileptics; insanity and marriage; after-care of the insane; mental hygiene.
- Stedman, Prof. J (ohn) M (oore)**, U. S. Department of Agriculture, Washington, D. C. *Entomology*. Brockport, N. Y., Nov. 2, 64. B.S., Cornell, 88. Instr. entom. and invert. zool., Cornell, 88-90; biologist, U. S. Dept. Agr., 90-91; prof. biol., Trinity (N. C.), 91-93; prof. biol., Ala. Polytech. and biologist, Exp. Sta., 93-95; prof. entom., Missouri, and entomologist, Exp. Sta., 95-07; *exten. specialist*, U. S. Dept. Agr., 07- A.A.; Micros. Soc.; Ass. Econ. Entom.; Wash. Entom. Soc.; St. Louis Acad. Economic entomology; tapeworms of sheep; biological entomology.
- Steel, A (ivin) A (rthur)**, R. F. D. 1, Parma, Idaho. *Mining engineering*. Omaha, Nebr., Nov. 20, 77. B.S. (C.E.), Nebraska, 99; E.M., Columbia, 00. Asst. and mining geologist, Engineering Co. of Am., 00-04; asst. engineer, U. S. Fuel Investigations, 04; *assoc. prof. geol. and mining*, Arkansas, 05-09, prof. mining, 09-12; *in fruit business*, 12- A.A.; Min. Eng.; Eng. Educ. Earth pressure; crucible assaying; ore concentration; North Carolina gold mines; coal briquetting; conservation of coal in Arkansas; crushing of ore in caving systems of mining.
- Steel, Prof. Matthew**, 449 W. 153d St., New York, N. Y. *Biological chemistry*. Bushmills, Ireland, June 3, 79. B.S., N. Mex. Col., 01, M.S., 02; Ph.D., Columbia, 03. Scientific aid, U. S. Dept. Agr., 03-04; asst. chemist, R. I. Exp. Sta., 04-06; asst. biochem., Columbia, 07-08, instr., 08-10; chief chemist, research lab., dairy dept., U. S. Dept. Agr. and Missouri, 10-11, asst. prof. biochem., Missouri, 11-12; chem., *L. I. Col. Hosp.*, 12-14, *prof. org. chem. and biochem.*, 14- A.A.; Soc. Biol. Chem.; Chem. Soc. Metabolism; paranucleoprotein; urinary ammonia nitrogen; aluminum in food; influence of electro-therapeutic currents on metabolism.
- Steele, Dr. Albert Edward**, Harvard Medical School, Boston, Mass. *Bacteriology*. Peabody, Mass., July 7, 77. M.D., Harvard, 00. Instr. *bacter.* Harvard Med. Sch., 13- Ass. Path. and Bact.; Am. Med. Ass.
- Steele, Prof. B (renton) L (orenzo)**, Pullman, Wash. *Physics*. Walkerton, Ind., Dec. 14, 75. A.B., Indiana, 04, A.M., 10. Asst. physics, Indiana, 03-04; teacher physics and asst. principal, high sch., Greencastle, Ind., 04-05; teacher *physics*, Shortridge High Sch., Indianapolis, 08-09; asst. prof., Wash. State, 10-12, *assoc. prof.*, 12-13, *prof.*, 13-, head of dept., 19- Heat.
- Steele, Dr. Daniel A (tkinson) K (ing)**, 2920 Indiana Ave., Chicago, Ill. *Surgery*. Eden, Ohio, March 29, 52. M.D., Northwestern, 73; LL.D., Illinois, 06. Dean and head, dept. surg., Illinois, 82-17. Major, M.C., 17-19. Am. Med. Ass. Abdominal surgery.
- Steele, E (dward) S (trieby)**, 1522 Q St., Washington, D. C. *Botany, Philosophy*. Farmingdale, Ill., April 20, 50. A.B., Oberlin, 72; B.D., Oberlin Theol. Sem., 77; Andover Theol. Sem.,

- 81-83; Harvard Divinity Sch., 83-84, 87-88; Leipzig, 86-87. Pastor, 77-81; prof. philos. and ethics, Middlebury, 85-86; sub-ed., 'Century Diet,' 89-91; bot. clerk, U. S. Dept. Agr., 91-02; ed. asst., div. plants, U. S. Nat. Museum, 02-18; asst. botanist, U. S. Dept. Agr., 18-20. Philos. Ass.; Wash. Soc. Philos. Inquiry. Epistemology, especially the logical function; religion; systematic botany.
- Steenbock, Dr. Harry**, 2117 W. Lawn Ave., Madison, Wis. *Agricultural chemistry*. Charlestown, Wis., Aug. 16, 86. B.S., Wisconsin, 08, M.S., 10, Ph.D., 16; Berlin, 13. Asst. agr. chem., Wisconsin, 08-10, instr., 10; assoc. prof., 10-20, prof., 20- A.A.; Chem. Soc.; Soc. Biol. Chem. Mineral metabolism; vitamins.
- Steensland, Prof. H(albert) S(everin)**, 309 Orange St., Syracuse, N. Y. *Pathology*. Madison, Wis., July 22, 72. B.S., Wisconsin, 95; M.D., Hopkins, 99; Leipzig, 03. Path. house officer, Boston City Hosp., 99-00; lecturer path. and bacter., Syracuse, 00-05, assoc. prof., 05-08, prof., 08-, director, path. lab., 00- A.A.; Ass. Path. and Bact.; Am. Med. Ass. Tumors; action of benzol; diphasis leucopenia.
- Seese, Col. J(ames) G(ordon)**, U. S. A., Army and Navy Club, Washington, D. C. *Civil engineering*. Mt. Holly Springs, Pa., Jan. 21, 82. A.B., Dickinson, 02, A.M., 06; grad., U. S. Mil. Acad., 07; Army Eng. Sch., 10. Second lieutenant, U.S.A., 07-, asst. engineer, Isthmian Canal Commission, 08-12; instr. and later asst. prof. eng., U. S. Mil. Acad., 13-17; asst. chief of engineers, U.S.A., 17-18, mem. gen. staff and chief, personnel branch, 18-20, special mission overseas, 19; pres., *Alaska Road Commission*, 20-D. S. medal; La Solidaridad, II Class, Panama; mil. cross, II class of Greece; commander of Danilo I of Montenegro. A.A.; assoc. Civil Eng.; fel. Am. Geog. Soc. Military, railway and hydraulic engineering.
- Stefánsson, V(ilhjálmur)**, Harvard Club, 44th St., New York, N. Y. *Anthropology*. Arnes, Man., Nov. 3, 79. A.B., Iowa, 03; Harvard, 03-06, fellow, 04-05. Asst. anthrop., Harvard, 05-06; ethnologist, Leffingwell-Mikkelsen polar exped., 06-07; Am. Museum Nat. Hist. ethnographic exped. to central continental arctic and Victoria Isl., 08-12; commander, Can. arctic exped., 13-18. Private exped. to Iceland, summer, 04; Harvard archeol. exped. to Iceland, summer, 05. Gold medal, Am. Geog. Soc.; Nat. Geog. Soc.; Phila. Geog. Soc.; Chicago Geog. Soc.; N. Y. Explorers Club; Soc. geog. de Paris. A.A.; hon. fel. Am. Geog. Soc.; Anthropol. Ass.; Folk-lore Soc.; hon. fel. N. Y. Acad.; hon. fel. Phila. Geog. Soc.; hon. fel. Davenport Acad.; hon. fel. Am. Mus. Nat. Hist.; Boston Folk-lore Soc.; Anthropol. Inst. Gt. Britain and Ireland. Ethnography; geography; archeology and ethnology of the arctic coast.
- Stehle, Prof. Raymond Louis**, University of Pennsylvania, Philadelphia, Pa. *Biological chemistry*. Columbus, Ohio, May 22, 88. A.B., Ohio State, 12, A.M., 13; Ph.D., Yale, 15. Instr. *physiol. chem.*, Pennsylvania, 15-19, asst. prof., 19- A.A.; Chem. Soc. Purin metabolism; catalase; excretion of bases in acid intoxication.
- Steidtmann, Prof. Edward**, 2002 Monroe St., Madison, Wis. *Geology*. Merrimack, Wis., Aug. 5, 81. A.B., Wisconsin, 06, A.M., 07, Ph.D., 10. Asst. prof. *geol.*, Wisconsin, 12- A.A.; Geol. Soc.; Wis. Acad. Structural geology; metamorphism; sedimentation.
- Steiger, Geo(rge)**, U. S. Geological Survey, Washington, D. C. *Chemistry*. Columbia, Pa., May 27, 69. B.S., George Washington, 90, M.S., 92. Chemist, U. S. Geol. Surv., 92-17, chief chemist, 17- A.A.; Chem. Soc.; Min. and Metal. Eng.; Soc. Chem. Indust.; Wash. Acad.; Wash. Geol. Soc. Geochemistry; certain natural and artificial minerals; inorganic analytical methods.
- Steik, Prof. Karl T(heodore)**, Standard Oil Co., Whiting, Ind. *Chemistry*. Lemsa, Livonia, Dorpat, 05; A.M., Harvard, 11; Ph.D., Chicago, 19. Prof. chem., Claflin, 07-09; assoc. prof., Wyoming, 11-19. Chem. Soc. Engineering chemistry; derivatives of cyclopropane; effect of alkali on Portland cement; medicinal arsenic compounds.
- Steil, Dr. W(illiam) N(icholas)**, 115 S. Warren St., Madison, Wis. *Botany*. Highland, Wis., Sept. 4, 76. Ph.B., Wisconsin, 11, Ph.D., 16. Teacher, secondary schools, 97-10; asst. bot., Wisconsin, 10-11; instr., 11- Apogamy; ferns.
- Steiner, Dr. Walter R(alph)**, 646 Asylum Ave., Hartford, Conn. *Medicine*. Frederick City, Md., Nov. 18, 70. A.B., Yale, 92, A.M., 95; M.D., Hopkins, 98. Pathologist and bacteriologist, Hartford Hosp., 01-12, consulting pathologist and bacteriologist, 12-, visiting physician, 09- Consulting physician, Middlesex Hosp., Middletown, Conn.; New Britain Hosp.; Hartford Orphan Asylum. Sec'y, Am. Physicians and Surg. Cong., 11- A.A.; Am. Physicians; Ass. Path. and Bact.; fel. Am. Acad. Med.; Am. Med. Ass.; Ass. Tuber. Internal medicine; the history of medicine.
- Steinmetz, Prof. Charles P(roteus)**, Wendall Ave., Schenectady, N. Y. **Electrical engineering*. Breslau, Germany, April 9, 65. Breslau, 82-88; Zürich, 88-89; Bickemeyer Lab., Yonkers, N. Y., 89-92; hon. A.M., Harvard, 02; Ph.D., Union, 03. Consulting engineer, Gen. Elec. Co., Schenectady, N. Y., 93-; prof. electrophysics, Union, 03- A.A.; Math. Soc.; Physical Soc.; Elec. Eng.; Franklin Inst.; Am. Acad. Synthetic geometry; vector analysis of alternating currents; magnetism and hysteresis; dielectrics; transients; theory of electrical apparatus and phenomena; electrochemistry.
- Stejneger, Leonhard**, U. S. National Museum, Washington, D. C. **Biology*. Bergen, Norway, Oct. 30, 51. Cand. art., Christiania, 70, cand. philos., 72, cand. juris., 75. Observer, U. S. Signal Service, 82-83; asst. curator birds, U. S. Nat. Museum, 84-89. Curator reptiles, 89-11, head curator biol., 11- Mem. U. S. Fur-seal Commission, 96-97; chairman, pub. committee, Smithsonian Inst.; mem. permanent committee and committee on nomenclature, Int. Cong. Zool. Knight Order of St. Olaf, Norway. A.A.; Soc. Ichthyol. and Herp. (v. pres., 16, pres., 19); fel. Ornith. Union; Ass. Geog.; Wash. Acad.; Wash. Biol. Soc. (pres., 07); cor. mem. Phila. Acad.; hon. mem. Calif. Acad.; Christiania Sci. Soc.; hon. mem. British Ornith. Union; cor. mem. London

- Zool. Soc; life mem. Bergen Mus. Geographical distribution of vertebrates; systematic ornithology and herpetology; Antillean fauna; Japanese mammalogy, ornithology and herpetology; paleo-arctic geographical distribution.
- Stengel, Dr. Alfred**, 1728 Spruce St, Philadelphia, Pa. **Medicine, Pathology*. Pittsburgh, Pa, Nov. 3, 68. M.D, Pennsylvania, 89. Instr. clin. med, Pennsylvania, 93-98; *prof*, Woman's Med. Col, Phila, 96-98; *Pennsylvania*, 98-11, *med*, 11- Physician, Philadelphia, Univ. and Pa. Hospital; formerly ed, 'Am. Jour. Med. Science'; past director, Wm. Pepper Lab. Clin. Med. A.A; Am. Physicians; Ass. Path. and Bact; Philos. Soc; Wash. Acad; Phila. Col. Physicians; Phila. Path. and Neur. Societies. Internal medicine.
- Stephens, Frank**, Natural History Museum, Balboa Park, San Diego, Calif. *Mammalogy*. Western N. Y., April, 49. Mem. expd. to Death Valley, 91. A.A; mem. Ornith. Union; life mem. Cooper Ornith. Club; Wash. Biol. Soc. Ornithology; California mammals.
- Stephens, Prof. H(enry) M(atthew)**, Dickinson College, Carlisle, Pa. *Biology*. Neosho, Mo, Jan. 4, 68. A.B, Dickinson, 92, A.M, 94; Mass. Inst. Tech, 94. Instr. *biol*, *Dickinson*, 92-95, adj. prof, 95-99, *prof*, 99- A.A; Chem. Soc. Water analysis, in connection with study of Susquehanna River drainage basin; comparative study of the same forms under inland and marine habitat. [Died Feb. 5, 21.]
- Stephens, Prof. R(oswell) P(owell)**, University of Georgia, Athens, Ga. *Mathematics*. Barnesville, Ga, Nov. 4, 74. A.B, Georgia, 96; Ph.D, Hopkins, 05. Instr. *math*, Wesleyan, 05-07; adj. prof, *Georgia*, 07-10, assoc. prof, 10-19, *prof*, 19- A.A; Math. Soc. Analytic geometry; vector analysis.
- Stephens, Prof. T(homas) C(alderwood)**, Morningside College, Sioux City, Iowa. *Zoology*. Adrian, Mich, March 9, 76. A.B, Kansas City, 01; M.D, Kansas, 04; fellow, Chicago, 04-06. Instr. embryol, Kansas City, 01-02; lecturer histol, Kansas, 02-04; *prof. biol*, *Morningside*, 06- Asst. embryol, Chicago, summers, 05,06; on staff, Lakeside Lab, 16-18. A.A; Soc. Mammal; mem. Ornith. Union; Ecol. Soc; Cooper Ornith. Club; Wilson Ornith. Club (pres, 14); Ass. Prof; Nebr. Ornith. Union (pres, 14); Iowa Acad. (pres, 19-20); Iowa Conservation Ass. (pres, 14). Field studies on the behavior of birds.
- Stephenson, Dr. Edward Beattie**, Office of Chief of Engineers, Washington, D. C. *Physics*. Sparta, Ill, Jan. 19, 82. B.S, Knox, 03, M.S, 07; fellow, Illinois, 07-09, Ph.D, 10. Teacher science and math, high sch, Geneva, Ill, 03-06; instr. math, Knox, 06-07; asst. physics, Illinois, 09-10; instr, North Dakota, 10-13, asst. prof, 13-17; lieut. and capt, *corps engineers*, 17-19, *physicist in charge ranging and camouflage development, office of chief of engineers*, 19- A.A; Physical Soc. Sound ranging; Heusler alloys; telephone cables; photography; searchlights.
- Stephenson, Dr. Eugene A(ustin)**, 2360 Sherbrook St, Pittsburgh, Pa. *Geology*. Franklin, Mich, 84. B.S, Adrian, 05; Ph.D, Chicago, 17. Instr. geol, Chicago, 15-18; *chief geologist, South Penn Oil Co*, 18-
- Stephenson, Dr. L(loyd) W(illiam)**, U. S. Geological Survey, Washington, D. C. *Geology*. Scio, Ohio, Aug. 31, 76. Ph.B, Scio, 03; Ph.D, Hopkins, 07. Junior geologist, *U. S. Geol. Surv*, 07-09, asst. geologist, 09-11; paleontologist 11-14, *geologist*, 14- Substitute prof. paleont, California, 14. A.A; Geol. Soc; Paleont. Soc; Wash. Acad; Wash. Geol. Soc; Wash. Biol. Soc. Geology and underground water resources of coastal plain of North Carolina, Georgia, Mississippi and Arkansas; Cretaceous paleontology of North Carolina; stratigraphy and invertebrate paleontology of Atlantic and Gulf coastal plain.
- Starki, Dr. V(ictor)**, New Philadelphia, Ohio, *Zoology*. Solothurn, Switzerland, Sept. 26, 46. Col, Solothurn, 66-68; Munich; M.D, Bern, 73, 78. *Practising physician*, Switzerland, 73-83; *New Phila, Ohio*, 83- Asst. conchol, Carnegie Museum, Pittsburgh, assoc. curator Mollusca, 09- A.A; Ohio Acad. Systematics of land and fresh-water Mollusca and their geographical distribution; ciliate Infusoria; North American Sphaeriidae and Pupillidae; morphology and anatomy of some Stylommatophora; anatomy and classification of Unionidae.
- Sterling, E(rnest) A(lbert)**, 7 E. 42d St, New York, N. Y. *Forestry*. Brooklyn, Pa, June 27, 78. Bucknell, 98-00; F.E, Cornell, 02. Forester, N. Y. State, summer, 02; forest asst, U. S. Bur. Forestry, 02-04; asst. forester, U. S. Forest Service, 04-07; forester, Pa. R. Co, 07-12; consulting forester, 12-15; *manager, J. D. Lacey and Co*, 15- Soc. Foresters; Ry. Eng; Wood Preservers Ass. (past pres.). Forest planting; propagation of forest seedlings; causes and effects of forest fires; wood preservation; forest economies.
- Stern, Dr. A(dolph)**, 40 W. 84th St, New York, N. Y. *Psychiatry*. Hungary, Nov. 4, 78. A.B, Col. City of N. Y, 98; M.D, Columbia, 03. *Asst. physician*, King's Park State Hosp, N. Y, 03-05; Mt. Sinai Dispensary, N. Y. City, 11-17; *Vanderbilt Clinic*, 17-; *instr. neur*, *Columbia*, 18- Psychopath. Ass; Psychoanal. Ass; N. Y. Acad. Med. Psychoanalysis.
- Sternberg, Charles H(azeliuss)**, Balboa Park, San Diego, Calif. *Vertebrate paleontology*. Middleburg, N. Y, June 15, 50. Iowa Lutheran, 65, 66; Kansas State, 68, 75; hon. A.M, Midland, 11. In charge collecting parties for Prof. E. D. Cope, 76-79, 95-97; for museum comp. zool, Harvard, 80, 82; for Dr. von Zittel, Munich, five seasons; for Prof. A. Agassiz, 84; head preparator and collector fossil vertebrates, Can. Geol. Surv, 12-16. A.A; Paleont. Soc; life mem. Kans. Acad. Fossil hunting.
- Sternberg, Prof. Waldemar M**, Rolla, Mo. *Physical chemistry*. Petrograd, Russia, July 11, 84. B.S, Inst. Tech, Petrograd, 08; Ph.D, Minnesota, 18. Instr. *chem*, Minnesota, 10-18; *asst. prof*, *Mo. Sch. Mines*, 18- Chem. Soc; Electrochem. Soc. Electrochemistry; colloidal chemistry.
- Sterrett, W(illiam) D(ent)**, U. S. Forest Service, Washington, D. C. *Forestry*. Bedford, Pa, March 2, 81. A.B, George Washington, 00; Harvard, 01; M.F, Yale, 03. Forest asst, U.

- S. Forest Service, 03-08; forester, Bur. Forestry, P. I., 08-10; *forest examiner, U. S. Forest Service, 18-* Soc. Foresters; Ecol. Soc. Marketing wood-lot products; forest conditions in Delaware; pines; oaks; ashes.
- Stetson, George R(ochford)**, 116 B St., N. E., Washington, D. C. *Anthropology*. Boston, Mass., Nov. 28, 33. Boston schools; Braintree Acad. A.A.; Archeol. Inst.; Wash. Anthropol. Soc.; Wash. Soc. Philos. Inquiry.
- Stetson, Dr. Harlan True**, Harvard Astronomical Laboratory, Cambridge, Mass. *Astrophysics*. Haverhill, Mass., June 28, 85. Ph.B., Brown, 08; M.S., Dartmouth, 10; Ph.D., Chicago, 15. Asst. physics, Dartmouth, 08-10, *instr.*, 11-13; astron., Northwestern, 13-14, physics, 16; *astron. Harvard, 16-* Research asst., Yerkes Observatory, summer, 09; *instr.* astron. and physics, Middlebury, summers, 12, 13. A.A.; Astron. Soc.; Physical Soc. Thermoelectric methods in astronomical photometry and spectroscopy; short period variables.
- Stevens, Prof. A(lviso) B(urdett)**, Escondido, Calif. *Pharmaceutical chemistry*. Tyrone, Mich., June 15, 53. Ph.C., Michigan, 75; Ph.D., Bern, 05. *Instr.* pharmacy, Michigan, 86-90, lecturer, 90-92, asst. prof., 92-06, junior prof., 06-10, prof., 10-19, acting dean, 12-14, dean, 17-19, retired, 19. Mem. committee of revision, U. S. Pharmacopoeia, 00, 10; committee for third and fourth revision of Nat. Formulary. Pharmaceut. Ass. (v. pres, 90); Chem. Soc. (chairman. pharmaceut. sect, 09). Poisonous plants of Rhus; drug assay; arithmetic of pharmacy.
- Stevens, Prof. F(rank) L(incoln)**, University of Illinois, Urbana, Ill. **Plant pathology*. Syracuse, N. Y., April 1, 71. B.L., Hobart, 91; B.S., Rutgers, 93, M.S., 97; Ohio State, 94-96; fellow, Chicago, 98-99, Ph.D., 00, traveling fellow (Bonn, Halle and Naples), 00-01. *Instr.* science, Racine, 93-94; North High Sch., Columbus, Ohio, 94-98; sanit. analyst, Chicago Drainage Canal, 98-00; *instr.* biol. N. C. Col., 01-02, prof., 02-03, bot. and veg. path., 03-12, biologist, N. C. Exp. Sta., 03-12; dean, P. R. Col., 12-14; *prof. plant path., Illinois, 14-* A.A.; Soc. Nat.; Bot. Soc.; Soc. Bact.; Phytopath. Soc. (pres, 10); Nature Study Soc. (v. pres, 08, 09, 10); fel. N. C. Acad. (pres, 05, see'y, 06). Cytology of fungi; plant diseases; tobacco wilt; melon wilt; lettuce rot; cytology of Synchytrium; soil bacteriology.
- Stevens, Dr. George T(homas)**, 350 W. 88th St., New York, N. Y. *Ophthalmology, Neurology*. Jay, N. Y., July 25, 32. M.D., Castleton Med. Col., 57; hon. Ph.D., Union. Surgeon, U. S. Vols, 61-65; prof. ophthalm. and physiol., Albany Med. Col., 70-76; *practising physician, 76-* Operating surgeon, Army of Potomac; Am. ed., 'Annals d'Oculistique,' 94-96. Award, Belgian Royal Acad. of Med., 83. A.A.; Ophthalm. Soc.; Am. Med. Ass.; Otol. Soc. Ophthalmology; nervous diseases; facial expressions and the pose of the body.
- Stevens, Dr. George Walter**, Warrensburg, Mo. *Botany*. Keithsburg, Illinois, Sept. 4, 68. A.B., Kansas, 97, A.M., 03; Ph.D., Harvard, 16. Teacher biol., State Nor. Sch., Okla., 04-12; director, Okla. Bot. Surv., 13; *head, dept. biol.,*
- Mo. State Teachers' Col., Warrensburg, 16-* Collector in Alaska for Okla., 08, in charge state bot. surv., 13. Okla. Acad. Taxonomic botany; geographical distribution; Mendelism.
- Stevens, H(arold) E(dwinn)**, Agricultural Experiment Station, Gainesville, Fla. *Plant pathology*. Pruitt, Ky., March 29, 80. B.Agr., Ky. State, 06; M.S., Illinois, 10. Field asst. bot., Ky. Exp. Sta., 06; agr. inspector, Bur. Agr., P. I., 07, acting supt., exp. farm, 08; asst. plant path., Ark. Exp. Sta., 10-11, adj., 11-12; *plant pathologist, Fla. Exp. Sta., 12-* A.A.; Phytopath. Soc.; Micros. Soc. Diseases of citrus fruits and trees.
- Stevens, Dr. H(erman) C(ampbell)**, Elyria, Ohio. *Neurology*. Elkhart, Ind., Nov. 12, 78. A.B., Michigan, 01; Ph.D., Cornell, 05; M.D., Rush Med. Col., 14. Asst. psychol., Cornell, 03-05; asst. prof. and assoc. prof., Washington (Seattle), 05-13; assoc. prof. educ. and director, psychopath. lab., Chicago, 13-18; *asst. prof. neur. med. dept., Illinois, 18-* Res. physician, Chicago State Hosp., 18-19; physician, Am. Red Cross. Albania, 20. A.A.; Psychol. Ass.; Ill. Soc. Mental Hygiene (mem. exec. committee); Chicago Neur. Soc. (v. pres, 18). Peripheral vision; right and left handedness; Rossalimo tests; Mongolian idiocy; brain tumors.
- Stevens, Dr. J(ames) F(ranklin)**, P. O. Box 1546, Lincoln, Neb. *Medicine*. Van Buren, Ill., Aug. 19, 59. A.B., Classical Sem., 81; M.D., Northwestern, 84; A.M., Nebraska, 00. Practising physician; prof. internal med., Lincoln Dental Col., 00-04; dean and prof. internal med., Nebr. Wesleyan, 04-09; lecturer mat. med., Nebraska, 09-12, *prof. introd. med., 12-* Trustee, Doane Col. A.A.; Am. Med. Ass.; Am. Acad. Med.; Anthropol. Ass.; mem. Ornith. Union; Cooper Ornith. Union; Nebr. Pharmaceut. Ass.; Nebr. Acad. Health problems in public schools. [Died Feb. 23, 21.]
- Stevens, Prof. James S(tacy)**, Orono, Maine. *Physics*. Lima, N. Y., Aug. 21, 64. B.S., Rochester, 85, M.S., 88, LL.D., 07; non-res. student, Syracuse, 88-90; Chicago, 95-96. Instr. science, Cook Acad., Montour Falls, N. Y., 85-91; *prof. physics, Maine, 91-*, dean, *col. arts and sciences, 05-* A.A.; Physical Soc.; Soc. de Physique. Theory of measurements; relation of magnetization to the modulus of elasticity; method of determining surface tension; relation of internal and external resistance; atmimetry; molecular contact; refractive indices of mixtures; new physical pendulum; meteorology of Orono, Me., 1869-1904; measurement of atmospheric transparency.
- Stevens, Dr. John Vosburgh**, Pierson Block, Spencer, Ind. *Medicine*. Lysander, N. Y., Nov. 23, 51. B.S., Loyola, M.D., 85. Prof. pediat., Loyola, 91-99, 09-15; *practising physician*. Ed., 'Annual of Med. and Surg,' 91-99; see'y, Wis. Board Med. Examiners, 01-09; ed., 'Wis. Med. Jour,' 10-12. World's Cong. Med. and Surg., 93, (see'y). A.A.; Am. Med. Ass. Pediatrics.
- Stevens, Dr. Neil E(verett)**, U. S. Department of Agriculture, Washington, D. C. *Plant pathology*. Portland, Maine, April 6, 87. A.B. Bates, 08; Ph.D., Yale, 11. *Instr.* bot., Kansas State, 11-12; *pathologist, bur. plant indust., U. S.*

- Dept. Agr.*, 12- A.A.; *Phytopath. Soc.*; Wash. Bot. Soc. Climate in relation to plant disease.
- Stevens, O(rin) A(lva)**, Agricultural College, N. Dak. *Biology*. Blue Rapids, Kans, Oct. 17, 85. B.S., Kansas State, 07. Asst. bot., Kansas State, 07-09; *seed analyst and asst. botanist*, N. Dak. Col., 09- A.A.; Bot. Soc.; N. Dak. Acad. North Dakota weeds; seed testing; North Dakota bees and wasps.
- Stevens, Prof. W(alter) Le Conte**, Washington and Lee University, Lexington, Va. **Physics*. Bartow Co, Ga., June 17, 47. A.B., South Carolina, 68; Virginia, 76-77; Ph.D., Georgia, 82; Strasbourg, Berlin and Zürich, 90-92. Instr. chem., Oglethorpe, 70-72; physics and chem., Chatham Acad., Savannah, Ga., 73-76; math., Cooper Inst., New York, 79-82; *prof. physics*, Packer Col. Inst., 82-90; Rensselaer, 92-98; *Washington and Lee*, 98- A.A.; (sec'y, B, 93, v. pres, 95); Physical Soc.; Philos. Soc.; N. Y. Acad.; fel. Royal Micros. Soc. Physiological optics; acoustics.
- Stevens, Prof. W(illiam) C(hase)**, University of Kansas, Lawrence, Kans. *Botany*. Princeton, Ill., Feb. 21, 61. A.B., Kansas, 85, M.S., 93; Bonn, 97. Instr. science, high sch. Emporia, Kans., 85-89; asst. nat. hist., Kansas, 89-94, assoc. prof. bot., 94-99, *prof.*, 99- A.A.; Soc. Nat.; Bot. Soc.; Bot. Cent. States. Sporogyny in pteridophytes and spermatophytes; adaptation to environment in plants through tissue modification.
- Stevenson, Dr. Charles H(ugh)**, Hotel Stevenson, Detroit, Mich. *Economics, Statistics*. Snow Hill, Md., Dec. 6, 69. Lehigh; LL.M., George Washington, 96, D.C.L., 98. Expert, U. S. Fish Commission, 91-09; special agent, U. S. Bur. Census, 09. Medal, Columbian Expos, 94; Paris Expos, 00; Pan-Am. Expos, 01; Smithsonian prize, Int. Fishery Cong, 08. Statist. Ass.; Econ. Ass.; Wash. Econ. Ass. Foreign fishery trade; shad fisheries; preservation of fishery products for food; international regulation of fisheries on the high seas; pearls; fishery census.
- Stevenson, Mrs. Cornelius (Sara Yorke)**, 237 S. 21st St., Philadelphia, Pa. *Archeology, Civics*. Paris, France, Feb. 19, 47. Institution Descauriel, Cours Rémy, etc; hon. Sc.D., Pennsylvania, 94; Litt.D., Temple. Sec'y, dept. archeol., Pennsylvania, 94-02, pres, 02-05; curator, Egypt. sect., *Am. Explor. Soc.*, 94-05, *sec'y*, 94- Trustee, Philadelphia Museum, 94-01, curator, 06; lecturer, Pa. Museum and Sch. Indust. Art; lit. ed., 'Public Ledger,' Phila., 07; v. pres, jury ethnol., Columbian Expos, 93; mem. London committee, Egypt. Explor. Fund; v. pres, and chairman, committee on social econ. woman's welfare dept., Nat. Civic Federation, 08. Officier de l'instruction publique, 16; service medal, Nat. Inst. Soc. Sci., 18; Chevalier Légion d'honneur, 20. Philos. Soc.; Archeol. Inst. (pres, Pa. branch, 98-01); Oriental Soc.; Pa. Hist. Soc.; Phila. Oriental Club. Archeology; civics; history; museum methods.
- Stevenson, Prof. E(dward) L(uther)**, 156th St., West of Broadway, New York, N. Y. *History, Geography*. Rozetta, Ill., Oct. 18, 60. A.B., Franklin, 81, A.M., 83, LL.D., 14; Hopkins, 87-88; Jena, Halle and Heidelberg, 88-91, Ph.D., Heidelberg, 91. Supt., city schools, Rising Sun, Ind., 83-84; Gilman, Ill., 84-87; prof. hist., Rutgers, 92-11. Non-res. lecturer, Hopkins, 04, 09; lecturer hist. geog., Columbia, 06-07; N. J. commissioner to Jamestown Expos, 07. Knight Order of Isabel the Catholic; Order of the Liberator, Venezuela. Am. Geog. Soc.; Antiq. Soc.; Am. Hist. Ass.; Hispanic Soc. Am. (sec'y). The interrelations of history and geography; historical geography, especially in cartography; early exploration and discovery, with special reference to its geographical and cartographical features.
- Stevenson, John A(lbert)**, Federal Horticultural Board, Washington, D. C. *Plant pathology*. Woonsocket, S. Dak., July 16, 90. B.S., Minnesota, 12. Asst. bot., Minnesota, 12-13; asst. pathologist, Sugar Planters Exp. Sta., P. R., 13-14; pathologist, P. R. Exp. Sta., 14; *path. inspector, fed. hort. board, U. S. Dept. Agr.* A.A.; Phytopath. Soc. Tropical botany and pathology.
- Stevenson, Prof. J(ohn) J(ames)**, 215 W. 101st St., New York, N. Y. **Geology*. New York, Oct. 10, 41. A.B., N. Y. Univ., 63, A.M., 66, Ph.D., 67, LL.D., Princeton, 93; Washington and Jefferson, 02. Prof. chem. and nat. hist., West Virginia, 69-71; geol., N. Y. Univ., 71-09. Aid, Ohio Geol. Surv., 71-72, 74; geologist, U. S. Geol. Surv., 73, 74, 78, 79, 80; second Pa. Geol. Surv., 75-82. A.A. (v. pres, 97); Geol. Soc. (pres, 99); Philos. Soc.; fel. N. Y. Acad. (pres, 96-98, v. pres, 09); Wash. Acad.; Phila. Acad.; Calif. Acad.; Padova Acad.; Moscow Acad.; Breslau Acad.; Halle Acad.; Palermo Acad.; Geol. Societies of Edinburgh, Liverpool, Belgium, Hungary and Russia. Carboniferous deposits of the Appalachian Basin; formation of coal beds; interrelations of fossil fuels.
- Stevenson, Prof. Louisa S(tone)**, Mt. Holyoke College, South Hadley, Mass. *Chemistry*. Lowell, Mass., Dec. 5, 79. A.B., Vassar, 01, fellow, 01-02, Cornell, 03-04, 09-10; Ph.D., Cornell, 11. Asst. chem., Vassar, 02-03, instr., 05-09; Wellesley, 11-13; assoc. prof., Sweet Briar, 13-15; instr., Mt. Holyoke, 15-16, assoc. prof., 16-19, *prof.*, 19- Chem. Soc. Fluorescence of anthracene.
- Stevenson, Dr. Reston**, College of the City of New York, New York, N. Y. *Chemistry*. Wilmington, N. C., May 5, 82. A.B., North Carolina, 02, A.M., 03; Ph.D., Columbia, 08. Asst. instr. chem., Cornell, 03-05; research chemist, East. Dynamite Co, 05; anal. chemist, Gen. Chem. Co, 05-06; tutor chem., Col. City of N. Y., 06-08, instr., 08-12, asst. prof., 12-20, *assoc. prof.*, 20- Major, U.S.A. Chem. Soc.; N. Y. Chemists Club. Physical chemistry.
- Stevenson, Prof. W(illiam) H(enry)**, Iowa State College, Ames, Iowa. *Agronomy*. Freeport, Ill., Sept. 4, 72. A.B., Illinois Col., 93; B.S.A., Iowa State, 05. *Prof. soils, Iowa State*, 02-10, agron., 10-14, *farm crops and soils*, 17-, in charge, *soil surv.*, 14-, v. director, *Exp. Sta.*, 12- Mem. Iowa State Drainage and Conservation Commission, 08-10. A.A.; Soc. Agron.; Am. Geog. Soc.; Iowa Acad.; Iowa State Drainage Ass. (sec'y, 04-14). Soil physics; soil fertility.

- Stewart, Prof. Alban**, Tallahassee, Fla. *Botany*. Wellington, Mo, Jan. 14, 75. A.B, Kansas, 96, A.M, 97; Ph.D, Harvard, 11. Asst. paleont, Kansas, 97-99; asst. U. S. Nat. Museum, 00-04; prof. biol, Penn (Iowa), 08-09; instr. bot, N. H. Col, 09-10; Wisconsin, 11-16; *prof. bot. and bacter*, Florida State, 16- Botanist, Calif. Acad. exped. to Galapagos Islands, 05-06. A.A; Bot. Soc; Phytopath. Soc. Paleontology; fossil fishes; flora of the Galapagos and Cocos Islands; anatomy of insect and fungus galls.
- Stewart, Dr. A(lonzo) H(amilton)**, 1048 S. 56th St, Philadelphia, Pa. *Bacteriology*. Greensburg, Pa, June 28, 67. M.D, Jefferson Med. Col, 92; D.P.H., Pennsylvania, 13; A.B, 16, A.M, 17. *Asst. bacteriologist*, Phila. Bur. Health, 97- Demonstrator clin. micros, Jefferson Med. Col, 94, 95, 97; instr. bacter, Pennsylvania, 14-17; sanitarian, Merchants S. B. Corp, 17-18. A.A; Am. Med. Ass; Franklin Inst. Bacteriology of milk.
- Stewart, Prof. Colin C(ampbell)**, Hanover, N. H. **Physiology*. Owen Sound, Ont, Aug. 15, 73. B.A, Toronto, 94; Clark, 94-95, fellow, 95-97, Ph.D, 97. Asst. *physiol*, Harvard Med. Sch, 97-98; tutor, Col. Physicians and Surg, Columbia, 98-00; demonstrator, Pennsylvania, 00-03, asst. prof, 03-04; assoc. prof, Dartmouth, 04-07, prof, 07-08, *Brown prof*, 08- Instr, summer sch, Clark, 95, 97; Pennsylvania, 02. A.A; *Physiol. Soc.* The physiology of mammalian smooth muscle; the nerve supply of the viscera; alcohol; muscle physiology; the Golgi method.
- Stewart, Dr. De Lisle**, P. O. Box 510, Cincinnati, Ohio. *Astronomical photography*. Wabasha, Minn, March 16, 70. B.L, Carleton, 91, Ph.D, 95. Principal district sch, Fertile, Minn, 91-92; asst, Goodsell Observatory R. R. Time Signals, 93-95; Arequipa Branch, Harvard Col. Observatory, 96-02; instr. astron, Cincinnati, 03-08, asst, observatory, 03-10; observer, Int. Latitude Service, 05-10. Asst. Eros plate measurements, Goodsell Observatory, Carleton, 02. Astron. Soc; Cincinnati Soc. Nat. Hist; Cincinnati Astron. Soc. (pres). Examination of photographic plates of Bruce telescope for new nebulae, asteroids, etc; methods of plate measurement.
- Stewart, Prof. F(red) C(arlton)**, Geneva, N. Y. *Plant pathology*. French Creek, N. Y, Feb. 13, 68. B.S, Iowa State, 92, M.S, 94. Asst. botanist, Iowa Exp. Sta, 91-94; *botanist*, N. Y. *Exp. Sta*, Geneva, 94- *prof. plant path*, Cornell. A.A; Phytopath. Soc. (pres, 13). Diseases of cultivated plants.
- Stewart, Dr. G(eorge) N(eil)**, Western Reserve University, Cleveland, Ohio. **Physiology*. London, Ont, April 18, 60. M.A, Edinburgh, 81, Mackay-Smith scholar, 83-84, D.Sc, 87, M.D, 90, LL.D, 20; Berlin, 86-87; George Henry Lewes student, Cambridge, 89-93, D.P.H, 92; Strasbourg, 92. Asst. physics lab, Edinburgh, 79-80; senior demonstrator *physiol*, Victoria, 87-89; examiner *physiol*, Aberdeen, 90-94; *prof. physiol. and histol*, Western Reserve, 94-03; *prof. physiol. and head of dept*, Chicago, 03-07; *prof. exp. med. and director*, Cushing Lab, Western Reserve, 07- *Physiol. Soc*; *Soc. Exp. Biol*; *Soc. Exp. Path*; *Soc. Pharmacol*; London *Physiol. Soc.* Electrophysiology of the nerve;
- Talbot's law; the nerves of the heart; the circulation time; hemolysis; the action of hemolytic and agglutinative agents on the blood corpuscles and other cells; the permeability of animal cells; resuscitation; blood-flow in man; physiology of adrenals.
- Stewart, Dr. G(eorge) W(alter)**, Iowa City, Iowa. **Physics*. St. Louis, Mo, Feb. 22, 76. A.B, De Pauw, 98; Ph.D, Cornell, 01. Asst. *physics*, Cornell, 99-01, instr, 01-03; asst. prof, North Dakota, 03-04, prof, 04-09; *prof. and head of dept*, Iowa, 09- Instr, summer sch, Lehigh, 02; Missouri, 03. A.A; *Physical Soc*; Eng. Educ; Iowa Acad. Radiation; distribution of energy in spectra (acetylene flames, black body at room temperature); architectural acoustics; high resistance; relation between illuminating power, viscosity and density of kerosene oils; acoustic shadow of a sphere, phase and intensity; sound diffraction and localization; ionization at metallic surfaces; binaural localization and beats; propagation in an irregular atmosphere; action of conical horns; physical aspects of audition; acoustic wave filters.
- Stewart, Guy R(obertson)**, Experiment Station, Hawaiian Sugar Planters Association, Honolulu, Hawaii. *Chemistry*. B.S, California, 06, 06-07. Asst. agr. chem, California, 05-07; asst. chemist, bur. chem, U. S. Dept. Agr, 07-09; analyst and investigator, Calif. State Board of Health, 09-13; asst. prof. agr. chem, California, 13-19; *station chemist*, *Exp. Sta*, Hawaiian Sugar Planters Ass, Honolulu, 20- A.A; Chem. Soc. Agricultural chemistry; soil fertility.
- Stewart, Dr. J(ames) S(mith)**, Whitehall Oil Co, Port au Spain, Trinidad. *Geology*. Glasgow, Scotland, 81. B.S, Queen's (Can), 11; Chicago, 12-13; Ph.D, Yale, 16. Asst. geologist, Can. Geol. Surv, 10-16; oil geologist, 17-18; geologist, Can. Geol. Surv, 19-20. Am. Geog. Soc. Geology of the disturbed belt of southwestern Alberta.
- Stewart, Dr. John P(ogue)**, York, Pa. *Horticulture*. Biggsville, Ill, June 1, 76. A.B, Illinois, 02; M.S.A, Cornell, 03, Ph.D, 11. Teacher Latin and science, township high sch, Biggsville, Ill, 99-01; bot. and agr, State Nor. Univ, Normal, Ill, 03-06; *prof. exp. hort*, Pa. State, 07-18; *commercial fruit grower*, 18- Assoc. ed, 'Pa. Farmer,' 20- A.A; Soc. Hort. Sci; Pomol. Soc. Experimental pomology; fertilization of apple orchards; properties, preparation and use of concentrated lime-sulphur; causes affecting yield and quality in apples.
- Stewart, Prof. John T(ruesdale)**, 2223 Knapp St, St. Paul, Minn. *Civil engineering*. Loda, Ill, Jan. 13, 68. B.S, Illinois, 93, C.E, 09. Field asst, U. S. Geol. Surv, 97-03; drainage engineer, U. S. Dept. Agr, 04-08; *prof. agr. eng*, Minnesota, 08-17; major and lieut. col, E.C, 17-19; *consulting engineer*, 19- Civil Eng; West. Soc. Eng; Ill. Soc. Eng. Reclamation of overflow lands; drainage plans for Red River Valley, North Dakota; experimental drainage system, Northwest Experiment Farm, Minnesota; methods of draining agricultural lands.
- Stewart, Miss Maude G(ertrude)**, Box 192, Pipestone, Minn. *Physics*. Elgin, Minn, March 5, 66. B.L, Carleton, 88; Chicago, 94; A.M, Co-

- lumbia, 13. Instr. high sch, Highland Park, Ill, 92-03; *head, dept. science*, Salem, 06-12; *high sch*, Faribault, Minn, 12-20; *Pipestone*, Minn, 20- A.A; Physical Soc. Radioactivity.
- Stewart, Prof. O(scar) M(ilton)**, Columbia, Mo. **Physics*. Neosho, Mo, Nov. 3, 69. Ph.B, De Pauw, 92; fellow, Cornell, 95-96, Ph.D, 97. Prof. physics and chem, Baker, 92-94; *asst. physics*, Cornell, 96-98, instr, 98-01; *asst. prof.*, Missouri, 01-03, *asst. prof. in charge*, 03-05, *prof.*, 05- A.A; Physical Soc. Electrical conductivity of gases; theory of instruments.
- Stewart, Prof. Robert**, Reno, Nev. *Chemistry*. American Fork, Utah, Aug. 16, 77. B.S, Utah Col, 02; Chicago, 04-05; fellow, Illinois, 08-09, Ph.D, 09. *Asst. chemist*, Utah Exp. Sta, 02-05, *asst. prof. chem*, Utah Col, 05-07, *prof.*, 07-15; *assoc. prof. soil fertility*, Illinois, 15-18, *prof.*, 18-20; *dean, col. agr.*, Nevada, 20- Soc. Agron. Agricultural chemistry; agronomy; soil fertility; chemical composition of arid farm crops; use of irrigation water.
- Stewart, R(ober) Meldrum**, Dominion Observatory, Ottawa, Can. *Astronomy*. Gladstone, Can, Dec. 15, 78. B.A, Toronto, 02, M.A, 03. Supt. time service, *Dominion Observatory*, 05-08, *astronomer*, 08-18, *asst. director*, 18- A.A; Astron. Soc; fel. Royal Astron. Soc. Can; fel. Royal Astron. Soc; Soc. astron. de France. Radioactivity; meridian work; time service; longitude by wireless; theory of errors.
- Stewart, Prof. Rupert L(yonel)**, Pomona, Calif. *Agriculture*. Mo, July 15, 90. B.S.A, N. Mex. Col, 11; M.S.A, Cornell, 14. *Asst. agron.*, N. Mex. Col, 11-13, *animal husbandry*, 14-15, *asst. prof. agron.*, 15-16, *prof.*, 16; *head, dept. agr.*, Pomona Senior High Sch. and Junior Col, 20- Soc. Agron; Ass. Farm Econ. Soils and farm crops.
- Stewart, Dr. T(homas) Dale**, University of California, Berkeley, Calif. *Chemistry*. Summer, Wash, 90. B.S, California, 13, M.S, 14, Ph.D, 16. *Asst. chem.*, California, 13-16; *research assoc.*, Chicago, 16-17; *instr.*, California, 17-20, *asst. prof.*, 20- Chem. Soc. Electromotive force and metallic conductors; the electric carrier in metals; organic chemistry.
- Stieglitz, Prof. Julius (Oscar)**, University of Chicago, Chicago, Ill. **Chemistry*. Hoboken, N. J, May 26, 67. Abiturient, Realgym, Karlsruhe, 86; Ph.D, Berlin, 89; hon. Sc.D, Clark, 09; hon. Chem.D, Pittsburgh, 16. *Docent chem.*, Chicago, 92-93, *asst.*, 93-94, *instr.*, 94-97, *asst. prof.*, 97-02, *assoc. prof.*, 02-05, *prof.*, 05-, *director anal. chem.*, 09-15, *univ. laboratories*, 12-, *chairman, dept. chem.*, 15- Hitchcock lecturer, California, 09, *summer lecturer*, 15; *assoc. ed.*, 'Jour. Am. Chem. Soc.', 12-19; *mem. Int. Commission Annual Tables of Constants*, 15-; *chairman, sub-committee, synthetic drugs*, Nat. Research Council, 17-, *v. chairman, div. chem.*, 19- Nat. Acad; A.A; Chem. Soc. (*chairman sect. org. chem.*, 07, *pres.*, 17); Soc. Chem. Indust; Philos. Soc; Am. Med. Ass. (*v. chairman, council of chem. and pharm.*); Am. Acad; Wash. Acad; Soc. chim. de Paris. The Beckmann molecular rearrangements; isoureas; carbimids; saponification of imido-ethers; positive halogen ions; molecular rearrangement velocities; cat-
- alysis; acid amidin formation; stereoisomeric nitrogen derivatives; velocities of ester saponification; theory of indicators; rearrangements in triphenylmethane series; electron theory of valence in organic chemistry; murexid; barbituric acid derivatives.
- Stifter, Dr. W(illiam) W(arren)**, Peking Union Medical College, Peking, China. *Physics*. Davenport, Iowa, Dec. 22, 83. A.B, Shurtleff, 02; fellow, Illinois, 06-07, 10-11, A.M, 08, Ph.D, 11. Instr. chem. and physics, Ewing, 02-06; *asst. physics*, Illinois, 07-09, *instr.*, 09-10; Columbia, 11-17; *instr. physics, pre-med. sch.*, Peking Union Med. Col, 17-20, *asst. prof.*, 20-, *dean*, 17- A.A; *assoc. Physical Soc.* Magnetic properties of cobalt at high temperatures.
- Stiles, Dr. Ch(arles) Wardell**, Hygienic Laboratory, 25th and E Sts, N. W, Washington, D. C. **Medical zoology*. Spring Valley, N. Y, May 15, 67. Wesleyan, 85-86, hon. M.S, 96, Sc.D, 07; Col. de France, 86-87; Berlin, 87-89; Ph.D, Leipzig, 90; Trieste Zool. Sta, 91; Pasteur Inst. and Col. de France, 91; M.D, Paris, 96; LL.D, N. Carolina, 12. Zoologist, bur. animal indust, U. S. Dept. Agr, 91-02; *prof. med. zool.*, Georgetown, 92-06; *zoologist*, U. S. Pub. Health Service, 02-10, *prof. zool.*, 10-, *asst. surgeon gen. (reserve)*, 19- Hon. custodian helminthol. collections, U. S. Nat. Museum, 93-; *sec'y, advisory committee*, Smithsonian table, Naples Zool. Sta, 94-; *lecturer*, Army Med. Sch, 94-01; *med. sch.*, Hopkins, 97-; Navy Med. Sch, 02-17; *agr. and science attaché*, U. S. Embassy, Berlin, 98-99; *sec'y, Int. Commission Zool. Nomenclature*, 98-; *scientific sec'y*, Rockefeller Sanit. Commission for Eradication of Hookworm Disease, 09-14. U. S. delegate, Int. Zool. Cong, Leyden, 95; Cambridge, 98; Berlin, 01; Bern, 04; Boston, 07. A.A. (*sec'y*, F, 02, *gen. sec'y*, 04); Soc. Zool; *cor. mem.* London Zool. Soc; *for. cor. Soc. de Biol. de France*; Acad. de Méd. de France; *for. cor. Soc. Centrale de Méd. Vet. de France*; *cor. mem.* Reale Acad. di Med. di Torino. Zoology in its relation to public health.
- Stiles, Prof. H(arold)**, Iowa State College, Ames, Iowa. *Physics*. Richwood, Ohio, Oct. 11, 74. Ph.B, Kenyon, 96; A.M, Harvard, 04; fellow, Northwestern, 07-09, Ph.D, 09. Instr. *physics*, Northwestern, 04-07; *prof.*, Morningside, 09-14; *assoc. prof.*, Iowa State, 14- *Lecturer physics*, Iowa, summers, 12-14. A.A; Physical Soc; Iowa Acad. Wave length determinations for mercury spectrum.
- Stiles, Prof. Henry Wilson**, College of Medicine, 309 Orange St, Syracuse, N. Y. *Anatomy*. M.D, Ensworth Cent. Med. Col, 01; Missouri; Stanford. Instr. *anat.*, Michigan, 06-09; *asst. prof.*, Tulane, 09-10; *prof.*, Syracuse, 10- Ass. Anat. A stereoscopic atlas of anatomy.
- Stiles, Prof. Percy G(ouldthwait)**, Harvard Medical School, Boston, Mass. *Physiology*. Newtonville, Mass, July 1, 75. B.S, Mass. Inst. Tech, 97; Ph.D, Hopkins, 02. Instr. *physiol.*, Univ. and Bellevue Hosp. Med. Col, 02-03; Mass. Inst. Tech, 03-17; *asst. prof.*, Simmons, 07-14; *Harvard Med. Sch.*, 16- Instr. *physiol.*, Mass. Nor. Sch, Framingham, 98-99. A.A; Physiol. Soc; Soc. Exp. Biol; Am. Acad. Smooth muscle; skeletal muscle; vasomotor reactions.

- Stillhamer, Prof. A(rthur) G(rant)**, 705 N. East St, Bloomington, Ill. *Physics, Astrophysics*. Bloomington, Feb. 26, 78. B.S., Ill. Wesleyan, 98, A.M., 00; fellow, Chicago, 03-05. Instr. chem. and physics, Ill. Wesleyan, 95-98, asst. chem., 98-99; asst. astrophys. and director solar research, Yerkes Observatory, 05-06; assoc. prof. *physics*, Ill. Wesleyan, 08-09, *prof.*, 09-A.A.; Physical Soc; fel. Royal Astron. Soc. A means of automatically recording atmospheric transparency.
- Stillmans, Prof. Arthur William**, 104 S. Michigan Boulevard, Chicago, Ill. *Dermatology*. Chicago, Dec. 24, 71. M.D., Illinois, 99. Instr. *dermat. and syphilol.*, Illinois, 07-14; clin. prof., Loyola, 14-18, *prof.*, 18-19, *Northwestern*, 19-Attending dermatologist, Cook Co. Hosp., Chicago, 12- Am. Med. Ass.; Dermat. Ass.; Chicago Inst. Med. *Dermatology*; syphilology.
- Stillman, Prof. John M(axson)**, Stanford University, Calif. **Chemistry*. New York, N. Y., April 14, 52. Ph.B., California, 74, Ph.D., 85, LL.D., 16; Strasbourg and Würzburg, 75-76. Instr. chem., California, 76-82; chemist, Boston Sugar Refining Co., 82-87; supt. and chemist, Standard Sugar Refining Co., 87-91; prof. chem., Stanford, 91-17, v. pres., 13-17, *emer. prof.*, 17- Asst. educ. director, district 11, S.A.T.C., 18. A.A.; Chem. Soc; Chem. Eng. (v. pres., 16-19). Chemistry of certain vegetable substances; ammonia compounds of inorganic chlorids; molecular lowering of the freezing-point of diphenylamin and naphthylamin; certain factors influencing the precipitation of Ca and Mg in water purification; history of chemistry.
- Stillman, Prof. Stanley**, 2336 Broadway, San Francisco, Calif. *Surgery*. Sacramento, Calif., Aug. 21, 61. A.B., California, 82; M.D., Cooper Med. Col., 89. *Prof. surg.*, Cooper Med. Col., 98-12; *Stanford*, 06- Lieut. commander and commander, M.R.F. Trustee, Cooper Med. Col. Surg. Ass; Calif. Acad. Med; Soc. Int. de Chirurg. General surgery.
- Stillman, Dr. W(illiam) O(lin)**, 287 State St, Albany, N. Y. *Medicine, Surgery*. Normansville, N. Y., Sept. 9, 56. M.D., Albany Med. Col., 78; hon. A.M., Union, 80; Paris, Berlin, Vienna and London, 83-84. *Physician*, Lathrop Mem. Hosp. for Incurables, 87-92; *Home for Christian Workers*, 92-; *lecturer hist. of med.*, Albany Med. Col., 97- Physician to Mother House of Dominican monasteries for 35 years. A.A.; Ass. Anat; Am. Humane Ass. (pres). Uric acid diathesis.
- Stillwell, Albert G(ladding)**, 76½ Pine St, New York, N. Y. *Chemistry*. Brooklyn, N. Y., Aug. 8, 76. Brooklyn Polytech; B.S., Columbia, 98. Asst. chemist, Stillwell and Gladding, 98-03; *pres.*, Stillwell Laboratories, Inc., 03- Official chemist, N. Y. Produce Exchange, 03-09; Nat. Ass. Importers, 09- Chem. Soc. (director, N. Y. sect., 09-10); Soc. Chem. Indust; N. Y. Chemists Club. Analytical chemistry; fertilizers; oils.
- Stillwell, L(ewis) B(uckley)**, 143 Liberty St, New York, N. Y. *Electrical engineering*. Scranton, Pa., March 12, 63. Wesleyan, 82, hon. Sc.D., 07; E.E., Lehigh, 85, hon. M.S., 07. Chief elec. engineer, Westinghouse Elec. and Mfg. Co., 91-97; elec. director, Niagara Falls Power Co., 97-00; Rapid Transit Subway Construction Co., 00-08; *consulting elec. engineer*, Manhattan Railway Co., 00-04; *The Hudson Companies*, 05-A.A.; Elec. Eng. (pres); Civil Eng; Philos. Soc; British Inst. Elec. Eng.
- Stimson, H(arold) F(rederic)**, Bureau of Standards, Washington, D. C. *Physics*. Leicester, Mass., April 1, 90. A.B., Clark, 10, A.M., 11, Ph.D., 15. Research asst. to Prof. A. G. Webster, 11-15; *assoc. physicist, bur. Standards*. A.A.; assoc. Physical Soc. Mathematical physics; electrostatic capacities; electric oscillations; sound.
- Stine, Dr. C(harles) M(ilton) A(rland)**, Wilmington, Del. *Chemistry*. Norwich, Conn., Oct. 18, 82. A.B., Pennsylvania, 01, B.S., 03, A.M., 04, M.S., 06; fellow, Hopkins, 06-07, Ph.D., 07. Prof. chem., Md. Col., 03-05; head, high explosive div, east. lab, *E. I. duPont de Nemours and Co.*, 07-16; org. div, *chem. dept.*, 16-19; *asst. director*, 19- Chem. Soc. (councilor, 17); Chem. Eng; N. Y. Chemists Club. Hydrates in binary electrolytes; high explosives; detonating compounds; dyes and intermediates.
- Stine, Prof. W(ilbur) M(orris)**, Mechanicsburg, Pa. *Electrical engineering*. Tyrone, Pa., Nov. 3, 63. Ph.B., Dickinson, 86, M.S., 89, Sc.D., 93; Ph.D., Ohio (Athens), 93. Asst. prof. physics and later prof. physics and elec. eng., Ohio (Athens), 86-93; director elec. eng., Armour, 93-98; prof. eng., Swarthmore, 98-09. Ed, 'Elec. Engineering,' 94; mem. jury awards, Columbian Expos, 93; Nat. Export Expos, Phila., 99. A.A.; Physical Soc; Elec. Eng. Alkaline and gas accumulators; arc and incandescence lamps; physics of fuses for electrical currents; photometry; Röntgen rays; instruments of precision for electrical measurements; metallography; magnetism of iron; precision apparatus; electromagnetism.
- Stitt, Rear Admiral E(dward) E(hodes)**, U.S.N., U. S. Naval Medical School, Washington, D. C. *Medicine*. Charlotte, N. C., July 22, 67. A.B., South Carolina, 85, LL.D., 17; M.D., Pennsylvania, 89; Sc.D., 20. Asst. surgeon, *U.S.N.*, 89-92, passed asst. surgeon, 92-00, surgeon, 00-17, med. director with rank of *rear admiral*, 17-20, commanding officer, Naval Med. Sch., 16-20, *surgeon gen.*, 20- Assoc. prof. med. zool., Univ. Philippines; prof. trop. med., Georgetown; George Washington; lecturer, Jefferson Med. Col. Ass. Immunol; Soc. Trop. Med. Bacteriology; blood work; parasitology; tropical medicine.
- Stock, Dr. Chester**, 492 Seventh St, San Francisco, Calif. *Paleontology*. San Francisco, Jan. 28, 92. B.S., California, 14, fellow, 14-15; Ph.D., 17. Research asst, *dept. palcont.*, California, 17-19, *instr.*, 19- A.A.; Paleont. Soc; Soc. Mammal; West. Soc. Nat; Calif. Acad. Comparative anatomy; vertebrate paleontology and morphology; historical geology.
- Stock, Kurt**, Bartlesville, Okla. *Metallurgy*. Berlin, Germany, May 8, 74. Diploma, Royal Sch. of Mines, Freiberg. Chief chemist and later asst. supt., U. S. Zinc Co., 06-10; with Lanyon-Starr Smelting Co., 10-13; supt. and v. pres., Altoona Zinc Smelting Co., 13-14; construction engineer, Clarksburg Clinkering Co., 14-15;

- supt, Bartlesville Zinc Co, 15- A.A.; Min. Eng; Colo. Sci. Soc.
- Stockard, Prof. Charles R (upert)**, Cornell Medical College, New York, N. Y. **Anatomy, Biology*. Washington Co, Miss, Feb. 27, 79. B.S, Miss. Agr. Col, 99, M.S, 01; Ph.D, Columbia, 06; Sc.D, Cincinnati, 20. Acting prof. mil. science, Miss. Agr. Col, 98-00; Jefferson Mil. Col, 00-03; asst. zool, Columbia, 05-06; embryol. and histol, med. col, Cornell, 06-08, instr, 08-09, asst. prof. embryol, 09-11, prof. anat, 11- Hunting- ton Fund for cancer research; trustee, Woods Hole; investigator, Tortugas Lab, Carnegie In- stitution, Naples Zool. Sta. and Anat. Inst, Munich. A.A.; Soc. Nat. (sec'y, 09-11); Soc. Zool; Ass. Anat. (sec'y-treas, 14-); Soc. Exp. Biol; Soc. Cancer Research. Influence of chem- icals on embryonic development; production of cyclopean monsters; regeneration and growth; modification of germ-cells; degeneracy in mam- mals; blood-cells and endothelium; oestrous cycle; structural defects and abnormalities; post-natal growth and development.
- Stockberger, Dr. W (arner) W**, U. S. Department of Agriculture, Washington, D. C. *Botany*. Croton, Ohio, July 10, 72. B.S, Denison, 02; Ph.D, George Washington, 07. Supt. schools, Hanover, Ohio, 95-97; asst. instr. science, Deni- son, 97-01, instr. bot, 01-03; expert in histol, bur. plant indust, U. S. Dept. Agr, 03-09, phar- macognosist, 09-10, physiologist, 10-13, *physiol- ogist in charge drug, poisonous and oil plant in- vestigations*, 13- Asst. sec'y, Pharmaceut. Con- vention, 20- A.A.; Pharmaceut. Ass; Soc. Agron; Wash. Bot. Soc. (pres, 12). Pharma- cognosy; hop culture; drug plant culture in America; poisonous plants; new oil-seed crops; variation and heredity.
- Stockbridge, Dr. H (orace) E (dward)**, R. F. D. 3, Atlanta, Ga. *Agriculture, Chemistry*. Had- ley, Mass, May 19, 57. B.S, Mass. Agr. Col, 78; Ph.D, Göttingen, 84. Asst. chemist, U. S. Dept. Agr, 80; instr. chem, Mass. Col, 81, assoc. prof. chem. and geol, 84-85; prof, Imp. Col. of Agr, Sapporo, Japan, 85-89; chief chemist, Japanese Govt, 87-89; director, Ind. Exp. Sta, 89; pres, N. Dak. Col. and director, Exp. Sta, 90-94; director, Farmers' Institutes, Lake City, Fla, 97-05; cd, 'South. Ruralist,' 06- A.A.; Chem. Soc; Ind. Acad; Chem. Gesell; Japan Educ. Soc. Fertilizing of crops; feeding of animals; estimation of sugar in beets; lupulin of hops; clarification of cane juice; effect of cul- tivation on elaboration of characteristic con- stituents of certain wild plants; determination of digestive coefficient of native feed stuffs; feeding values of new feed stuffs.
- Stocking, Prof. W (illiam) A (lonzo), Jr**, The Parkway, Ithaca, N. Y. *Bacteriology*. Sims- bury, Conn, May 13, 72. B.Agr, Conn. Col, 95; B.S.A, Cornell, 98, M.S.A, 04. Instr. agr, State Nor. Sch, Mansfield, Pa, 98-99; Conn. Col, 99- 03, asst. prof. agr. bacter, 03-05, prof, 05-06; asst. prof. dairy bacter, Cornell, 06-09, prof. dairy indust, 09- Expert dairy bacter, U. S. Dept. Agr, 05. Soc. Bact; Ass. Am. Med. Milk Commissions. Milk bacteria; bacterial content of the cow's udder; sources and nature of bac- terial contamination of milk; milking machines; milk products.
- Stockton, Dr. Cha (rle)s G**, 436 Franklin St, Buf- falo, N. Y. **Medicine*. Madison, Ohio, Aug. 27, 53. M.D, Buffalo, 78; Niagara, 84. Prof. mat. med, Niagara, 83-87; *principles and prac- tise of med. and clin. med*, Buffalo, 87-12, emer. prof, 12- Consulting physician, Buffalo Gen. Hosp; N. Y. State Hosp. for Crippled and De- formed Children; Buffalo City and Erie Co. Hosp; contributor to various text books and en- cyclopedias. A.A.; Am. Physicians; Am. Med. Ass; Gastro-Enterol. Ass. Diseases of the ab- dominal organs.
- Stoddart, Prof. C (harles) W (illiam)**, State Col- lege, Pa. *Chemistry*. Boscobel, Wis, Oct. 14, 77. A.B, Columbia, 00, A.M, 01; Ph.D, Wis- consin, 09. Asst. prof. soils, Wisconsin, 04-10; prof. agr. chem, Pa. State, 10-20; dean, sch. lib. arts, and acting dean, sch. nat. science, 10- A.A.; Chem. Soc. Soil acidity and phosphates; rare earths.
- Stoek, Prof. Harry H (arkness)**, University of Ill- nois, Urbana, Ill. *Mining engineering*. Washing- ton, D. C, Jan. 16, 66. B.S, Lehigh, 87, E.M, 88, Sc.D. Asst. engineer, Susquehanna Coal Co, 88- 90; instr. mining, metal. and geol, Lehigh, 90- 93; asst. prof. mining and metal, Pa. State, 93- 97; ed, 'Colliery Eng,' 97-09; prof. mining eng. and head of dept, Illinois, 09- A.A.; Coal Min. Inst. (pres); Min. and Metal, Eng; Eng. Educ. Coal mining and storage; economics of mining; mining education.
- Stoekle, Dr. Erwin R**, Cutler Hammer Manu- facturing Co, Milwaukee, Wis. *Physics*. Chi- cago, Ill, June 8, 90. B.S, Northwestern, 11; M.S, Wisconsin, 13, Ph.D, 16. Research phys- icist, West. Elec. Co, 15-17; director, physical lab, Cutler Hammer Mfg. Co, 17- Assoc. Phys- ical Soc; Elec. Eng. Thermionic vacuum tubes; discharge of electricity through gases; electric arcs.
- Stokes, Dr. Henry N (ewlin)**, 1207 Q St, N. W, Washington, D. C. **Chemistry*. Moorestown, N. J, Oct. 24, 59. B.S, Haverford, 78; Ph.D, Hopkins, 84; Munich, 85-86; Polytech, Zürich, 86-89. Chemist, U. S. Geol. Surv, 89-92; asst. prof. inorg. chem, Chicago, 92-94; chemist, U. S. Geol. Surv, 94-03; Bur. Standards, 03-09. A.A. (sec'y, C, 93, 03); Chem. Soc. (mem. com- mittee papers and pub); Min. Eng; Chem. Gesell; Soc. chim. de Paris. Inorganic chem- istry; silicon compounds; phosphorus-nitrogen compounds; chemistry of ore deposition, espe- cially sulphids.
- Stokes, Dr. John H (inchman)**, Mayo Clinic, Ro- chester, Minn. *Dermatology*. Munich, Germany, Sept. 1, 85. A.B, Michigan, 08, M.D, 12. Instr. anat, Michigan, 13, res. dermat. and syphilol, 13-14, instr, 14; Illinois, 15-16; assoc. prof. med, Minnesota, and chief sect. dermatol. and syphilol, Mayo Clinic, 16- Am. Med. Ass; Der- mat. Ass. Syphilis; acoustic complex of the opossum; black fly bite; cutaneous sensitization; disease prevention.
- Stokes, R (obert) T (homas)**, 112 N. Kenilworth Ave, Oak Park, Ill. *Chemistry*. Brooklyn, N. Y, June 6, 85. B.S, Dartmouth, 07. Instr. chem, Hobart, 07-08; indust. chemist, 08-11;

- tutor chem, Col. City of N. Y., 11-16; rubber manufacturing, 16-18; with *Sears, Roebuck and Co.*, 18- A.A.; Chem. Soc. India rubber.
- Stokes, Dr. William Royal**, 1639 N. Calvert St, Baltimore, Md. *Bacteriology*. Baltimore, Aug. 21, 70. M.D., Maryland, 91; Sc.D., Washington (Md.), 10. Res. pathologist, Boston City Hosp., 92-96; assoc. prof. path., Maryland, 96-00, *prof.* path. and bacter., Col. Physicians and Surg., Baltimore, 00-14, Maryland, 14-19, *bacter.*, *Maryland and Col. Physicians and Surg.*, 19- Chief, bur. bacter., Md. State Department of Health, 96-20; Baltimore Dept. Health, 96- Soc. Bact.; Am. Med. Ass.; Pub. Health Ass. Sanitary bacteriology; immunity; bacteriology of foods.
- Stokey, Prof. Alma G(racey)**, Mt. Holyoke College, South Hadley, Mass. *Botany*. Canton, Ohio, June 17, 77. A.B., Oberlin, 04; Ph.D., Chicago, 08. Asst. bot., Oberlin, 03-06; instr., *Mt. Holyoke*, 08-11, assoc. prof., 11-16, *prof.*, 16- A.A.; Bot. Soc.; Sullivant Moss. Chapter. Morphology and anatomy of pteridophytes; seed plants.
- Stoland, Prof. O(le) O(lufson)**, 1845 Leonard Ave, Lawrence, Kans. *Physiology*. Beresford, S. Dak., July 30, 81. A.B., South Dakota, 05; M.S., Chicago, 11, Ph.D., 13. Teacher science, high sch., Vermilion, S. Dak., 05-06; instr. biol., South Dakota, 06-11; asst. *physiol.*, Chicago, 11-13; *prof.*, South Dakota, 13-16; *Kansas*, 16- A.A.; *Physiol. Soc.* Toxicity of normal and hypertrophied thyroids; effect of pituitrin on renal activity; effect of parathyroid tetany on the liver and pancreas; temperature as a factor in the control of thyroid activity.
- Stoller, Prof. James H(ough)**, Union College, Schenectady, N. Y. *Geology*. Johnstown, N. Y., Dec. 11, 57. A.B., Union, 84, A.M., 87; Munich 86-87; Ph.D., Leipzig, 98. Instr. nat. hist., Union, 84-89, adj. prof., 89-92, *prof.* geol. and biol., 92-19, *geol.*, 19-; *mem. staff*, *dept. geol.*, N. Y. State Museum, 12- Soc. Nat.; fel. Geol. Soc. Glacial geology of Schenectady, Saratoga and Cohoes quadrangles; glacial geology of lower Mohawk and middle Hudson valleys.
- Stone, Prof. E(rnest) A(lbert)**, 429 Daly Ave, Ottawa, Ont. *Civil engineering*. Charlottetown, P. E. I., July 16, 70. B.A.Sc., McGill, 91, M.A.E., 94. With various railroads, 91-02; asst. struct. engineer, Canada Foundry Co., Toronto, 02-07; *prof.* civil eng., Dalhousie, 07-08; New Brunswick, dean, eng. sch., 08-11; consulting engineer, 11-14; *prof.* gen. eng. Queen's (Can.), 14-18; struct. engineer, Mil. Hosp. Commission, 18-20; *bridge engineer*, *Grand Trunk Arbitration*, 20- Civil Eng.; Eng. Educ.; Can. Inst. Eng.; Can. Soc. Civil Eng. Impact stresses.
- Stone, Prof. George E(dward)**, Amherst, Mass. **Botany*. Leicester, Mass., Sept. 6, 60. Mass. Col., 83-84; Mass. Inst. Tech., 85-89; Leipzig, 91-93. *Prof.* bot., Mass. Col., 93-17, botanist, Hatch Exp. Sta., 94-17. Botanist, Mass. State Board of Agr. A.A.; Soc. Nat.; Bot. Soc.; New Eng. Bot. Club; Mass. Hort. Soc.; Mass. Forestry Ass.; Boston Soc. Nat. Hist.; Worcester Nat. Hist. Soc.; Worcester Hort. Soc. Plant pathology and physiology.
- Stone, Dr. Harvey B(rinton)**, 205 E. Preston St, Baltimore, Md. *Surgery*. Baltimore, Nov. 22, 82. A.B., Hopkins, 02, M.D., 06. Adj. prof., *surg.*, Virginia, 07-10; *instr.*, *Hopkins*, 12- Am. Med. Ass. Surgery; pathology of the intestinal tract.
- Stone, Dr. Isabelle**, Sweet Briar College, Sweet Briar, Va. *Physics*. Chicago, Oct. 18, 68. A.B., Wellesley, 90; M.S., Chicago, 96, Ph.D., 97. Teacher, Bryn Mawr Prep. Sch., Baltimore, 97-98; instr. physics, Vassar, 98-06; head, Sch. for Am. Girls, Rome, Italy, 07-14; *prof.* physics, *Sweet Briar Col.*, 18- Reader in physics, Col. Entrance Exam. Board, June, 01. A.A.; Physical Soc. Electrical resistance of thin films; color in platinum films; properties of thin films when deposited in a vacuum.
- Stone, James S(avage)**, Harvard Medical School, Boston, Mass. *Surgery*. Newton, Mass., Aug. 21, 68. A.B., Harvard, 89, A.M., M.D., 94. *Instr. surg.*, *Harvard*. Surgeon, Boston Children's Hosp. Am. Med. Ass.; Col. Surg.
- Stone, Prof. J(ohn) L(emuel)**, College of Agriculture, Ithaca, N. Y. *Agriculture*. Waverly, Pa., July 6, 52. B.S.A., Cornell, 74. Asst. agr., Cornell, 97-03, asst. prof. *farm practise*, 03-06, *prof.*, 06-19, *emer. prof.*, 19- Mem. Pa. State Board of Agr.; lecturer, Farmers' Institutes. Soc. Agron.; N. Y. State Drainage Ass. Farm management.
- Stone, John S(tone)**, 4811 Panorama Drive, San Diego, Calif. *Electrical engineering*. Dover, Va., Sept. 26, 69. Columbia, 86-88; Hopkins, 88-90. Experimentalist, lab., Am. Bell Tel. Co., Boston, Mass., 90-99; consulting elec. engineer, 99-02; chief engineer, Stone Tel. and Tel. Co., 02-10, v. pres., 02-08, pres., 08-10; consulting elec. engineer, 10-20; with *dept. research and development*, *Am. Tel. and Tel. Co.*, 20- Lecturer elec. oscillations, Mass. Inst. Tech. Mem. Int. Elec. Cong., 04; delegate, Second Pan-Am. Scientific Cong., 17. A.A.; assoc. Elec. Eng.; Electrochem. Soc.; Wireless Tel. Eng. (pres., 06-09, v. pres., 09); Radio Eng. (v. pres., 13, pres., 14, manager, 15-20, chairman, committee on wavelength regulation, 19-, organizer and chairman committee on Council Nat. Defense); hon. mem. Radio Club; Franklin Inst.; assoc. Naval Inst.; Am. Acad.; Mass. Inst. Tech. Soc. Arts. Electrophysics; telegraphy and telephony over wires and by wireless; simultaneous transmission and reception in radio-telegraphy and telephony; directive transmission and reception.
- Stone, Prof. Mabel A(nnie)**, Wellesley College, Wellesley, Mass. *Botany*. Ayer, Mass., Feb. 14, 85. A.B., Wellesley, 07, A.M., 13; Woods Hole; Stanford. Asst. bot., *Wellesley*, 07-12, instr., 12-16, *asst. prof.*, 17- A.A. Comparative morphology of the liverworts.
- Stone, Prof. Ormond**, Flagler Farm, Clifton Station, Va. **Astronomy*. Pekin, Ill., Jan. 11, 47. Chicago, 66-70, A.M., 75. Tutor, Racine, 67-68; asst., U. S. Naval Observatory, 70-75; director, Cincinnati Observatory, 75-82; Leander McCormick Observatory, and prof. practical astron., Virginia, 82-12, retired, 12. Founder and ed., *'Annals of Math.'* 84-; chairman astron. Cong. Arts and Sciences, 04. A.A. (v. pres., 88); As-

- tron. Soc; Math. Soc; Math. Ass; Wash. Acad; Wis. Acad; Cincinnati Soc. Nat. Hist; Circolo Mat. di Palermo. Observations of variable and double stars, nebulae and satellites; celestial mechanics.
- Stone, B(alph) W(alter)**, U. S. Geological Survey, Washington, D. C. *Geology*. Camden, N. Y., Nov. 17, 76. Ph.B, Hamilton, 99; A.B, Harvard, 00, A.M, 01. Asst. geol, Harvard, 00-01; asst. geologist, *U. S. Geol. Surv.*, 01-17, *geologist*, 17- Instr. geog, summer sch. for Cuban teachers, Harvard, 00. Mem. jury awards, Panama-Pacific Expos, 04. A.A; Geol. Soc; Wash. Geol. Soc. Stratigraphy in western Pennsylvania; bituminous coal; gas and oil; Waynesburg and Eldersridge (Pa) quadrangles; coal resources of southwestern Alaska, Russell Fork, Virginia, and Kentucky, and Crazy Mountains, Montana; stratigraphic relations of the Livingston formation of Montana; coal and stratigraphy of Black Hills and Powder River, Wyoming; gypsum, phosphate rock, sand and gravel, magnesite, magnesium, salt, bromin and calcium chlorid resources of the United States.
- Stone, Dr. B(oland) E(lisha)**, Ontario Agricultural College, Guelph, Ont, Can. *Botany*. Harvard, Nebr, Nov. 4, 81. B.S, Nebraska, 07; M.S, Ala. Polytech, 08; Ph.D, Cornell, 13. Asst. bot, Purdue, 06-07; instr, Ala. Polytech, 07-08; adj. prof, agr. bot, Nebraska, 08-09; *lecturer bot*, Cornell, 09-12; *Ont. Agr. Col.*, 12- A.A; Phytopath. Soc; Bot. Soc. Plant pathology and physiology; life histories of ascomycetes.
- Stone, Dr. R(uth) L(ovilla)**, University of California, Berkeley, Calif. *Bacteriology*. San Francisco, Calif, Aug. 3, 93. A.B, California, 15, A.M, 16, Ph.D, 19. *Research asst. path, California*, 16- *Bacteriologist*, U. S. Base Hosp, Nitro, Va, 19. Serology; typhoid fever; immune bodies; *Streptococcus empyema*.
- Stone, Dr. Willard John**, 324 Chamber of Commerce Building, Pasadena, Calif. *Medicine*. Gloversville, N. Y, May 31, 77. B.S, Michigan, 99, M.D, 01. Physician-in-chief, Flower Hosp, Toledo, Ohio, 08-17; *attending physician, Los Angeles Co. and Pasadena Hospitals*. Major, M.C, 17-19. Soc. Clin. Invest; Ass. Immunol; Climat. Ass; Am. Med. Ass; Miss. Valley Med. Ass. (pres, 17). Medical diagnosis.
- Stone, Dr. William Stephen**, 162 E. 63d St, New York, N. Y. *Medicine*. New Britain, Conn, May 3, 67. A.B, Yale, 88; M.D, Columbia, 91. Instr. gynec, Columbia, 95-06; attending surgeon, N. Y. Lying-In Hosp, 01-07; asst. director *cancer research, Mem. Hosp, N. Y. City*, 17-20, *clin. director*, 20- Ass. Cancer Research; Gynec. Soc. Pathology; obstetrics; cancer; biological and clinical use of radium.
- Stone, Pres. Winthrop Ellsworth**, West Lafayette, Ind. *Chemistry*. Chesterfield, N. H, June 12, 62. B.S, Mass. Col, 82; Boston, 86; Ph.D, Göttingen, 88. Asst. Mass. Exp. Sta, 84-86; chemist, Tenn. Exp. Sta, 88-89; prof. chem, *Purdue*, 89-92, v. pres, 92-00, *pres*, 00- Chem. Soc; fel. Ind. Acad. Carbohydrates.
- Stone, Witmer**, Academy of Natural Sciences, Philadelphia, Pa. *Zoology, Ornithology*. Philadelphia, Sept. 22, 66. A.B, Pennsylvania, 87, A.M, 91, Sc.D, 13. *Conservator, ornith. sect, Acad. Nat. Sciences, Phila*, 91-, asst. curator, *Museum*, 93-08, curator, 08-18, *exec. curator*, 18- *Lecturer nat. hist*, Germantown Acad, 89-90; Ludwick Inst. Courses, Phila. A.A; fel. Ornith. Union (v. pres, 14-20, pres, 20-); Soc. Mammal; Soc. Ichthyol. and Herp; Bot. Soc; Entom. Soc; Philos. Soc; N. Y. Linnean Soc; Phila. Acad; Phila. Bot. Club; Del. Valley Ornith. Club (pres, 91); for. mem. British Ornith. Union. Systematic ornithology and mammalogy; the molt and coloration of birds; geographical distribution of plants and animals.
- Stoner, Dr. D(ayton)**, 603 Summit St, Iowa City, Iowa. *Zoology*. North Liberty, Iowa, Nov. 26, 83. A.B, Iowa, 07, M.S, 09, Ph.D, 19. Asst. museum, Iowa, 08-14, instr. *zool*, 14-19, assoc, 19-20, *asst. prof.* 20- *Insectary asst*, Iowa Exp. Sta. *zool. exped. to Vancouver Isl*, 13; instr. entom. Lakeside Lab, Iowa, 16; mem. Univ. of Iowa exped. to Barbados and Antigua, 18; instr. entom. and ornith. biol. sta, Michigan, 19. A.A; Entom. Soc; Wilson Ornith. Club; Nat. Ass. Audubon Societies; fel. Iowa Acad. Entomology; distributional, ecological and systematic zoology; rodents of Iowa; Scutelleroidea.
- Stoner, R(eginald) C**, 200 Bush St, San Francisco, Calif. *Geology*. Bakersfield, Calif, Aug. 21, 89. B.S, California, 12. *Geologist, Standard Oil Co. of Calif.* Paleont. Soc; Calif. Acad. Paleontology.
- Stookey, Dr. Lyman Brumbaugh**, 412 Sixth St, Los Angeles, Calif. *Physiology, Pathology*. Belleville, Ill, July 30, 78. A.B, Yale, 00, Ph.D, 02; Strasbourg, 04-05. Asst. physiol. and physiol. chem, N. Y. State Path. Inst, 02-05; *prof. physiol, South. California*, 05- Am. contributor, Maly's 'Jahresbericht über die Fortschritte der Tierchemie.' A.A; Physiol. Soc; Chem. Soc; Soc. Exp. Biol; Soc. Biol. Chem; N. Y. Soc. Physiol. Chemists. Formation of glycogen; gastric secretion of hydrochloric acid; digestion of gelatin; biological relation of proteids and proteid assimilation; digestion and self-digestion of tissues and tissue extracts; autolysis of brain tissue; output of ammonia in course of different forms of insanity; proteolytic enzymes; peptone; peptids; internal secretion of thyroid; pentose; pharmacological action of iodids, salicylates, etc; intracellular enzymes of anti-enzymes; nucleoproteids; intracellular and extracellular antibodies; complement fixation reaction for tuberculosis.
- Stookey, Prof. S(tephen) W(harton)**, Cedar Rapids, Iowa. *Geology*. Marion, Iowa, April 3, 50. Cornell, (Iowa), 79-81; B.S, Coe, 84, M.S, 87, LL.D, 04; Iowa, 91-93, 00-02; Chicago, summers, 95, 96. Supt. schools, Manchester, Iowa, 84-91; prof. nat. science, Coe, 91-99, geol. and bot, 01-07; pres, Bellevue (Nebr), 08-14; *prof. geol. and bot. and dean. Coe*, 14- Mem. Iowa exped. to Bahama, 93; Iowa Geol. Surv. Nebr. Acad; Iowa Acad. Geology of Iowa and Poweshiek Counties, Iowa; destructive parasitic fungi in Iowa.
- Storer, Dr. H(oratio) R(obinson)**, 58 Washington St, Newport, R. I. *Medicine, Surgery*. Boston, Mass, Feb. 27, 30. A.B, Harvard, 50, A.M, M.D, 53, LL.B, 68; Paris, London and Edin-

- burgh, 53-55; LL.D, Fordham, 12. Prof. obstet. and med. juris, Berkshire Med. Col, 65-69; asst. to Sir J. Y. Simpson and asst. ed, 'Obstet. Memoirs and Contributions,' 54-55; *practising physician, and lecturer and writer on med, surg. and sanit. subjects*, 55- Physician, Boston Lying-in Hosp; surgeon, St. Elizabeth Hosp. and N. E. Hosp. for Women and Children; consulting surgeon, Carney Hosp, Boston; Newport Hosp; St. Joseph's Hosp, Providence. Gold medal, Am. Med. Ass, 65. Am. Med. Ass. (sec'y, 65, v. pres, 68); fel. Am. Acad; R. I, Mass. and Calif. Med. Societies; Boston Gynec. Soc. (hon. pres, ed, 'Jour'); Newport Med. Soc. (hon. pres); Boston Soc. Nat. Hist; N. Y. Acad. Med; several Canadian and foreign med, obstet. and numis. societies. Gynecology; natural history; medical numismatics.
- Storer, N(orman) W(ilson)**, Westinghouse Electric and Manufacturing Co, Pittsburgh, Pa. *Electrical engineering*. Orangeville, Ohio, Jan. 11, 68. M.E, Ohio State, 91. *With Westinghouse Elec. and Mfg. Co*, 91-93, designer of generators, in charge of direct current work, 93-04, engineer, ry. dept, 04-20, *gen. engineer, ry. electrification*, 12- Elec. Eng; Mech. Eng; West. Pa. Eng. Soc. Application of electricity for power purposes; electric railroads; variable speed motors; frequency for single phase alternating current railways; design of electric locomotives.
- Storer, S(tacy) S(teward)**, Chamber of Commerce, Atlanta, Ga. *Engineering*. Buford, Ohio, Dec. 15, 82. C.E, Ohio Northern, 03, M.E, 04. Asst. engineer, Virginian Ry, 05-08; designing engineer, Va. Bridge and Iron Co, 08-10; structural engineer, U. S. Govt, 10-13; *structural engineer*, 13- A.A; Civil Eng; Wash. Archit. Club. Structural steel bridges and buildings; reinforced concrete.
- Storer, Tracy I(rwin)**, University of California, Berkeley, Calif. *Zoology*. San Francisco, Calif, Aug. 17, 89. B.S, California, 12, M.S, 13. Asst. instr. zool, California, 12-14, asst. curator birds, museum vert. zool, 14-19, *field naturalist*, 19- War work, 17-19. A.A; Ornith. Union; Ecol. Soc; Soc. Mammal; West. Soc. Nat; Cooper Ornith. Club; Calif. Acad. Taxonomy; ecology; game birds of California; habits of California land vertebrates; place names of California.
- Storey, Dr. Thomas A(ndrew)**, College of the City of New York, New York, N. Y. *Hygiene*. Burden, Kans, Jan. 29, 75. A.B, Stanford, 96, A.M, 99, Ph.D, 02; Hopkins Lab, Pacific Grove, Calif, summers, 97-98; Michigan, 00; Harvard Med. Sch, 02-03, M.D, 05; Cooper Med. Sch, 03-04. Asst. gym, Stanford, 96-97, instr. hygiene and org. training, 97-02, asst. prof. hygiene, 02-06; assoc. prof. and *director dept. hygiene, Col. City of N. Y.*, 06-10, *prof.*, 10- House officer, Long Island Hosp, Boston, 05; res. house physician, Children's Hosp, Boston, 06; lecturer, Columbia, summers, 07, 08; inspector physical training, mil. training commission, N. Y. State, 16-; exec. sec'y, U. S. Inter-Departmental Social Hygiene Board, 18- Sec'y-gen, Int. Cong. Social Hygiene, Buffalo, 13. A.A; Physiol. Soc; Soc. Exp. Biol; Am. Med. Ass; Soc. Col. Directors Physical Educ.
- (v. pres, 05, pres, 07-09); Physical Educ. Ass; Sch. Hygiene Ass. (sec'y, 07-14); N. Y. Acad. Med. Daily variations in the power of voluntary muscular contraction; influence of fatigue on the speed of the contraction of human voluntary muscle; exercise upon irritability of human muscle; tonus rhythms in normal human muscle and in gastrocnemius of the cat; effect of injuries of the brain on the vasomotor center.
- Stork, Harvey Elmer**, Carleton College, Northfield, Minn. *Botany*. Zoar, Ind, March 28, 90. A.B, Ind. State Nor. Sch, 14; A.M, Indiana, 15; Ph.D, Cornell, 20. *Asst. prof. bot, Carleton*, 20- A.A; Bot. Soc. Cytology of fungi; biology, cytology and genetical behavior of the genus *Taraxacum*.
- Storm, Dr. C(hristian) G(eorge)**, Ordnance School of Application, Aberdeen Proving Ground, Md. *Chemistry*. Boscobel, Wis, Nov. 20, 77. B.S, Columbian, 98, M.S, 99; Ph.D, George Washington, 16. Asst. and instr. chem, Columbian, 99-01; explosives chemist, Navy Powder Works, 01-09; U. S. Bur. Mines, Pittsburgh, 09-15; directing chemist, Aetna Explosives Co, 15-17; consulting explosives chemist, ordnance dept, 17, lieut. col, 17-19; research chemist, Pa. Trojan Powder Co, 19; *prof. chem. eng, Ordnance Sch. of Application*, 20- Chem. Soc. (sec'y, Pittsburgh sect, 14, 15). Explosives.
- Story, Prof. George F. E(dmunds)**, 11 Foster St, Worcester, Mass. *Animal nutrition*. Essex, Vt, Oct. 2, 85. Vermont; B.S.(Agr), Ohio State, 10. Instr. exten. dept, Ohio State, 10-11; with Mass. Col, 11-15; *prof. animal and dairy husbandry*, Vermont, 15-18; *manager, Worcester Co. Farm Bureau*, 18- A.A.
- Story, Prof. W(illiam) E(dward)**, Clark University, Worcester, Mass. **Mathematics*. Boston, Mass, April 29, 50. A.B, Harvard, 71, Parker fellow, 74-75; Ph.D, Leipzig, 75. Tutor *math*, Harvard, 75-76; assoc. later asst. prof. and assoc. prof, Hopkins, 76-89; *prof, Clark*, 89- Nat. Acad; A.A. (v.pres, 96); Math. Soc; Am. Acad; London Math. Soc. Theory of errors; algebraic invariants; finite differences; algebraic curves and surfaces; hyperspace and non-Euclidean geometry; continued fractions; calculus of operations.
- Stose, George W(illis)**, U. S. Geological Survey, Washington, D.C. *Geology*. Chicago, Ill, Oct. 5, 69. B.S, Mass. Inst. Tech, 93, 94. Asst. geologist, U. S. Geol. Surv, 94-00, *geologist and ed. geologic maps*, 00- A.A; Geol. Soc; Wash. Geol. Soc. Structure and stratigraphy; geology and mineral resources of central southern Pennsylvania, Maryland, eastern West Virginia, western Virginia and eastern Tennessee.
- Stotsenburg, J(ames) M(acpherson)**, Ridley Park, Pa. *Anatomy*. Wilmington, Del, Sept. 28, 65. Cornell, 93-95; M.D, Pennsylvania, 99. Junior assoc. and curator, *Wistar Inst*, 06-10, assoc. anat, 10-13, *instr.*, 13- A.A; Ass. Anat. Influence of ductless glands on growth; prenatal growth by weight in albino rat.
- Stouffer, Prof. E(llis) B(agley)**, University of Kansas, Lawrence, Kans. *Mathematics*. Melbourne, Iowa, Nov. 7, 84. B.S, M.S, Drake, 07; fellow, Illinois, 08-11, Ph.D, 11. Instr. *math*,

- Drake, 07-08; Illinois, 11-14; asst. prof, *Kansas*, 14-17, *assoc. prof.*, 17- Math. Soc; Math. Ass; London Math. Soc; Circolo Mat. di Palermo. Projective differential geometry; invariants of differential equations.
- Stoughton, Bradley, 29 W. 39th St, New York, N. Y. *Metallurgy*. New York, Dec. 6, 73. Ph.B. Sheffield Sci. Sch, Yale, 93; B.S., Mass. Inst. Tech, 96. Asst. mining and metal, Mass. Inst. Tech, 96; private asst. to Prof. H. M. Howe, 97; metallurgist, supt. and manager of various steel mfg. companies, 98-01; instr. metal, Columbia, 02-03, adj. prof, 03-08; *consulting metal. engineer*, 08- Mem. jury awards, Panama-Pacific Expos, 15; gen. eng. committee, Nat. Council of Defence, 18; head, div. metal. and v. chairman div. eng, Nat. Research Council, 17- Iron and Steel Inst; Electrochem. Soc; Min. and Metal. Eng. (sec'y, 13-); Min. Eng; Soc. Test. Mat; Can. Min. Inst; Int. Ass. Test. Mat; British Iron and Steel Inst. Metallurgy of iron and steel; manufacture and properties of iron and steel.
- Stout, Dr. A(rlow) B(urdette), New York Botanical Garden, New York, N. Y. *Botany*. Jackson Centre, Ohio, March 10, 76. A.B., Wisconsin, 09; Ph.D., Columbia, 13. Instr. bot, Wisconsin, 09-11; *director, laboratories*, N. Y. Bot. Garden, 11- A.A.; Soc. Nat; Bot. Soc; Wis. Acad; hon. life mem. Wis. Archeol. Soc; Ohio Archeol. and Hist. Soc. Genetics; cytology; plant pathology; archeology.
- Stout, W(ilber), 291 E. Northwood Ave, Columbus, Ohio. *Geology*. Chester, Ohio, Aug. 21, 76. B.E., Ohio State, 15. Chemist, 02-11; *asst. geologist*, Ohio Geol. Surv, 11- A.A.; Geol. Soc; Ceramic Soc; Min. and Metal. Eng; Nat. Gas. Ass; Ohio Acad. Geology of coal formations in Ohio; clays of Ohio.
- Stover, W(ilmer) G(arfield), Ohio State University, Columbus, Ohio. *Plant pathology*. Hancock Co, Ohio, Oct. 3, 81. A.B., Miami, 09, A.M., 10; Wisconsin, 13, 14. Asst. bot, Miami, 07-10; acting instr, Ohio State, 10-11; asst. prof, Okla. Col, 11-12; instr, *Ohio State*, 12-14, *asst. prof.*, 14-18, *plant path.*, 18- Field asst. forest pathology, U. S. Dept. Agr, 16, 17, agent, cereal investigations, 18-19. A.A.; Bot. Soc; Phytopath. Soc; Ohio Acad. Diseases of cereals; seed treatment and seed injury; Agri-aceae.
- Stowell, Dr. Charles H(enry), 99 Fairmount St, Lowell, Mass. *Medicine*. Perry, N. Y., Oct. 27, 50. M.D., Michigan, 72. Prof. physiol. and histol, Michigan, 76-85; 'med. writer, Washington, D. C, 85-97; *gen. manager and treas.*, J. C. Ayer Co, Lowell, Mass, 97- Ed, 'Trained Motherhood'; 'Food'; 'Practical Medicine'; 'The Microscope'; 'National Med. Rev.' Histology; structure of the teeth; the essentials of health; physiology.
- Stowell, Dr. Thomas B(lanchard), University of Southern California, Los Angeles, Calif. *Neurology*. Perry, N. Y., March 29, 46. A.B., Genesee, 65, A.M., 68; Ph.D., Syracuse, 81; LL.D., St. Lawrence, 09. Principal, acad., Addison, N. Y., 65; Morrisville, N. Y., 66; teacher math, Genesee Wesleyan Sem, 67; principal, Morris High Sch, Leavenworth, Kans, 68; prof. nat. science, State Nor. Sch, Cortland, N. Y., 68-89; principal, State Nor. Sch, Potsdam, N. Y., 89-09; head, dept. educ, *Southern California*, 09-19, *emer. dean, sch. educ.*, 19- A.A.; Ass. Anat; Micros. Soc; Am. Hist. Ass. Nervous system of domestic cat.
- Strachan, Dr. E(arle) K(enneth), 15 Revere Place, Buffalo, N. Y. *Physical chemistry*. Brookton, Mass, May 15, 86. B.S., Worcester, 08; M.S., Illinois, 10, Ph.D., 12. Instr. chem, Illinois, 12-13; Minnesota, 13-16; *with Nat. Aniline and Chem. Co*, 16- A.A.; Electrochem, Soc; Chem. Soc. Organic condensation reactions; chemical equilibrium; electrolytic dissociation; non-ideal solutions; physical chemistry of dyestuffs.
- Strachan, R(obert) C(harles), 39 Argyle Road, Brooklyn, N. Y. *Civil engineering*. Newburgh, N. Y., Oct. 23, 62. B.S., C.E., N. Y. Univ, 83. With various railroads and N. Y. State Canals, 83-91; bridge designer, Edge Moor Bridge Works, 91-94; private practice, 94-00; designing engineer, dept bridges, N. Y. City, 00-16, engineer in charge construction, dept. correction, 16-17, *examining engineer, board of estimate*, 17- Lecturer nomographic charting, N. Y. Univ, 15. Civil Eng; Brooklyn Eng. Club. Bridges and structural design; nomographic charting.
- Stradling, Dr. George F(lowers), 5120 Newhall St, Philadelphia, Pa. *Physics*. Hatboro, Pa, Nov. 13, 67. A.B., Pennsylvania, 87, Ph.D., 95; fellow by courtesy, Hopkins, 88; Strasbourg, 89; Polytech, Zürich, 94. Instr. physics, Pennsylvania, 90; Haverford, 03-04; prof, *Northeast High Sch*, Phila, 91-06, head, sci. dept, 06-20, *principal*, 20-; *prof. physics*, *Wagner Free Inst*, 91- Chairman, dept. physics, col. science, A.E.F. Univ, Beaune, 19. Longstreth medal, Franklin Inst. A.A.; Franklin Inst. (pres, physical sect, 01). Elasticity; magnetism.
- Stratton, Prof. G(eorge) M(alcolm), University of California, Berkeley, Calif. **Psychology*. Oakland, Calif, Sept. 26, 65. A.B., California, 88, fellow, 91-92; A.M., Yale, 90; Ph.D., Leipzig, 96. Instr. philos, California, 92-94, psychol, 96-97, asst. prof, 97-99, *assoc. prof. and director*, psychol. lab, 99-04; *prof. exp. psychol. and director*, psychol. lab, Hopkins, 04-08; *psychol.*, *California*, 08- Lecturer exp. psychol, Philos. Union, California, 99-00; summer session, Columbia, 08; officer in charge, psychol. sect, med. research lab, Air Service, 18; Taylor lecturer, Yale, 20. Psychol. Ass. (pres, 08). Perception of change; visual space; eye movements and esthetics; psychology of religion.
- Stratton, Prof. George W(eatherworth), University of Kansas, Lawrence, Kans. *Organic chemistry*. Saguache, Colo, Sept. 18, 86. A.B., Colorado, 07; fellow, Ohio State, 07-09, A.M., 09, Ph.D., 12. Instr. chem, Ohio State, 09-12; asst. prof, *Kansas*, 12-13, 14-18, *assoc. prof.*, 19- Fellow, Mellon Inst, 13-14; capt, C.W.S., A.E.F., 18-19. A.A.; Chem. Soc. Constitution of hydroxyazo compounds; chlorination and oxidation of hydrocarbons.
- Stratton, Prof. Robert, Stillwater, Okla. *Botany*. Georgetown, Ohio, Nov. 18, 83. A.B., Miami, 15; A.M., Ohio State, 17. Asst. bot, Cornell, 15-16;

- instr. Miami, 16-17; prof. biol. Westminster (Mo), 17-18; *asst. prof. bot.* Ala. Polytech, 18-20; *Okla. Col.*, 20- Bot. Soc. The Fimnetariales of Ohio.
- Stratton, Prof. Samuel W(esley)**, U. S. Bureau of Standards, Washington, D. C. **Physies.* Litchfield, Ill, July 18, 61. B.S, Illinois, 84, hon. Eng.D, 03; Sc.D, Pittsburgh, 03; hon. D.Sc, Cambridge, 08; Yale, 19. Instr. math. and physics, Illinois, 86-89, *asst. prof. physics*, 89, *prof. physics and elec. eng.*, 89-92; *asst. prof. physics*, Chicago, 92-95, *assoc. prof.*, 95-98; *prof.*, 98-01; *director, Bur. Standards*, 01- Mem. Int. Committee on Weights and Measures, 05; chairman, Nat. Screw Thread Commission; sec'y and mem. Nat. Advisory Committee for Aeronautics; mem. Nat. Research Council. U. S. delegate, Int. Elec. Cong, St. Louis, 04; London, 09. Elliott Cresson Medal, Franklin Inst, 12; pub. welfare medal, Nat. Acad, 17. Nat. Acad; A.A; Physical Soc; Astron. Soc; Elec. Eng; Mech. Eng; Soc. Test. Mat; Philos. Soc; Wash. Philos. Soc.
- Strausbaugh, Prof. P(erry) D(aniel)**, College of Wooster, Wooster, Ohio. *Botany.* Republic, Ohio, March 21, 86. B.S, Wooster, 13; fellow, Chicago, 18-19, Ph.D, 20. Teacher, rural schools, Seneca Co, Ohio, 02-05; principal, Danville-Buckeye City High Sch, Knox Co, 09-10; instr. biol, Wooster, 13-15, *asst. prof.* and later *prof. bot.*, 15- A.A; Bot. Soc; Ecol. Soc. Plant microchemistry and physiology; hardness in the plum.
- Strauss, Dr. Israel**, 116 W. 59th St, New York, N. Y. *Neurology.* Pawtucket, R. I, June 23, 73. A.B, Brown, 94; A.M, M.D, Columbia, 98. *Assoc. neurologist and assoc. neuropath.* Mt. Sinai Hosp. A.A; Am. Med. Ass; Neur. Ass; Am. Acad. Med. Neuroanatomy; psychiatry.
- Strayer, Prof. G(eorge) D(rayton)**, Teachers College, Columbia University, New York, N. Y. *Education.* Wayne, Pa, Nov. 29, 76. A.B, Hopkins, 03; Ph.D, Columbia, 05. Instr. educ, *Teachers Col, Columbia*, 05-07, *adj. prof.*, 07-10, *prof. educ. administration*, 10- A.A; Nat. Soc. Study Educ. (pres, 18). Educational administration; city school expenditures; classification, promotion and progress of school children; surveys of school systems.
- Street, John Phillips**, 405 Indiana Trust Building, Indianapolis, Ind. *Chemistry.* Beverly, N. J, Jan. 30, 69. B.S, Rutgers, 89, M.S, 93. *Asst. chemist*, N. J. Exp. Sta, 89-05, *chemist*, 05-07; Conn. Exp. Sta, 07-19; *Ind. director inspection, Nat. Cannery Ass.*, 19- *Chemist* to dairy commissioner, Conn, 07-19; major, S.C, 17-19. Chem. Soc; Agr. Chem. (pres, 60). Fertilizers; food chemistry; the carbohydrates of the sugar-beet; the effect of molds on cornmeal; organic nitrogenous fertilizers; the analysis of catsup and canned vegetables; drugs.
- Streeter, Dr. George L(inius)**, 2022 Eutaw Place, Baltimore, Md. **Anatomy, Embryology.* Johnstown, N. Y, Jan. 12, 73. A.B, Union, 95; M.D, A.M, Columbia, 99; Berlin and Leipzig, 02-03. Intern, Roosevelt Hosp, N. Y, 99-00; demonstrator anat. of the nervous system, Albany Med. Col, 01-02; *asst. anat.*, Hopkins, 04, instr, 05-06; *assoc. prof.*, Wistar Inst, 06; *prof. anat.* and director of lab, Michigan, 07-14; research *assoc.*, Carnegie Institution, 14-18, *director, dept. embryol.*, 18- Assoc. ed, 'Anat. Record,' A.A; Ass. Anat; Soc. Zool. Human embryology; development of central nervous system; internal ear; experimental embryology.
- Stromquist, Dr. Carl Eben**, University of Wyoming, Laramie, Wyo. *Mathematics.* Fremont, Kans, Nov. 6, 77. B.S, Bethany (Kans), 99; Ph.D, Yale, 03. Instr. math, Princeton, 03-08, *preceptor*, 08-09; instr, *Wyoming*, 09-10, *prof.*, 10- Math. Soc. Calculus of variations; those geometries in which circles are the shortest distances.
- Stromsten, Dr. Frank A(lbert)**, 943 Iowa Ave, Iowa City, Iowa. *Zoology.* Corydon, Iowa, April 5, 72. B.S, Iowa, 00, M.S, 02, fellow, 02-03; fellow, Princeton, 04-06, Sc.D, 05. *Asst. instr. animal biol.*, Iowa, 03-04, *instr.*, 06-10, *asst. prof.*, 10-19, *assoc. prof.*, 19- *Asst. research*, marine lab, Carnegie Institution, 07; *asst. fresh water mussel surv.* of Iowa River, 08. A.A; Ass. Anat; Soc. Zool; Iowa Acad. The anatomy and development of the venous system of Chelonia; development of the posterior lymph hearts of turtles; musk glands of turtles; Entomostraca of Iowa; fresh water mussels of the Iowa River; anatomy and development of the lymphatic system of reptiles; circulatory system of the logger-head turtle.
- Strong, Prof. C(harles) A(ugustus)**, Fiesole, Italy. **Psychology, Philosophy.* Haverhill, Mass, Nov. 28, 62. A.B, Rochester, 84; A.B, Harvard, 85, fellow (Berlin), 85-86; Paris, Berlin and Freiburg, 89-90; LL.D. Rochester, 19. Instr. philos, Cornell, 87-89; *docent psychol.*, Clark, 90; *assoc. prof.*, Chicago, 92-95; *lecturer*, Columbia, 95-02, *prof.*, 02-12. Psychol. Ass; Philos. Ass; fel. N. Y. Acad; cor. mem. Inst. National Genevois. Relations between psychology and philosophy; relation of mind and body.
- Strong, Prof. Edward K(ellogg), Jr**, Carnegie Institute of Technology, Pittsburgh, Pa. **Psychology.* Syracuse, N. Y, Aug. 18, 84. B.S, California, 06, M.S, 09; Ph.D, Columbia, 11, fellow, 11-12, 12-14. *Asst. psychol.*, Barnard, Columbia, 09-10; *prof. psychol. and psychol. of educ.*, Peabody Col. for Teachers, 14-19; *vocational educ.*, Carnegie Inst. Tech, 19- Research 12-14; mem. committee on classification of personnel in U.S.A, 17-19. A.A. (chairman, I); Psychol. Ass; S. Soc. Philos. and Psychol; Sierra Club. Psychology of education; psychology of advertising; recognition memory; psychology of selling; social psychology; effect of hookworm disease on school children.
- Strong, Dr. Oliver S(mith)**, 437 W. 59th St, New York, N. Y. **Zoology.* Red Bank, N. J, Dec. 30, 64. A.B, Princeton, 86, A.M, 88; fellow, Columbia, 91-92, Ph.D, 95. *Asst.*, Lake Lab, Milwaukee, Wis, 90-91; biol, *Columbia*, 92-93, tutor comp. neur. and *asst. nor. histol.*, Col. Physicians and Surg, 95-04, instr, histol, 04-09, *anat.*, 09-18, *asst. prof.*, 17-18, *assoc. prof.*, 19- Assoc. ed, 'Jour. Comp. Neur,' 96-04; 'Jour. Comp. Neur. and Psychol,' 04-; 'Neur. Bul,' 18- A.A; Soc. Nat; Soc. Zool; Ass. Anat. Cranial nerves of vertebrates; histology of the

human central nervous system; neurohistological methods; cranial nerves of *Squalus acanthias*; a case of congenital unilateral atrophy of the cerebellum; clinical neurology; development and structure of the nervous system.

Strong, Prof. Ralph Kempton, Reed College, Portland, Oregon. *Chemistry*. Kentville, N. S., June 21, 82. B.A. Acadia, 05, B.S. 06; A.M., Harvard, 07; Ph.D., Chicago, 17. Tech. chemist, 07-11; head, dept. chem, duPont Manual Training Sch., Louisville, Ky., 11-15; assoc. chem., Chicago, 15-17; prof. indust. chem. and head, dept. chem. eng., Oregon Col., 17-20; *prof. indust. chem. and head, dept. chem.*, Reed, 20- Chem. Soc.; Electrochem. Soc.; Soc. Chem. Indust.; Eng. Educ.; Chem. Eng.; Ass. Prof.; Soc. de Chim. indust. Industrial chemistry; mesothorium; phosphates; wood chemicals.

Strong, Prof. R(euben) M(yron), Loyola University School of Medicine, Chicago, Ill. **Zoology. Anatomy*. West Allis, Wis., Oct. 8, 72. A.B., Oberlin, 97; A.M., Harvard, 99; Ph.D., 01; Frankfort, 09; Naples, 10. Instr. zool. and physics, Lake Forest Acad., 97-98; biol., Haverford, 02-03; Carnegie research asst., 03-04; assoc. zool., Chicago, 04-07, instr., 07-14; *prof. anat.*, Mississippi, 14-16; assoc. prof., Vanderbilt, 16-17, *prof. micros. anat.*, 17-18; *prof. and head, dept. anat.*, Loyola, 18-, *sec'y, faculty*, 18- Instr., Woods Hole, 02-05; *prof. zool.*, lake lab, Michigan, 16-17. A.A.; Soc. Nat.; Ass. Anat. (exec. committee, 16-19); Soc. Zool.; Am. Med. Ass.; mem. Ornith. Union. Comparative anatomy; hair and feathers; variation; animal behavior; heredity; bone architecture; structure and pigmentation of integument; ossification.

Strong, Prof. Richard P(earson), Harvard Medical School, Boston, Mass. **Medicine, Biology*. Fortress Monroe, Va., 72. Ph.B., Yale, 93; M.D., Hopkins, 97; hon. Sc.D., Yale, 14; Harvard, 16. Res. house physician, Hopkins Hosp., 97-98; first lieut. asst. surgeon, med. dept., U.S.A., 98-02, pres. Board for Investigation of Trop. Diseases, P. I., 99-01, director, Army Path. Lab., Manila, director, Govt. Biol. Lab., Manila, 01-13; *prof. trop. med.*, Univ. Philippines, 07-13; chief, med. dept., P. I. Gen. Hosp., 10-13; *prof. trop. med.*, Harvard Med. Sch., 13- U. S. scientific investigator infectious diseases, Berlin, 03; director, Int. and Am. Red Cross Sanit. Commissions, Serbia, 15; mem. med. board, Council Nat. Defense, 17; mem. gen. headquarters investigation committee, B.E.F.; A.E.F. representative, Inter-Allied Sanit. Commission; director, dept. med. research and intelligence, Am. Red Cross, 18-19; gen. med. director, League of Red Cross Societies, 19-20. Delegate, Int. Cong. Hygiene and Demography, 07; Int. Cong. Tuberculosis, Washington, 08 (hon. v. pres. sect. path. and bact.); Int. Plague Conf., Peking, 11. A.A.; Am. Physicians; Ass. Path. and Bact.; Soc. Exp. Path.; Soc. Clin. Invest.; Soc. Trop. Med.; Am. Med. Ass.; Am. Acad.; Soc. Trop. Med.; Soc. Exp. Biol.; Manila Med. Ass.; Int. Ass. Trop. Med.; London Soc. Trop. Med. and Hygiene; cor. mem. Soc. de Path. exot. Tropical medicine; bacteriology; plague; amebic dysentery; bacillary dysentery; tropical intestinal parasites; cholera; beriberi; pneumonic plague; leprosy; fram-

boesia; chemo-therapy; verruga Peruviana; Oroya fever; African tick fever; trypanosomiasis; Malta fever; tropical ulcerations of the skin; trench fever.

Strong, Dr. Wendell M(elville), Glen Ridge, N. J. *Mathematics*. Indianapolis, Ind., Feb. 6, 71. A.B., Yale, 93, Ph.D., 98; A.M., Cornell, 94; LL.B., Univ. of N. Y., 03. Instr. math., Yale, 95-00; with actuarial dept., *Mutual Life Ins. Co. of N. Y.*, 00-04, asst. actuary, 04-11, *assoc. actuary*, 11- A.A. (sec'y, A., 00); Math. Soc.; Actuarial Soc. (ed., 'Trans.', 09, 16, sec'y, 16); London Math. Soc. Non-quaternion number systems; actuarial science.

Strong, Dr. W(illiam) W(alker), 500 S. York St., Mechanicsburg, Pa. *Physics*. Good Hope, Pa., May 16, 83. B.S., Dickinson, 05; fellow, Hopkins, 07-08, Ph.D., 08. Carnegie asst. physics, Hopkins, 08-11; *prof. elec. theory*, Pittsburgh, 11-13; *physicist*, S. I. E. M. Co., 13- Instr. Carnegie Inst. Tech., 14-15; *physicist*, Research Corp., 15, 19. A.A.; Physical Soc.; Elec. Eng. Absorption and spark spectra; ionization; radioactivity; electrical precipitation of fumes, dust and smoke; fume mask; diamond surface glass; structure of ether; deblooming of oil; corona discharge.

Strouse, Dr. Solomon, 104 S. Michigan Ave., Chicago, Ill. *Medicine*. Baltimore, Md., June 29, 82. A.B., Hopkins, 02, M.D., 06. Res. house officer, Hopkins Hosp., 06-07; volunteer research worker, med. laboratories, 07-09; *assoc. pathologist*, Michael Reese Hosp., Chicago, 09-12, *assoc. attending physician*, 12-18, *asst. prof. med.*, Northwestern, 17- Soc. Clin. Invest.; Soc. Exp. Biol.; Am. Med. Ass.; assoc. Am. Physicians; Chicago Inst. Med. Pneumonia; hay fever; diabetes; blood chemistry; metabolism.

Struthers, Dr. Joseph, 32 W. 40th St., New York, N. Y. *Chemistry*. New York, Nov. 13, 65. Col. City of N. Y., 80-81; Ph.B., Columbia, 85, Ph.D., 95. Instr. miner. and metal, Columbia, 85-00; field asst., U. S. Geol. Surv., 01-02; asst. ed. and ed., 'Miner. Indust.', 00-04; asst. sec'y, asst. treas. and ed., Inst. Min. Eng., 03-10, sec'y, asst. treas. and ed., 10-11; v. pres., Johnson Elec. Smelting, 14-16; engineer of tests, N. Y. Dist. ordnance dept., U.S.A., 18-20, *mem. claims board*, 20- Sec'y, div. min. eng., La. Purchase expos, 04; chairman, jury of mines and metal sect., Jamestown Expos, 07. Min. Eng.; United Eng. Soc. (treas., director, 10-); Eng. Foundation (treas., 15-); N. Y. Eng. Club. Metallurgical slags.

Stuart, W(illiam), U. S. Department of Agriculture, Washington, D. C. *Horticulture*. St. Remi, Que., May 21, 65. B.S., Vermont, 94; M.S., Purdue, 96. Asst. botanist, Ind. Exp. Sta., 94-01, *assoc. horticulturist*, 01-02; *prof. hort.*, Vermont, and *horticulturist*, Vt. Exp. Sta., 02-09; expert, *bur. plant indust.*, U. S. Dept. Agr., 09-12, *horticulturist*, 12- A.A.; Soc. Hort. Sci.; Pomol. Soc.; Vt. Hort. Soc. (sec'y, 03-09); Wash. Bot. Club. Rose growing and lettuce growing with chemical fertilizers; disease resistance in potatoes; corn smut and its prevention; the prevention of oat smut; etherization of plants for forcing purposes; Montreal market muskmelon culture; Mendelian inheritance in

- carnations; group classification and varietal description of some American potatoes; production of main crop potatoes.
- Stubbs, Dr. William Carter**, 701 Howard Ave, New Orleans, La. *Chemistry*. Gloucester Co, Va, Dec. 7, 46. William and Mary, 60; A.M., Randolph-Macon, 62; Virginia, 67; hon. Ph.D., Ala. Agr. Col, 86. Prof. nat. sciences, E. Ala. Col, 69-72; chem, Ala. Col, 72-85; state chemist, Ala, 78-85; prof. agr, Louisiana, state chemist, La, and director, La. Agr. Exp. Sta, 85-05; director, La. Geol. Surv, 90-05. U. S. agent to investigate agr. exp. stations, Hawaii, 00; state commissioner, La. Purchase Expos, 04; Jamestown Expos, 07. A.A.; Agr. Chem; Ass. Agr. Col; La. Nat. Soc; La. Chem. Soc. Agriculture.
- Stuckey, Henry Perkins**, Experiment, Ga. *Horticulture*. Hartsville, S. C, Oct. 3, 80. B.S.A., Clemson; Cornell; Missouri. Asst. hort, Ala. Polytech, 07; horticulturist, Winthrop Nor. and Indust. Col, S. C, 08; *Ga. Exp. Sta*, 08-19, director, 19- Bot. Soc; Soc. Hort. Sci; Ga. Hort. and Agr. Societies.
- Studhalter, R(ichard) A(rthur)**, Sul Ross Normal College, Alpine, Tex. *Plant pathology*. Basel, Switzerland, Aug. 2, 87. A.B., Texas, 12; Chicago; A.M., Washington (St. Louis), 17. Asst. bot, Kansas State, 12; agent, U. S. Dept. Agr, 12-14; asst. botanist, Mont. Exp. Sta, 16-17; *office forest path*, U. S. Dept. Agr, 17- A.A.; Phytopath. Soc; Bot. Soc. Forest tree diseases; plant physiology.
- Stuhlman, Prof. Otto, Jr**, Chapel Hill, N. C. **Physics*. Elberfeldt, Germany, Nov. 12, 84. A.B., Cincinnati, 07; A.M., Illinois, 09; fellow, Princeton, 09-11, Ph.D, 11. Instr. *physics*, Illinois, 07-09; Stevens, 11-12; Pennsylvania, 12-17; asst. prof, Iowa, 17-19; West Virginia, 19-20; *assoc. prof*, North Carolina, 20- Airplane sound ranging, Nat. Research Council. A.A.; Physical Soc; Iowa Acad. Photoelectric effects; homologous series as a function of atomic numbers; metallic mirrors and wedges; coefficient of absorption of electrons; constant difference of potential; photoelectric long wave-length limits.
- Stunkard, Dr. H(orace) W(esley)**, New York University, University Heights, New York, N. Y. *Zoology*. Monmouth, Iowa, Aug. 23, 89. B.S., Coe, 12; A.M., Illinois, 14, fellow, 14-16, Ph.D, 16. Asst, Illinois, 12-14; *instr. biol*, N. Y. Univ. A.A.; Micros. Soc. Parasitology; comparative anatomy.
- Stupart, R(obert) F(rederic)**, Toronto Magnetic Observatory, Agincourt, Can. *Meteorology, Terrestrial magnetism*. Toronto, Can. *Director, Meteorol. Service, Can, and Toronto Magnetic Observatory*. Royal Soc. Can; Can. Inst. (past pres); Royal Astron. Soc. Can. (past pres).
- Sturgis, Dr. W(illiam) C(odman)**, 281 Fourth Ave, New York, N. Y. **Botany*. Boston, Mass, Nov. 15, 62. A.B., Harvard, 84, A.M., 87, Ph.D, 89. Asst. bot, Harvard, 88-89; vegetable pathologist, Conn. Exp. Sta, 92-01; lecturer diseases of forest trees, Yale, 01-02; bot, Colo. Col, 04-05, dean, sch. of forestry, 05-14. A.A.; Forestry Ass; Phytopath. Soc; Am. Acad; New Eng. Bot. Club; Boston Soc. Nat. Hist. Anatomy and sexuality of lichens; Myxomycetes; diseases of field crops and forest trees; soil bacteria; taxonomy of the Stemonitaceae; fungi of Colorado.
- Sturmer, Prof. J(ulius) W(illiam)**, 601 Lees Ave, Collingswood, N. J. *Pharmacy*. Niagara Co, N. Y., March 6, 70. Ph.G., Purdue, 91; Phar.D., Buffalo, 12. Instr. pharmacy, Purdue, 91-94, prof, 94-12; prof. and dean, dept. pharmacy, Medico-Chirurg. Col, Phila, 12-16; *dean, postgrad. courses and prof. pharmaceut. chem*, Phila. Col. Pharmacy, 16- A.A.; Chem. Soc; Pharmaceutical Ass. (pres, Phila. branch, 16-). Pharmaceutical chemistry.
- Sturtevant, Dr. A(lfred) H(enry)**, Columbia University, New York, N. Y. **Zoology*. Jacksonville, Ill, Nov. 21, 91. A.B., Columbia, 12, fellow, 12-15, Ph.D, 14. *Research asst, Carnegie Institution*, 15- A.A.; Soc. Nat; Soc. Zool; Soc. Exp. Biol. Genetics; taxonomy and behavior of *Drosophila*.
- Sudler, Dr. Mervin T(ubman)**, University of Kansas, Rosedale, Kans. *Surgery*. Westover, Md, Aug. 9, 75. B.S., Md. Col, 94, M.S., 01; Ph.D., Hopkins, 99; M.D., Col. Physicians and Surg, Baltimore, 01. Instr. *anat*, Hopkins, 99-02; med. col, Cornell, 02-03; *assoc. prof*, Kansas, 05-06, *prof*, 06-, *dean, scientific dept, sch. med*, 06- Ass. Anat; Soc. Zool; fel. Col. Surg; Md. Med. and Chirurg. Faculty. Anatomy of gall-bladder; embryology of *Penilia schmacheri*; development of human pharynx; development of the nose.
- Sudworth, George B(ishop)**, U. S. Department of Agriculture, Washington, D. C. *Forestry*. Kingston, Wis, Aug. 31, 64. A.B., Michigan, 85. Instr. bot, Mich. Agr. Col, 85-86; botanist, div. forestry, U. S. Dept. Agr, 86-95, dendrologist, div. and bur. forestry, 95-04; *chief dendrol*, U. S. Forest Service, 04-; *mem. fed. hort. board*, U. S. Dept. Agr, 12- Soc. Foresters; Forestry Ass; Wash. Acad; Wash. Biol. Soc; Wash. Bot. Soc. Dendrology; forest flora of the United States.
- Sullivan, Dr. E(ugene) C(ornelius)**, Corning Glass Works, Corning, N. Y. *Chemistry*. Elgin, Ill, Jan. 23, 72. B.S., Michigan, 94; Göttingen, 96; Ph.D., Leipzig, 99. Instr. *anal. chem*, Michigan, 99-03; in chem. lab, U. S. Geol. Surv, 03-08; *in charge chem. and physical research*, Corning Glass Works, 08-, *v. pres*, 20- Chem. Soc; Electrochem. Soc; Soc. Chem. Indust; Soc. Glass Technol; Ceramic Soc; Wash. Acad. Glass manufacture; iodine compounds; influence of one substance in solution on the solubility of another; reactions between minerals and water solutions; relation between chemical composition and physical properties of glass.
- Sullivan, Louis R(obert)**, American Museum of Natural History, New York, N. Y. *Anthropology*. Houlton, Maine, May 21, 92. A.B., Bates, 14; A.M., Brown, 16; Columbia, 16-19. Instr. zool. and bot, Tilton Sem, 14-15; asst. *anthrop*, *Am. Museum Nat. Hist*, 16-18, asst. *curator*, 18- Asst. anthropologist, U.S.A., 18-19; research *assoc*, Bishop Museum exped. to Polynesia. Anthropol. Soc; Ethnol. Soc; Galton Soc. (director, somatol. lab, 18-); N. Y. Acad. Physical anthropology; Siouan and Philippine an-

thropometry; craniometry; Hawaiian anthropometry and osteometry.

Sullivan, Dr. M(ichael) X(avier), Pellagra Hospital, Spartanburg, S. C. *Biochemistry*. Fall River, Mass. Oct. 25, 75. A.B., Harvard, 99; A.M., Brown, 02, Ph.D., 03. Asst. chem., Harvard, 99-00; private tutor, Providence, R. I., 00-03; instr. physiol. and biochem., Brown, 03-07; fertility expert, bur. soils, U. S. Dept. Agr., 07-15; *biochemist, U. S. Pub. Health Service*, 15-Asst., Woods Hole, 05, 06; asst. prof. physiol., dental sch., George Washington, 08- Assoc. chemist, U. S. Pub. Health Service Reserve, 19. A.A.; Chem. Soc. (pres, Wash. sect., 14); Soc. Bact.; Soc. Biol. Chem.; Wash. Acad. (v. pres, 14). *Biochemistry of bacteria*; digestion in selachians and elasmobranchs; biochemistry of soils; pellagra; relation of diet to health and disease.

Sullivan, Russell, 1431 N. Meridian St., Indianapolis, Ind. *Astronomy*. Indianapolis, Nov. 23, 81. A.B., Yale, 05. A.A.; Astron. Soc. Popular astronomy; dark and planetary nebulae; celestial motions.

Sullivan, Prof. W(alter) E(dward), University of Wisconsin, Madison, Wis. *Anatomy*. Ludlow, Maine, July 22, 85. A.B., Bates, 07; A.M., Brown, 09, Ph.D., 12. Instr. biol., Western Reserve, 11-13; asst. prof. *anat.*, Marquette, 13-15; prof., *med. sch.*, Tufts, 15-20; *Wisconsin*, 20- A.A.; Ass. Anat.; Fisheries Soc. Vertebrate morphology and embryology.

Summers, Prof. H(enry) E(lijah), Ames, Iowa. *Zoology*. Rochester, N. Y., Aug. 18, 63. B.S., Cornell, 86, fellow, 86-88. Assoc. prof. biol., Tennessee, 88-91; asst., Ill. State Lab. Nat. Hist., 92-93; asst. and assoc. prof. physiol., Illinois, 93-97; prof. zool., Iowa State, 98-17; state entomologist, Iowa, 98-17. A.A.; Ass. Econ. Entom. (sec'y, 04, 05, v. pres, 09); Micros. Soc.; Wash. Entom. Soc.; Iowa Acad. (pres, 02, treas., 07-09). Heteroptera; economic entomology.

Sumner, Dr. Francis B(ertody), Scripps Institution for Biological Research, La Jolla, Calif. *Zoology*. Pomfret, Conn., Aug. 1, 74. B.S., Minnesota, 94; Ph.D., Columbia, 01. Instr. nat. hist., Col. City of N. Y., 99-06; director, biol. lab., U. S. Bur. Fisheries, Woods Hole, 03-13; asst. prof. *biol., California*, 13-19, *assoc. prof.*, 19-, *biologist, Scripps Inst.* Naturalist, 'Albatross,' 12-13. A.A.; Soc. Nat.; Soc. Zool.; Ecol. Soc.; Fisheries Soc.; Am. Geog. Soc.; West. Soc. Nat.; fel. N. Y. Acad.; Calif. Acad.; Boston Soc. Nat. Hist.; Wash. Acad. Earlier development of bony fishes; osmotic relations between fishes and the surrounding medium; intensive study of the fauna of a restricted area of sea-bottom; effect of external conditions upon the post-natal development of the mouse; fauna of the Woods Hole region; heredity and influence of environment in the white mouse; color variation in *Litorina palliata*; adaptive color changes in flounders; physical condition of San Francisco Bay; distribution and heredity of the deer-mouse.

Sumner, Prof. J(ames) B(atcheller), 119 Heights Court, Ithaca, N. Y. *Biochemistry*. Canton, Mass., Nov. 19, 87. A.B., Harvard, 10, A.M., 13, Ph.D., 14. Temporary prof. chem., Mt. Allison, 11; teaching fellow, Worcester, 11-12; *asst.*

prof. biochem. med. col., Cornell, 14- A.A.; Chem. Soc.; Soc. Biol. Chem. Urea and ammonia in biological fluids; urease; vegetable proteins.

Sumstine, Dr. David R(oss), 6309 Jackson St., E. E., Pittsburgh, Pa. *Mycology*. Somerset, Pa., Jan. 21, 70. A.B., Thiel, 90; M.S., Pittsburgh, 08; Sc.D., Pennsylvania Col., 10. *Asst. sect. bot., Carnegie Museum, Pittsburgh*, 98-; teacher bot., high sch., Pittsburgh, 09-12; *principal, Peabody High Sch., Pittsburgh*, 12- A.A.; Torrey Bot. Club; Bot. Soc. West. Pa. (pres, 06). Fungi of Pennsylvania; the Mucoraceae and Hyphomycetes of North America.

Sundstroem, Dr. E(dward) S(igfrid), University of California, Berkeley, Calif. *Physiology*. Finland, March 18, 80. M.D., Helsingfors (Finland), 10. *Instr. biochem., California*, 16- Soc. Biol. Chem. Biochemistry; physiological effect of high altitudes and tropical climate; acclimatization.

Sundwall, Prof. John, University of Minnesota, Minneapolis, Minn. *Hygiene*. Fairview, Utah, 81. B.S., Chicago, 03, fellow, 04-06, Ph.D., 06; M.D., Hopkins, 12. Asst. anat., Chicago, 06-07; *prof., Utah*, 07-10; Kansas, 12-18; *hygiene, Minnesota*, 18- Public health; gland structures; the growth of tissue in plasms; tissue alteration in pellagra; structure of choroid plexus; subcutaneous atrophy.

Supplee, Dr. G(eorge) C(ornell), Dry Milk Co., Adams, N. Y. *Bacteriology*. Schuyler Co., N. Y., Dec. 5, 89. B.S., Cornell, 13, M.S.A., 14, Ph.D., 19. Instr. bacter., Cornell, 12-19; *director, research lab., Dry Milk Co.*, 19- Butter inspector, U. S. Dept. Agr., summers, 13-15, 17-18. Soc. Bact.; Dairy Sei. Ass.; Chem. Soc.; Pub. Health Ass. Chemistry and biology of dairy products.

Surface, Dr. Frank M(acy), 412 Fifth St., Washington, D. C. **Biology, Statistics*. Eaton, Ohio, April 22, 82. A.B., Ohio State, 04, A.M., 05; Harrison fellow, Pennsylvania, 05-07, Ph.D., 07. Assoc. biologist, Maine Exp. Sta., 07-10; biologist, Ky. Exp. Sta., 10-13; Maine Exp. Sta., 13-17; asst. chief, statist. div., Food Ad., 17-19; chief statistician, Am. Relief Ad., 19-20. Delegate, Fourth Int. Genetics Conf., Paris. A.A.; Soc. Nat.; Soc. Zool.; Bot. Soc. Genetics; physiology of reproduction; statistics of food and agriculture.

Surface, Prof. H(arvey) A(dam), Mechanicsburg, Pa. *Zoology*. Waynesville, Ohio, July 25, 67. B.S., Ohio State, 91, M.S., 92; Illinois, 93; fellow, Cornell, 97-98. Teacher, pub. schools, 85-87; asst., Ohio Geol. Surv., 91-92; geol., Ohio State, 92-93; prof. nat. hist., Pacific, 95-96; teacher zool., Cornell, 98; scientific asst., U. S. Fish Commission, 99; supervisor of nature study, Ithaca, N. Y., 99-00; *prof. zool., Pa. State*, 00-; state zoologist, Pa., 03-17. Zoologist, Pacific Chautauqua, 96; instr. ornith., N. Y. Teachers' Institutes, 98; field naturalist, Ill. State Biol. Sta., 99; special scientific asst., Pa. State Fish Commission, 00-; lecturer, Farmers' Inst., Pa., 01-; ornithologist, Pa. State Board of Agr., 01- A.A.; Soc. Nat.; assoc. Ornith. Union; Ass. Econ. Entom.; Audubon Soc.; Pa. Bee Keepers' Ass. (pres, 03-); Ohio Acad.; N. Y. State Sci. Teachers Ass.; hon. mem. Mon-

- treant Entom. Soc. Economic entomology; ichthyology; ornithology; economic zoology in Pennsylvania; the Hessian fly; fresh-water fishes; lampreys; reptiles.
- Sutherland, Dr. Arthur H(oward)**, 419 S. Olive St, Los Angeles, Calif. *Psychology*. Minonk, Ill, Nov. 19, 78. A.B, Grand Island, 99; fellow, Chicago, 08-09, Ph.D, 09. Asst. philos, Wisconsin, 07-08; abnorm. psychol, Govt. Hosp. for Insane, Washington, 09-10; instr. exp. psychol, Illinois, 10-14; psychol, Yale, 14-17; *psychologist and director, dept. educ. research, city sch. district, Los Angeles, Calif*, 17- Word-associations in abnormal subjects; psychological and educational tests; instruction of feeble-minded and atypical children.
- Suydam, Dr. John R(ichard)**, Jr, 960 Park Ave, New York, N. Y. *Chemistry*. New York, May 9, 86. A.B, Harvard, 08; Chem. E, Columbia, 12, A.M, 15, Ph.D, 17. Asst. chemist, Standard Paint Co, 12; Gen. Chem. Co, 12-14; *research chemist, Standard Textile Products Co*, 18- Lieut, C.A.C, 17-18; C.W.S, 18. Chem. Soc. Industrial chemistry; decomposition of coal.
- Swain, Prof. George F(illmore)**, Harvard University, Cambridge, Mass. *Civil engineering*. San Francisco, Calif, March 2, 57. B.S, Mass. Inst. Tech, 77; Berlin, 77-80; LL.D, N. Y. Univ, 96; California, 18. Instr. *civil eng*, Mass. Inst. Tech, 81-83, asst. prof, 83-86, assoc. prof, 86-87, *prof*, 87-09; *Harvard*, 09- Consulting engineer, Mass. R. R. Commission, 87-14; mem. Boston Transit Commission, 93-18; Nat. Conservation Commission, 08- A.A. (v. pres, 08); Civil Eng. (director, 01-04, v. pres, 08-10, pres, 13); Mech. Eng; Eng. Educ. (pres, 94); Consulting Eng; Am. Acad; Boston Soc. Civil Eng. (pres, 96); Can. Inst. Eng; British Inst. Civil Eng. Structural, railroad, hydraulic and valuation engineering.
- Swain, J(ohn) Merton**, Farmington, Maine. *Ornithology, Oology*. Farmington, April 22, 73. High sch. and acad. Assoc. Ornith. Union; Maine Ornith. Soc. Life histories and migration of birds; life histories of warblers.
- Swain, Pres. Joseph**, Swarthmore College, Swarthmore, Pa. *Biology*. Pendleton, Ind, June 16, 57. B.L, Indiana, 83, M.S, 85; Edinburgh, 85-86; LL.D, Wabash, 93. Instr. math. and zool, Indiana, 83-85, prof. math, 86-91; Stanford, 91-93; *pres*, Indiana, 93-02; *Swarthmore*, 02- Asst. to U. S. Fish Commissioner, 84. A.A.; Am. Acad. Ichthyology.
- Swain, Prof. Rob(ert) E(ckles)**, 638 Channing Ave, Palo Alto, Calif. *Chemistry*. Hollister, Calif, Jan. 5, 75. A.B, Stanford, 99; M.S, Yale, 01, Ph.D, 04; Strasbourg and Heidelberg, 01-02. Asst. *chem. Stanford*, 98-00, instr, 00-02, asst. prof, 02-07, assoc. prof, 07-12, *prof*, 12-, *exec. head of dept*, 17- Special agent, U. S. Dept. Justice, 10-11; expert chemist, referee board, U. S. Dept. Agr, 10-11. A.A.; Soc. Exp. Biol; Chem. Soc. (pres, Calif. sect, 19); Soc. Biol. Chem. Relation of molecular weight to lowering of freezing-point; products of uric acid feeding in dogs; products of tryptic digestion; urine of the coyote; formation of kynurenine acid in the animal body; smelter smoke; physiological action of thallium salts; chemistry of
- marine animals; effects of fatigue on the composition of the blood.
- Swaine, Dr. J(ames) M(alcolm)**, Department of Agriculture, Ottawa, Can. *Zoology*. Barrington, N. S, Oct. 16, 79. B.S.A, Cornell, 05, M.S, 06, Ph.D, 19. Asst. entom. and zool, Cornell, 05-06; lecturer, Macdonald, 06-11; asst. entomologist, *Can. Dept. Agr*, 11-18, *chief, div. forest insects*, 18- A.A; Entom. Soc; Ont. Entom. Soc. Entomology; beetles of the families Scolytidae, Cerambycidae and Buprestidae; forest insects; the hyoid region in the lower amphibians; the nervous system of lepidopterous larvae; ambrosia fungi.
- Swales, Bradshaw Hall**, U. S. National Museum, Washington, D. C. *Ornithology*. Detroit, Mich, June 30, 74. LL.B, Michigan, 96, LL.M, 97. Assoc. ornith, museum zool, Michigan; *custodian, sect. ool, U. S. Nat. Museum*. Mem. Ornith. Union; Cooper Ornith. Club; Wilson Ornith. Club (v. pres. and sec'y-treas); Anthropol. Ass; Soc. Mammal; Wash. Acad; Wash. Biol. Soc; Mich. Acad. Ornithology of Haiti and Great Lakes region; American Indians.
- Swan, Guy C(arleton)**, 30 Charles St, Brentwood, Md. *Chemistry*. Tyngsboro, Mass, June 13, 87. A.B, Stanford, 13, A.M, 15. Junior chemist, U. S. Dept. Agr, 15-18; chemist, E. I. duPont de Nemours and Co, 18-19; *junior chemist, U. S. Dept. Agr*, 19- Chem. Soc. Biological chemistry.
- Swan, Prof. J(ohn) N(esbit)**, University, Miss. *Chemistry*. New Jefferson, Ohio, Oct. 14, 62. A.B, Westminster (Pa), 86; Ph.D, Hopkins, 93. Teacher, pub. schools, Burlington, Iowa, 86-87; prof. science, Tarkio, 87-88; chem. and math, Westminster (Pa), 89-91; physical science, Monmouth, 93-15, acting pres, 02-03; *prof. chem, Mississippi*, 15- A.A; Chem. Soc; Pharmaceut. Ass. Double halids; tars.
- Swann, Dr. W(illiam) F(rancis) G(ray)**, University of Minnesota, Minneapolis, Minn. **Physics*. Ironbridge, England, Aug. 29, 84. B.Sc, London, 05, A.R.C.S, 06, D.Sc, 10. Asst. demonstrator, physics, Imp. Col. of Science and Tech, London, 05-07; asst. lecturer, Sheffield, 07-13; chief physicist, dept. terrestrial magnetism, Carnegie Institution, 13-17; physicist, Bur. Standards, 17-18; *prof. physics, Minnesota*, 18- Mem. Int. Geophys. Union; Geophys. Union. A.A; Physical Soc; Wash. Acad; Wash. Philos. Soc. (mem. gen. committee, 16); British Ass; London Physical Soc. Thermal measurements; electromagnetic theory; electrical conductivity; relativity; terrestrial magnetism; atmospheric electricity.
- Swanson, Prof. C(harles) O(scar)**, Kansas State Agricultural College, Manhattan, Kans. *Agricultural chemistry*. Jönköping, Sweden. A.B, Carleton, 99; M.Agr, Minnesota, 05. Principal, Jackson High Sch, Minn, 99-00; teacher, Cannon Falls High Sch, 00-03; instr. *agr. chem*, Purdue, and asst. chemist, Exp. Sta, 05-06; *Exp. Sta, Kansas State*, 06-14, asst. prof, 09-14, assoc. prof, 14-20, *prof*, 20-, *assoc. chemist*, 14- A.A; Chem. Soc. Wheat and flour; mill fumigants and by-products; loss of nitrogen and organic matter in cultivated soils; alfalfa; sorghums; silage; nutrition of swine.

- Swanton, Dr. John R (eed)**, Bureau of American Ethnology, Washington, D. C. **Anthropology*. Gardiner, Maine, Feb. 19, 73. A.B. Harvard, 96, A.M., 97, Ph.D., 00. Asst. ethnologist, *Bur. Am. Ethnol.*, 00-03, *ethnologist*, 03- Assoc. ed, 'Am. Anthropologist,' 10- A.A.; *Anthrop. Ass.*; *Folk-lore Soc.* (pres, 09); *Wash. Anthropol. Soc.* (sec'y, 08, pres, 15-17); cor. mem. *Paris Soc. des Américanistes*. Chinook, Dakota, Haida and Tlingit Indian languages; general ethnology of the Haida; the Haida language and mythology; dictionary of Indian languages (section on northwest coast); sociology and mythology of the Tlingit; general ethnology of the small tribes of the lower Mississippi; languages of the Tunica, Natchez, Chitimacha, Atakapa and Ofo Indians; history and general ethnology of the Creek Indians and their neighbors.
- Swart, W(alter) G(oodwin)**, Babbitt, Minn. *Metallurgy*. Fredonia, N. Y., Feb. 19, 68. Cornell; Denver; hon. E.M., Colo. Sch. Mines, 16. Metallurgist, Blake-Morscher Electrostatic Ore Separator, 00-07; west. manager, Am. Zinc Co, 07-15; manager, *Mesabi Iron Co*, 15- Min. Eng. Ore dressing.
- Swarth, Harry S(chelwald)**, University of California, Berkeley, Calif. *Zoology*. Chicago, Ill, Jan. 26, 78. High sch. Asst. Field Museum Nat. Hist, Chicago, 05-08; curator birds, museum vert. zool. California, 08-12; asst. director, Museum Hist. Science and Art, Los Angeles, 13-15; curator birds, museum vert. zool. California, 15- Lecturer zool. Southern California; scientific expeditions in the U. S, Alaska and Can. A.A.; fel. Ornith. Union (assoc. ed, 'The Condor,' 10-); Cooper Ornith. Club (sec'y, north. div, 09-13, south. div); Wilson Ornith. Club; Soc. Mammal; West. Soc. Nat; Calif. Acad; Wash. Biol. Soc. Ornithology; mammalogy.
- Swartz, Dr. Charles K(ephart)**, Johns Hopkins University, Baltimore, Md. *Geology*. Baltimore, Jan. 3, 61. A.B., Hopkins, 88, fellow, 03-04, Ph.D., 04; fellow, Clark, 89-90; B.D., Oberlin, 92. Instr. geol. *Hopkins*, 04-05, assoc. 05-06, assoc. prof. geol. and paleont, 07-10, *collegiate prof. geol.*, 10- Asst. Md. Geol. Surv, 09. A.A.; Geog. Soc; Paleont. Soc. Paleontology; Paleozoic geology; Devonian and Carboniferous of Maryland.
- Swartzel, Prof. K(arl) D(ale)**, Ohio State University, Columbus, Ohio. *Mathematics*. Lewisburg, Ohio, July 1, 69. B.S., Ohio State, 93, M.S., 94, fellow, 94-95; Harvard, 02-03. Instr. math, *Ohio State*, 95-99, asst. prof, 99-06, assoc. prof, 06-08, *prof.*, 08- Special instr. math, Kenyon, 98-00. A.A.; Math. Soc; Math. Ass; Eng. Educ.
- Swasey, Dr. Ambrose**, 7808 Euclid Ave, Cleveland, Ohio. *Mechanical engineering*. Exeter, N. H., Dec. 19, 46. Pub. schools; hon. D.Eng. Case, 05; hon. Sc.D., Denison, 10. Mem. firm, Warner and Swasey, *Cleveland*, 80-00, v. pres. and treas, *Warner and Swasey Co*, 00-12, *pres.*, 12- Mem. jury of awards, Nashville, Pan-Am, La. Purchase and Jamestown Expositions; pres. Cleveland Chamber of Commerce, 04; mem. Nat. Research Council. Chevalier Légion d'honneur, 00. Mech. Eng. (v. pres, 01, pres, 04); Philos. Soc; Astron. Soc; Cleveland Eng. Soc. (pres, 94); British Inst. Mech. Eng; fel. Royal Astron. Soc; British Astron. Ass. Design of the Lick and Yerkes telescopes; the circular dividing engine; the Swasey depression range finder and other scientific instruments.
- Sweeney, Prof. O(rland) R(ussell)**, Iowa State College, Ames, Iowa. *Chemistry*. Martin's Ferry, Ohio, March 27, 83. B.S., Ohio State, 09, A.M., 10; Ph.D., Pennsylvania, 16. Asst. anal. chem, Ohio State, 10; instr. chem, Pennsylvania, 10-16; indust. chem, Ohio State, 17; prof, N. Dak. Col, 18; Cincinnati, 19-20; *prof. and head, dept. chem. eng.*, *Iowa State*, 20- Major, C.W.S., 18-19. Chem. Soc. Industrial and analytical chemistry; chemical engineering.
- Sweet, Prof. A(lbert) W(hitman)**, University of Tennessee Medical School, Memphis, Tenn. *Bacteriology*. Riverpoint, R. I., April 14, 87. Ph.B., Brown, 11, A.M., 12, Ph.D., 15. Instr. biol, Brown, 12-13, bacter, 13-14; bacteriologist and chemist, Newport water works, 14-17; *prof. bacter. and pub. health*, *Tennessee*, 19- Bacteriologist, R. I. Shellfish Commission, 13-14; R. I. State Board of Health, 16-17; Newport Board of Health, 17; Red Cross, 17; Tenn. State Board of Health; various hospitals; lieut. and capt. Sanit. C. A.E.F., 17-19. Chem. Soc; Pub. Health Ass. Infantile dysentery; stream pollution; bile and bile products; nitrogen determinations; Wassermann reaction; *Bacillus bulgaricus*.
- Sweet, Dr. J(oshua) E(dwina)**, 301 St. Marks Square, Philadelphia, Pa. *Surgery*. Unadilla, N. Y., Aug. 9, 76. A.B., Hamilton, 97, A.M., 00, Root fellow, 07-08; M.D., Giessen, 01; Thomas A. Scott fellow, Pennsylvania, 01-02. Fellow, Rockefeller Inst, 02-06; asst. prof. exp. surg, *Pennsylvania*, 06-17, *prof. surg. research*, 17- Lt. col, M.C., consultant surg. research, A.E.F. Am. Med. Ass; Col. Surg; Physiol. Soc; Soc. Exp. Path; Soc. Exp. Biol; Phila. Acad. Surg. Immunity; cancer.
- Sweetser, Prof. Albert R(addin)**, Eugene, Oregon. *Botany*. Mendon, Mass, July 15, 61. A.B., Wesleyan, 84, A.M., 87; Mass. Inst. Tech., 84-85; Harvard, 93-97. Teacher science, Bucksport Acad, and Tilton Sem, 85-93; asst. crypt. lab, Harvard, and asst. instr. bot, Radcliffe, 95-97; *prof. biol.*, Pacific, 97-02; bot, *Oregon*, 02- A.A.; Bot. Soc; Pub. Health Ass; West. Soc. Nat; Oregon Acad. (v. pres, pres, 08).
- Swenk, Prof. Myron H(armon)**, University of Nebraska, Lincoln, Nebr. *Entomology*. Polo, Ill, Aug. 8, 83. A.B., Nebraska, 07, A.M., 08. Lab. asst. entom, *Nebraska*, 04-07, adj. prof, 07-10, asst. prof, 10-11, assoc. prof, 11-14, *prof. econ. entom.*, 15-, asst. entomologist, *Exp. Sta.*, 07-12, assoc. entomologist, 13-19, *entomologist*, 19-; asst. state entomologist, Nebr., 08-19, *state entomologist*, 19- A.A.; Ass. Econ. Entom; Entom. Soc; mem. Ornith. Union; Nebr. Ornith. Union (pres, 07, sec'y, 08-). Economic entomology; ornithology; mammalogy; taxonomy of Apoidea and Thysanura; birds and mammals of Nebraska; pollination of plants by insects.
- Swenson, Prof. B(ernard) V(ictor)**, 175 Fifth Ave, New York, N. Y. *Electrical engineering*. Chicago, Ill, May 3, 72. B.S., Illinois, 93, M.E., 01; E.E., Wisconsin, 01. Instr. physics and elec.

- eng, Illinois, 93-95, asst. prof. elec. eng, 95-98; Wisconsin, 98-05; sec'y and treas, Am. St. and Inter. Ry. Ass, 05-10; *St. and Interurban Ry. Advertising*, 10- In charge, dept. elec, summer sch, Wisconsin, 01-03; asst. supt. elec. ry. tests, Elec. Ry. Test Commission, mem. jury of awards and expert in charge, elec. eng. sect, La. Purchase Expos, 04. Elec. Eng; Mech. Eng; N. Y. Elec. Soc; N. Y. Eng. and R. R. Clubs. Dynamo electric machinery; photometry; illumination; electric railways.
- Swett, Prof. Otis D(ow)**, 1335 H St, N. W, Washington, D. C. *Chemistry*. Mattoon, Ill, Aug. 29, 71. LL.B, George Washington, 91, LL.M, 92, B.S, 04, M.S, 09. Instr. chem, George Washington, 04-09, asst. prof, 09-18, prof, 18- A.A; Chem. Soc. (abstractor of foreign patents, 'Abstracts'). Analytical chemistry; apparatus.
- Swezey, Prof. G(oodwin) D(elloss)**, University of Nebraska, Lincoln, Nebr. *Astronomy, Meteorology*. Rockford, Ill, Jan. 10, 51. A.B, Beloit, 73, A.M, 76; divinity sch, Yale, 73-75; B.D, Andover Theol. Sem, 80; Wisconsin, 96. Prof. nat. sciences, Doane, 80-94; meteorologist, Nebr. State Board of Agr, 91-; prof. astron. and meteorol, Nebraska, 96- Director, Nebr. Weather Service, 84-96; meteorologist, U. S. Exp. Sta, Lincoln, 94-06. Astron. Soc; Nebr. Acad. (treas, 97, pres, 99, sec'y, 07). The climate of Nebraska.
- Swezy, Dr. O(live)**, 2515 Vine St, Berkeley, Calif. *Zoology*. Shohola, Pa, Nov. 1, 78. B.S, California, 13, M.S, 14, Ph.D, 15, Berliner fellow, 19-20. Assoc. zool. California, 15-16, zoologist, Scripps Inst, 16-18, Nat. Research Council asst. protozool, 19- A.A; Soc. Zool; Micros. Soc. Marine plankton; parasitic Protozoa; cytology of Protozoa.
- Swezey, Otto H(erman)**, Hawaiian Sugar Planters' Experiment Station, Honolulu, Hawaii. *Entomology*. Rockford, Ill, June 7, 69. A.B, Lake Forest, 96; fellow, Northwestern, 96-98, M.S, 97; fellow, Ohio State, 02-03. Instr. biol, Northwestern, 98-02; asst. nursery and orchard inspector, Ohio, 03-04; asst. entomologist, Exp. Sta, Hawaiian Sugar Planters' Ass, Honolulu, 04-14, entomologist, 15- Hon. curator, Bishop Museum, Honolulu, 07- A.A; Ass. Econ. Entom; Ohio Acad; Hawaiian Entom. Soc. Life histories of insects; sugar-cane insects; life histories and parasites of Hawaiian Lepidoptera.
- Swick, Clarence H(erbert)**, U. S. Coast and Geodetic Survey, Washington, D. C. *Geodesy*. Wilson, N. Y, June 1, 83. C.E, Cornell, 07. Aid, U. S. Coast and Geod. Surv, 07-09, computer, 10- Wash. Philos. Soc. Triangulation; gravity.
- Swift, Dr. Charles H(enry)**, University of Chicago, Chicago, Ill. *Anatomy*. New Castle, Ky, Aug. 17, 81. A.B, Chicago, 03, B.S, 06, fellow, 08-09, Ph.D, 13; M.D, Rush Med. Col, 10. Asst. anat, Chicago, 10-13, assoc, 13-15, instr, 15-18, asst. prof, 18- Ass. Anat. Primordial germ-cells in the chick; yolk nucleus of Balbiani.
- Swift, Prof. Edgar James**, Washington University, St. Louis, Mo. *Psychology*. Ravenna, Ohio. A.B, Amherst, 86; Ph.D, Clark, 03. Teacher science, Lake Forest Acad, 88-89; prof. psychol, State Nor. Sch, Stevens Point, Wis, 96-01; psychol. and educ, Washington (St. Louis), 03- A.A; Psychol. Ass; West. Philos. Ass; S. Soc. Philos. and Psychol. Applied psychology; adolescence; mental development of children; heredity and environment; psychology and physiology of learning; eye defects in school children; statistical study of environment in mental development; influence of suggestion in education; psychology of learning a foreign language.
- Swift, Prof. Elijah**, University of Vermont, Burlington, Vt. *Mathematics*. Buffalo, N. Y, Oct. 23, 82. A.B, Harvard, 03, A.M, 04; Ph.D, Göttingen, 07. Instr. math, Princeton, 07-09, preceptor, 09-14; Williams prof, Vermont, 14- Math. Soc.
- Swift, Dr. Homer F(ordyce)**, 65 Central Park West, New York, N. Y. *Medicine*. Paines Hollow, N. Y, May 5, 81. Ph.B, Western Reserve, 02; M.D, Bellevue Med. Col, 06. Intern, Presb. Hosp, N. Y. City, 06-08; asst. path, Univ. and Bellevue Hosp. Med. Col, 09-10, instr. dermat, 09-10; asst. res. physician, Rockefeller Hosp, 10-12, res. physician, 12-14; attending physician, Presb. Hosp, 14-17; assoc. prof. med, Columbia, 14-17; assoc. prof, Cornell (on leave), 17-19; with A.E.F, 17-19. Mem. Am. Red Cross Trench Fever Commission. A.A; Am. Physicians; Am. Med. Ass; Soc. Exp. Biol; Soc. Internal Med; Soc. Clin. Invest; Soc. Baet; Ass. Immunol; Cosmopolitan Clin. Soc; Harvey Soc. Bacteriology; syphilis; rheumatism; trench fever.
- Swindle, Prof. P(ercey) F(ord)**, Fourth St. and Reservoir Ave, Milwaukee, Wis. *Physiology*. Newtonia, Mo. A.B, B.S, Missouri, 11, A.M, 12; Ph.D, Berlin, 15. Instr. exp. psychol, Ohio State, 15-16; research fellow, Harvard, 16-17; instr. physiol, Tufts, 17-18; asst. prof. exp. psychol, Missouri, 19-20; physiol. and pharmacol, sch. med, Marquette, 20- A.A; Soc. Nat; Psychol. Ass; Eugenics Research Ass. Latent period and fatigue of muscle and nerve; contractility of nerve fibers; heart beat.
- Swingle, Dr. L(eroy) D(ey)**, University of Utah, Salt Lake City, Utah. *Botany, Zoology*. Simon, Pa, Jan. 22, 81. Cold Spring Harbor, summer, 03; Ph.B, Lafayette, 04; fellow, Nebr, 05-08, Ph.D, 08. Asst. biol, Lafayette, 03-04; instr. science, Seattle Sem, 04-05; prof. zool, Nebr. Wesleyan, 08-11; research parasitologist, Wyo. Exp. Sta, 11; prof. pharmacol, Utah. Investigator, Nebr. Exp. Sta, summer, 09. Micros. Soc. Parasitic flagellates; embryology of *Myosorus minimus*; pernicious anemia of horses; insect flagellates.
- Swingle, Walter T(ennyson)**, U. S. Department of Agriculture, Washington, D. C. *Botany*. Canaan, Pa, Jan. 8, 71. B.S, Kansas State, 90, M.S, 96. Asst. botanist, Kans. Exp. Sta, 88; special agent, div. veg. physiol. and path, U. S. Dept. Agr, 91, agr. explorer, 98-02, in charge plant life hist. investigations, 02- A.A; Ass. Geog.
- Swingle, Dr. W(ilbur) W(illis)**, Yale University, New Haven, Conn. *Zoology*. Warrensburg, Mo, Jan. 11, 91. A.B, Kansas, 15, fellow, 15-16, A.M, 16; fellow, Princeton, 19-20, Ph.D, 20. Instr. zool, Kansas, 17-18; biol, Yale, 20- Kansas Acad. (sec'y, 16). Cytology; experimental morphology; embryology.

- Swisher, Prof. C(harles) L(ee)**, 1700 Villa Place, Nashville, Tenn. *Physics*. Sheldon, Ill, Jan. 27, 80. A.B, Illinois, 09; A.M, Michigan, 13; Ph.D, Cornell, 17. Instr. physics, Ga. Tech, 09-10; Grinnell, 10-13; Cornell, 13-16; prof. physics and in charge physics and elec. eng. S. Dak. Sch. Mines, 16-20; *assoc. prof. physics, Vanderbilt*, 20- A.A; *assoc. Elec. Eng.* Electrical properties of metallic calcium; distortion factors in alternating currents.
- Switzer, H(erbert) B(razilla)**, Transportation Building, Chicago, Ill. *Bacteriology*. Bradford, N. Y, June 25, 88. B.S.A, Cornell, 12. Instr. dairy bacter. and market milk, Purdue, 12-15, *asst. prof.*, 15-17; *bacteriologist, bur. chem, U. S. Dept. Agr*, 17- Soc. Bact. Pasteurization of cream; acid tolerant organisms; dried and evaporated milk.
- Sy, Prof. Albert P(hilip)**, Buffalo, N. Y. *Chemistry*. Altamont, Ill, Aug. 7, 72. B.S, Illinois, 94, M.S, 99; Ph.D, Buffalo, 08. Instr. chem, Buffalo, 95-98; Illinois, 98-99; *asst. prof.*, Buffalo, 99-00; *asst. chemist*, Frankford Arsenal, ordnance dept, U.S.A, 00-03, *chemist*, Sandy Hook, N. J, 03-04; *asst. prof. chem, Buffalo*, 04-07, *prof.*, 07-, *director, chem. laboratories*, 09- Chem. Soc. Physiological and pharmaceutical chemistry; explosives.
- Sykes, Prof. Geo(rge) F(rancis)**, Oregon State Agricultural College, Corvallis, Oregon. *Zoology*. Suffield, Conn, Nov. 10, 78. Ph.B, Brown, 09, A.M, 10. *Asst. comp. anat.*, Brown, 10; *instr. zool. and physiol, Oregon Col*, 10-12, *asst. prof.*, 13, *prof.*, 14- Curator, zool. museum, Oregon Col. A.A; Cooper Ornith. Club; Pacific Fisheries Soc. (sec'y); West. Soc. Nat. Developmental morphology and physiology of the salmon.
- Sykes, Godfrey G(lenton)**, Desert Botanical Laboratory, Tucson, Ariz. *Geography*. London, England, May 25, 61. Brewood Sch, England; private educ. With eng. dept, Great West. Ry, England, 79-81; hydraulic and mining engineer, Japan, 86-87; Australia, 88-89; practising civil engineer, 90-06; *mem. staff, desert lab, Carnegie Institution*, 06- Explorations in Ariz, Calif, Sonora, Libyan desert and Sudan, 01-12. A.A; Min. and Metal. Eng; fel. Royal Geog. Soc; fel. Royal Soc. Arts. Eremography; Spanish cartography; development in the Southwest.
- Sylvester, A(lbert) H(ale)**, Wenatchee, Wash. *Geology, Forestry*. Woodside, Calif, May 25, 71. B.S, California, 95. Topographer, U. S. Geol. Surv, 97-08; *forest supervisor, U. S. Forest Service*, 08- A.A; Civil. Eng; Soc. Foresters; Wash. Geol. Soc. Glaciers and physiography, including the vulcanology of Mt. Hood, Oregon; geology and physiography of the Wenatchee River country, Washington.
- Sylvester, Dr. R(ueel) H(ull)**, State University of Iowa, Iowa City, Iowa. *Psychology*. Lynnville, Iowa, March 18, 81. A.B, Iowa, 08; Ph.D, Pennsylvania, fellow, 12-13. Prof. psychol. and educ, Penn (Iowa), 09-10; *asst. prof. psychol, Iowa*, 13- Psychol. Ass; Iowa Acad. Tone variator; form-board tests; clinical psychology.
- Symmers, Dr. Douglas**, Bellevue Hospital, New York, N. Y. *Pathology*. Columbia, S. C, Sept.
- 17, 79. M.D, Jefferson Med. Col, 01. Research fellow pharmacol, Col. Physicians and Surg, Columbia, 05-06; *asst. pathologist, City Hosp*, N. Y, 06-08; N. Y. Hosp, 08-13; *prof. path, Univ. and Bellevue Hosp. Med. Col*, 12-19; *asst. director, laboratories, Bellevue and Allied Hospitals*, 16-18, *director*, 18- Instr. path, Univ. and Bellevue Hosp. Med. Col, N. Y, 07-08; *asst. path, med. col, Cornell*, 08-11; ed, 'Ziegler's Gen. Path.', 20. Ass. Path. and Bact; Soc. Exp. Biol; N. Y. Path. Soc. Pathological anatomy and chemistry.
- Symons, Prof. Thomas B(addeley)**, College Park, Md. *Zoology*. Easton, Md, Sept. 2, 80. Cornell, summer, 01; B.S, Md. Col, 02, M.S, 04, D.Agr, 18. Asst. state entomologist, Md, 02, *assoc. state entomologist*, 03; *prof. entom. and zool, Maryland, and state entomologist, Md*, 04-, *dean, sch. hort*, 12-; *exten. director*, 14- A.A; Ass. Econ. Entom; Md. Agr. Soc. (sec'y). Economic entomology; orchard and field crop pests.

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- Taber, Dr. Henry**, 2 Pleasant Place, Worcester, Mass. **Mathematics*. Staten Island, N. Y, June 10, 60. Ph.B, Yale, 82; Ph.D, Hopkins, 88. Asst. math, Hopkins, 88-89; docent, Clark, 89-92, *asst. prof.*, 92-03, *prof.*, 03- Math. Soc; Am. Acad; London Math. Soc. Bilinear forms; continuous groups; hypercomplex numbers.
- Taber, Prof. Stephen**, University of South Carolina, Columbia, S. C. *Geology*. Victory, N. Y, April 24, 82. A.B, Stanford, 06; Ph.D, Virginia, 12. Assayer and chemist, Santa Maria de Guadalupe y Anexas Mines, Mex, 06-07; *instr. econ. geol, Virginia*, 09-12; *prof. geol. and miner, South Carolina*, 12-, *state geologist, S. C*, 14- Field asst, Calif. Earthquake Investigation Commission, 06; *asst. geologist, Va. Geol. Surv*, 09-12; *mem. Porto Rico Seismol. Commission*, 18-19. A.A; Geol. Soc; Min. and Metal. Eng; Seismol. Soc; fel. London Geol. Soc; Soc. géol. de France. Seismology; dynamic and economic geology.
- Taff, Joseph A(lexander)**, Southern Pacific Building, San Francisco, Calif. *Geology*. Ten Mile, Tenn, Nov. 20, 62. Arkansas, 86-88; fellow, Texas, 93-94, B.S, 94. Asst. geologist, Ark. Geol. Surv, 88-89; Tex. Geol. Surv, 89-94; U. S. Geol. Surv, 94-00, *geologist*, 00-09; *Southern Pacific Co*, 09- Geol. Soc; Wash. Geol. Soc; Min. and Metal. Eng; Calif. Acad. Stratigraphic, structural and economic geology; geology of Ouachita, Arbuckle and Wichita Mountains in Oklahoma; Cretaceous of northern Texas; coal fields of West Virginia, Colorado, Wyoming, Utah and Oklahoma; mid-continent oil field.
- Taft, Dr. Annie E(lzina)**, 374 Hammond St, Chestnut Hill, Mass. *Pathology*. Castleton, Ill. M.D, Tufts, 07. Med. research officer, Monson State Hosp, 09-10; curator, dept. neuropath, Harvard Med. Sch, 11-17. Ass. Path. and Bact; Medico-Psychol. Ass. Neuropsychiatry; neuropathology.
- Taggart, Prof. Walter T(homas)**, University of Pennsylvania, Philadelphia, Pa. *Chemistry*. Philadelphia, April 15, 72. B.S, Pennsylvania, 96, Ph.D, 03. Instr. chem, Pennsylvania, 96-

- 05, asst. prof, 05-13, *prof. org. chem*, 13-A.A.; Chem. Soc. (councilor, 08-, pres, Phila. sect, 12). Electrochemistry; organic chemistry.
- Tainter, Charles S(umner)**, 2960 First St, San Diego, Calif. **Mechanics, Physics*. Watertown, Mass, April 25, 54. Pub. sch. Mem. U. S. transit of Venus exped, 74. Gold medal, Paris Elec. Expos, 81; Officier de l'Instruction Pub, 89; John Scott medal, Franklin Inst, 00; gold medal, Panama-Pacific Expos, 15. A.A. Transmission of sounds to a distance by agency of light; recording and reproduction of sound; telephony.
- Tait, Prof. John**, McGill University, Montreal, Can. *Physiology*. Orkney Islands, Scotland. B.Sc, Edinburgh, 01, M.B, Ch.B, 03, M.D, 06, D.Sc, 07. House surgeon, Leith Hosp, 04-05; asst. physiol, Edinburgh, 05-07, lecturer exp. physiol, 07-19; *prof. physiol, McGill*, 19- Capt, R.A.M.C. Fothergill gold medal, Edinburgh; Neill medal, Royal Soc. Edinburgh, 19. Physiol. Soc; British Ass. (sec'y, physiol. sect, 11-19); London Physiol. Soc; fel. Royal Soc. Edinburgh. Nerve; heart; blood coagulation; phagocytosis; zoology of Crustacea.
- Takamine, Dr. Jokichi**, Takamine Laboratory, Clifton, N. J. **Chemistry*. Takaoka, Japan, Nov. 3, 54. Ch.E, Tokio, 78; M.E, Glasgow, 79, D.E, 80, Phar.D, 81. Chemist, Dept. Agr. and Commerce, Japan, 88-87. V. commissioner patents, Patent Office, Japan; chief chemist, Tokio Fertilizer Works; consulting chemist, Parke, Davis and Co. Gold medal, Japan Eng. Soc. A.A.; Chem. Soc; Electrochem. Soc; Soc. Chem. Indust; Tokio Chem. Soc; Japan Eng. Soc; fel. London Chem. Soc. Diastatic ferments; active principles of the suprarenal glands.
- Talbot, Prof. A(rthur) N(ewell)**, Urbana, Ill. *Civil engineering*. Cortland, Ill, Oct. 21, 57. B.S, Illinois, 81, C.E, 85; Sc.D, Pennsylvania, 15; Eng. D, Michigan, 16. Asst. engineer, A.T. and S.F.R.R, 81-85; asst. prof. eng. and math, Illinois, 85-90, *prof. munic. and sanit. eng. and in charge theoret. and applied mech*, 90- Engineer on railroad location, construction and maintenance, on water-works, sewerage and pavement construction; consulting engineer; mem. div. eng, Nat. Research Council. Chanute medal in mech. eng, West. Soc. Eng, 10. A.A.; Civil Eng. (director, 09-11, pres, 18); R. R. Eng. (director, 15-18); Eng. Educ. (pres, 10); Am. Water Works Ass; Soc. Munic. Improv; Soc. Test. Mat. (pres, 13); West. Soc. Eng; Int. Ass. Test. Mat. Reinforced concrete; brick and terra cotta; structural steel compression tests; paving brick; rainfall and stormwater run-off; hydraulics; stresses in railroad track.
- Talbot, Prof. Eugene S(olomon)**, 31 N. State St, Chicago, Ill. *Medicine*. Sharon, Mass, March 8, 47. D.D.S, Pa. Col. Dental Surg, 72; M.D, Rush Med. Col, 80; LL.D, Kenyon, 02; M.S, Whitman, 03; Sc.D, Pennsylvania, 15. *Prof. stomatol, Rush Med. Col*, 80- Int. Med. Cong, Berlin, 90 (hon. pres. dental sect); Pan. Am. Cong, Washington, 93 (hon. sec'y); Havana, 01 (hon. sec'y); Int. Med. Cong, Moscow, 97 (hon. pres); Int. Stomatol. Cong, Paris, 07 (hon. pres); Int. Med. Cong, Budapest, 09.
- A.A.; Am. Med. Ass. (sec'y, sect. stomatol, v. pres, 20); fel. Am. Acad. Dental Sci; Ill. Acad; Chicago Acad. Med; Chicago Path. Soc; Chicago Med. Soc; Chicago Acad; N. Y. State Dental Soc; hon. mem. Odontol. Gesell; hon. mem. Stomatol. Gesell. Ung; hon. mem. Ass. Gen. Dentistes; hon. mem. Soc. Odontol. Españ; cor. mem. Dansk-Tandlaegeforening; cor. mem. Budapest Royal Soc. Physicians. Histopathology of the jaws and dental tissues; oral hygiene; degeneracy, its signs, causes and results; interstitial gingivitis; irregularities of the teeth; developmental pathology; degenerative evolution; degeneracy of the nervous system and nerve endings.
- Talbot, Dr. Fritz B(radley)**, 311 Beacon St, Boston, Mass. *Biological chemistry*. Boston, Jan. 30, 78. A.B, Harvard, 00, M.D, 05. Collaborator, nutrition lab, Carnegie Institution, 11-19; *instr. pediat, Harvard Med. Sch*; chief, children's med. service, Mass. Gen. Hosp. Int. Red Cross Cong, Cannes, 19. Pediat. Soc; Soc. Clin. Invest; Am. Med. Ass. Respiratory exchange; nutrition and metabolism of infants and children; anaphylaxis; human milk.
- Talbot, Prof. Henry P(aul)**, Massachusetts Institute of Technology, Cambridge, Mass. **Chemistry*. Boston, Mass, May 15, 64. B.S, Mass. Inst. Tech, 85; Ph.D, Leipzig, 90. Asst. *anal. chem, Mass. Inst. Tech*. 85-87, instr, 87-88, 90-92, asst. prof, 92-95, assoc. prof, 95-98, prof, 98-01, *prof. in charge dept, 01-*, chairman of faculty, 19-, administration committee, 20- Lecturer, Wellesley, 92-94; mem. advisory board, U. S. Bur. Mines and later of War Dept, 17-19. A.A. (v. pres, 07); Chem. Soc; Electrochem. Soc; Eng. Educ; Franklin Inst; Am. Acad. Inorganic and analytical chemistry; investigation of the accuracy of several analytical procedures.
- Talbot, Prof. Marion**, University of Chicago, Chicago, Ill. *Household administration*. Thun, Switzerland, July 31, 58. A.B, Boston, 80, A.M, 82; B.S, Mass. Inst. Tech, 88; LL.D, Cornell (Iowa), 04. Instr. domestic science, Wellesley, 90-92; dean of women, Chicago, 92-, asst. prof. sanit. science, 92-95, assoc. prof, 95-04, *prof. household administration*, 04- A.A.; Chem. Soc; Pub. Health Ass. Domestic hygiene; organization of the household; education of women.
- Talbot, Prof. Mignon**, South Hadley, Mass. *Paleontology*. Iowa City, Iowa, Aug. 16, 69. A.B, Ohio State, 92; Ph.D, Yale, 04. Teacher, high sch, Columbus, Ohio, 96-02; head, dept. geol, Mt. Holyoke, 04-08, *prof. geol*, 08- A.A.; Paleont. Soc; fel. Geol. Soc; Forestry Ass. Helderbergian fauna of New York.
- Taliaferro, Dr. W(illiam) H(ay)**, 310 W. Monument St, Baltimore, Md. *Zoology*. Portsmouth, Va, Feb. 10, 95. B.S, Virginia, 15; Ph.D, Hopkins, 18. Asst. biol, Virginia, 13-15; Hopkins, 15-17, instr. protozool, sch. hygiene and pub. health, 19-20, assoc, 20- A.A.; Soc. Zool; Soc. Exp. Biol. Cytology and behavior of lower invertebrates; Protozoa.
- Talmage, Dr. James E(dward)**, 47 E. South Temple St, Salt Lake City, Utah. *Geology*. Hungerford, England, Sept. 21, 62. Hopkins, 83-84; B.S, Lehigh, 01, hon. Sc.D, 12; Ph.D,

- Ill. Wesleyan, 96. Prof. chem. and geol, Brigham Young, 84-88; pres, Latter Day Saints Col, Salt Lake City, 88-93; Utah, 94-97, Deseret prof. geol, 94-07, pres, 04-07; *official, Latter Day Saints Church, 11-* Mining geologist. Delegate, Royal Soc. Edinburgh to Int. Geol. Cong, St. Petersburg, 97. A.A.; Geol. Soc; fel. London Geol. Soc; fel. Edinburgh Royal Soc; fel. Royal Micros. Soc; life assoc. Gt. Britain Philos. Soc; fel. Royal Scottish Geog. Soc. Utah geology.
- Talman, Prof. C(harles) F(itzhugh), U. S. Weather Bureau, Washington, D. C. Meteorology.** Detroit, Mich, Aug. 31, 74. Kalamazoo, 93-94. Observer, *U. S. Weather Bur*, 96-08, librarian, 08-12, junior prof. meteorol, 12-14, *prof. and librarian, 14-* In charge meteorol. stations, S.Am. and W.I., 98-99. A.A. Meteorological bibliography, history, terminology and nomenclature.
- Tanberg, Dr. A(rthur) P(ercival), 2402 W. 18th St, Wilmington, Del. Chemistry.** Dubuque, Iowa, June 20, 85. A.B. Swarthmore, 10, A.M, 13, Leedom fellow, 13-14; Ph.D, Columbia, 15. Instr. chem, Swarthmore, 11-13; org. chemist, *E. I. duPont de Nemours and Co*, 15-17, head, *org. div, exp. sta*, 17-19, *asst. director, 19-* Original chemistry; enzymes.
- Tanner, Prof. F(red) W(ilbur), 805 W. Iowa St, Urbana, Ill. Chemistry.** Buffalo, N. Y, Feb. 15, 88. B.S. Wesleyan; M.S. Illinois, Ph.D. 16. Bacteriologist, Ill. State Water Surv, 12-15; asst, instr, assoc. and later *asst. prof. bacter*, Illinois, 15- Soc. Baet; Chem. Soc; Water Works Ass; Pub. Health Ass. Sanitary chemistry; bacterial metabolism; food bacteriology; mycology of foods; yeasts.
- Tanner, Prof. J(ohn) H(enry), Ithaca, N. Y. *Mathematics.** Fort Plain, N. Y, March 1, 61. B.S. Cornell, 91; Göttingen, 94-96, Ph.D, 01. Teacher *math*, Clinton Liberal Inst, Fort Plain, N. Y, 83-87; instr. Cornell, 91-94, asst. prof, 94-04, *prof, 04-* A.A.; Math. Soc. (treas, 07-); Am. Geog. Soc; Ass. Teachers Math. Middle States and Md; Cent. Ass. Sci. and Math. Teachers.
- Tannreuther, Dr. G(eorge) W(ashington), University of Missouri, Columbia, Mo. Zoology.** Miami Co, Ohio, Feb. 13, 76. A.B. Manchester, 00; A.M, Antioch, 01; fellow, Chicago, 04-05, Ph.D, 08. Asst. *zool*, Chicago, 04; *Missouri*, 05-09, *instr, 09-* A.A.; Soc. Zool; Ecol. Soc. Embryology of Aphididae, Coelenterata, Discodrilidae and Rotifera; nutrition and reproduction of Euglena; germ cells.
- Tanquary, Dr. M(aurice) C(ole), College Station, Tex. Entomology.** Lawrenceville, Ill. A.B, Illinois, 07, A.M, 08, Ph.D, 12; Harvard, summer, 10. Asst. entom, Illinois, 09-12; instr, Kansas State, 12-13, asst. prof, 16-18, assoc. prof, 18-19; *state entomologist, Tex*, 19- Zoologist, Crocker Land exped. to the arctic, 13-16. A.A.; Entom. Soc; Ass. Econ. Entom. Insect embryology and behavior; control of economic insects; beekeeping.
- Tanton, Dr. T(homas) L(eslie), Geological Survey, Ottawa, Can. Geology.** London, Ont. Feb. 5, 90. B.A, Toronto, 11, fellow, 11-12, M.A, 12; Vienna, 12-13; Ph.D, Wisconsin, 15. Instr. physiog, Wisconsin, 13-14; *geologist, Can. Geol. Surv*, 15- Min. and Metal. Inst; Royal Astron. Soc. Can; Can. Min. Inst. Petrography; areal mapping; mineral deposits.
- Tappan, Dr. Anna Helen, 2402 Lincoln Way, Ames, Iowa. Mathematics.** Mt. Pleasant, Iowa, 88. A.B. West. Col. for Women, 09; A.M, Cornell, 12, fellow, 13-14, Ph.D, 14. Instr. *math*, West Col. for Women, 09-11; *Iowa State*, 14-17, *asst. prof*, 17- Math. Soc. Pure geometry.
- Tarr, Prof. W(illiam) A(rthur), University of Missouri, Columbia, Mo. Geology.** New Cambria, Mo, March 29, 81. B.S. Okla. Col, 04; Arizona, 08; fellow, Chicago, 10-11, Ph.D, 16. Instr. geol. and mining, Arizona, 08-09; research asst, Chicago, 09-11; instr. geol. and mining, *Missouri*, 11-13, asst. prof. geol, 13-17, assoc. prof, 17-19, *prof*, 19- Instr. geol, Chicago, summers, 10, 11, 14; geologist, Empire Oil Co, 17; Mo. Bur. Mines and Geol, summer, 18. A.A.; Geol. Soc; Min. Eng; Miner. Soc. Economic geology; heat effects on granite; ore deposits of Missouri; origin of chert, oolites and strolites; sediments; glauconite; loess of Missouri.
- Tartar, Prof. Herman V(ance), University of Washington, Seattle, Wash. Chemistry.** Airlie, Oregon, Jan. 4, 82. B.S. Oregon Col, 02; California, 02-03; Chicago, 08, Ph.D, 20; Michigan, 14. Chemist, Oregon State Food Commission, 03-05; Clark, Woodward Drug Co, 05-06; instr. chem, Oregon Col, 07-09, assoc. prof, 13-18, research chemist, Exp. Sta, 09-11, chemist, 11-18; *asst. prof. chem, Washington (Seattle)*, 18- Lecturer chem, Mass. Col, 16. A.A.; Chem. Soc. Hops; sulphid insecticides; lead arsenates; ammonia and sulphur in soils; electrolytic deposition of metals; polysulphids of the alkali and alkaline earth metals.
- Tashiro, Dr. Shiro, University of Cincinnati, Cincinnati, Ohio. Physiological chemistry.** Togo, Satsuma, Japan. Feb. 12, 84. B.S. Chicago, 09, fellow, 10-12, Ph.D, 12. Asst. *physiol. chem*, Chicago, 10, 12-13, assoc, 13-14, instr, 14-18, asst. prof, 18; *prof, Cincinnati*, 18- A.A.; Physiol. Soc; Soc. Biol. Chem; Chem. Soc; Soc. Exp. Biol; Ecol. Soc; Soc. Zool; Pharmaceut. Soc. Japan. Carbon dioxide production in nerve fibers, ganglia and eggs; chemical basis of protoplasmic irritability; metabolic factors in animal behavior; chemical sign of life; anesthetics; tropical metabolism; microchemical analysis of gases.
- Tate, Dr. John T(orrance), University of Minnesota, Minneapolis, Minn. *Physics.** Adams Co, Iowa, July 28, 89. B.S. Nebraska, 10, fellow, 10-12, A.M, 12; Ph.D, Berlin, 14. Instr. *physics*, Nebraska, 14-16; *Minnesota*, 16-17, asst. prof, 17, *prof*, 19- Lieut. A.S.A.P, 17-18. Physical Soc; Physik. Gesell. Optical constants and heats of vaporization of metals; discharge of electricity from hot wires.
- Tatlock, John, 37 Wall St, New York, N. Y. Astronomy.** Williamstown, Mass, March 12, 60. A.B, Williams, 82, A.M, 85. Asst. Washburn Observatory, Wisconsin, 83; prof. astron, Beloit, 84; asst. actuary, Mutual Life Ins. Co, 89-04; pres, Washington Life Ins. Co, 04-08; *banker*,

- 08- A.A.; Astron. Soc; fel. N. Y. Acad; fel. Royal Astron. Soc. Astronomy of position; finance and economics.
- Tatnall, Dr. Robert R (ichardson)**, 805 Franklin St., Wilmington, Del. *Physics*. Wilmington, Del., Feb. 4, 70. B.S., Haverford, 90, A.M., 91; Ph.D., Hopkins, 95; hon. fellow, Clark, 97-98. Instr. physics, Pennsylvania, 95-97; acad., Northwestern, 99-01, Northwestern, 01-05, asst. prof., 05-09, assoc. prof., 09-14; prof., Syracuse, 14-19; *exp. engineer*, 19- A.A.; Physical Soc; Franklin Inst. Solar spectrum; metallic arc spectra; compound pendulum; physical properties of leather.
- Tatum, Dr. Arthur L (awrie)**, 5527 Kimbark Ave., Chicago, Ill. *Physiology*. Wall Lake, Iowa, May 17, 84. B.S., Penn (Iowa), 05; fellow, Iowa, 05-07, M.S., 07; fellow, Chicago, 10-11, Ph.D., 13, M.D., Rush Med. Col., 14. Instr. chem., Colorado, 07-10; pharmacol., Wisconsin, 11-13; asst. physiol., Chicago, 13-14; instr., Pennsylvania, 15-16; prof. pharmacol., South Dakota, 16-18; *asst. prof. pharmacol. and physiol.*, Chicago, 18- A.A.; Physiol. Soc. Morphology, physiology and chemistry of the thyroid gland, pancreas and suprarenal glands.
- Taubenhaus, Dr. Jacob J (oseph)**, College Station, Tex. *Plant pathology*. Saffed, Palestine, Oct., 84. B.S., Cornell, 08, M.S., 09; Ph.D., Pennsylvania, 13. Asst. plant pathologist, Del. Exp. Sta., 09-13, assoc., 13-16; *chief, div. plant path.*, Tex. Exp. Sta., 16- Russell lecturer, Mass. Hort. Soc., 16. A.A.; Phytopath. Soc; Bot. Soc. Taxonomy; mycology; sweet pea, sweet potato, truck and greenhouse crop diseases.
- Taussig, Dr. Albert E (rnst)**, 3519 Washington Ave., St. Louis, Mo. *Medicine*. St. Louis, May 6, 71. A.B., Harvard, 91; M.D., Washington (St. Louis), 94. Prof. physiol., *Washington (St. Louis)*, 09, *assoc. prof. clin. med.*, 14- Physician, various hospitals. Am. Physicians; Am. Med. Ass. Internal medicine; diseases of the circulatory system.
- Taussig, Dr. Frederick J (oseph)**, 4506 Maryland Ave., St. Louis, Mo. *Gynecology*. Brooklyn, N. Y., Oct. 26, 72. A.B., Harvard, 93, 93-94; M.D., Washington (St. Louis), 98; Berlin, Vienna, 01-02. Asst. supt., Female Hosp., 99-00; asst., Bettina Pavilion, K. K. Eliz. Spital, Vienna, 01-02; gynecologist, Barnard Free Skin and Cancer Hosp., 06; Washington Univ. Hosp., 09; City Hosp., 10-; obstetrician, St. Louis Maternity Hosp., 09-; instr. *gynec.*, *Washington (St. Louis)*, 07-12, *assoc.*, 12- Gynec. Soc. (councilor, 14); Am. Med. Ass. (v. chairman, sect. gynec. and obstet); Ass. Anat; Ass. Cancer Research; Soc. Cancer Control (regional chairman, 20-). Development of hymen; hematomole; cancer of uterus; abortion; vaginitis in children; pre-cancerous diseases of vulva.
- Taverner, Percy A (lgermon)**, Victoria Memorial Museum, Ottawa, Ont., Can. *Ornithology*. Guelph, Ont., June 10, 75. Michigan, 94. Asst. curator, *Can. Geol. Surv.*, 11-14, *zoologist*, 14- Fel. Ornith. Union; Wilson Ornith. Club; Cooper Ornith. Club; colonial mem. British Ornith. Union. Ornithology of southern Ontario and southeastern Michigan; Canadian ornithology.
- Taylor, Commander Albert H (oyt)**, U. S. N., U. S. Naval Air Station, Anacostia, D. C. *Physics*. Chicago, Ill., Jan. 1, 79. B.S., Northwestern, 02; Ph.D., Göttingen, 09. Instr. physics, Mich. Agr. Col., 00-03; Wisconsin, 03-05, asst. prof., 05-08; prof. and head of dept., North Dakota, 09-17; lieutenant, U.S.N.R.F., 17-18; lieutenant commander, 18-19; *commander, N.R.F.C.*, 19- A.A.; Physical Soc; fel. Radio Eng; Elec. Eng; Wis. Acad. Radio engineering; aviation.
- Taylor, Prof. Alonzo E (nglebert)**, University of Pennsylvania, Philadelphia, Pa. *Pathology*. Iowa, March 19, 70. Cornell (Iowa), 86-88; De Pauw, 88-90; Berlin, 90-91; M.D., Pennsylvania, 94. Asst. director, Pepper Lab, Pennsylvania, 96-98; prof. path., California, 99-10; physiol., *Pennsylvania*, 10-11, *Benjamin Rush prof. physiol. chem.*, 11- Soc. Nat; Am. Physicians; Soc. Biol. Chem; Soc. Exp. Biol; Chem. Gesell. Chemical physiology and pathology.
- Taylor, Dr. Charles E (dward)**, Penn Yan, N. Y. *Chemistry*. Cleveland, Ohio, 81. B.S., Case, 06; A.M., Columbia, 07, Ph.D., 09. Chemist, Edward R. Taylor, 09-11; expert, Hooker Electrochem. Co., 11-15; *consulting chemist*, *Taylor Chem. Co.*, 16- A.A.; Chem. Soc; Electrochem. Soc. Industrial chemistry.
- Taylor, Prof. Charles H (enry)**, 324 Baum Building, Oklahoma City, Okla. *Geology*. Dwight, Kans., 77. B.S., Chicago, 07, M.S., 09. Instr. science, high sch., Beloit, Kans., 03-04, principal, 04-05; instr. science, State Nor. Sch., River Falls, Wis., 07-08; assoc. prof. geol., Oklahoma, 09-10; prof. miner., 10-11, geol., 11-16, *private practise*, 16- A.A.; Min. Eng. Economic geology; granites of Oklahoma.
- Taylor, David Watson**, U. S. N., Navy Department, Washington, D. C. *Engineering*. Louisa Co., Va., March 4, 64. Randolph-Macon, 81; grad. U. S. Naval Acad., 85; Royal Naval Col., Greenwich, England, 85-88; hon. D. Eng., Stevens, 04. Cadet engineer, *U.S.N.*, 81-82, naval cadet, 82-86, asst. naval constructor, 86-92, constructor, 92-14, *chief constructor*, 14- Gold medal, British Inst. Naval Archit., 94; prize medal, Soc. Naval Archit. and Marine Eng., 01. Nat. Acad; Naval Archit. and Marine Eng. (past v. pres); London Inst. Naval Archit. Resistance and propulsion of ships.
- Taylor, Dr. Edson H (omer)**, Charleston, Ill. *Mathematics*. Robinson, Ill., July 31, 74. B.S., Nat. Nor. Univ., 96; A.M., Harvard, 05, Ph.D., 09. *Teacher math.*, *East. Ill. State Nor. Sch.*, 99- Int. Commission on the Teaching of Math. (chairman, committee on nor. schools in the U. S.). A.A.; Math. Soc; Math. Ass; Cent. Ass. Sci. and Math. Teachers. Conformal mapping; pedagogy of mathematics.
- Taylor, Prof. Edward W (yllys)**, 527 Beacon St., Boston, Mass. *Neurology*. Montclair, N. J., May 7, 66. A.B., Harvard, 88, M.D., 91, A.M., 99. Asst. to Prof. H. Oppenheim, Berlin, 92-93; asst. path., *Harvard Med. Sch.*, 93-96; instr. neuropath., 96-04, instr. *neur.*, 06-12, asst. prof., 12-17, *prof.*, 17-; *chief of service*, *neur. dept.*, *Mass. Gen. Hosp.*, 12- Asst. and ed., *Boston Med. and Surg. Jour.*, 99-14; Shattuck lecturer, *Mass. Med. Soc.*, 09. Neur. Ass. (pres, 17); Am.

- Med. Ass. Neuropathology; neuroglia; multiple sclerosis; infantile paralysis; family diseases.
- Taylor, E(stes) P(ark)**, Anaconda Copper Co, Conway Building, Chicago, Ill. *Entomology*. Loveland, Colo, Sept. 17, 79. B.S., Colo. Agr. Col. 02. Asst. entomologist and botanist, Ky. Exp. Sta, Lexington, 02; asst. entomologist, Illinois, 03-05; Colo. Exp. Sta, 06-07; Mo. State Fruit Exp. Sta, 08-09; entomologist and hort. inspector, Mesa County, Grand Junction, Colo, 10-11; consulting horticulturist, 11-12; field horticulturist, Idaho, 13-16; director agr. exten, Arizona, 16-20; with exten. div, *Anaconda Copper Co*, 20- Collaborator, bur. entom., U. S. Dept. Agr. A.A.; Ass. Econ. Entom.; Entom. Soc. Coccidae of Missouri orchards; aphids of Colorado orchards; insects injurious to fruits.
- Taylor, Dr. Ewing**, 27 W. 44th St, New York, N. Y. *Medicine*. Poughkeepsie, N. Y., Sept. 24, 74. A.B., Williams, 95; M.D., Harvard, 03. Austin teaching fellow histol. and embryol, Harvard Med. Sch, 03-05; assoc. anat., Pennsylvania, 05-07; instr. histol., med. col., Cornell, 07-09; *asst. director, diagnosis lab, Dept. of Health, N. Y. City*, 09- Capt. M.C., 18-20. A.A.; Ass. Anat. Bacteriology; pathology.
- Taylor, F(rank) B(ursley)**, 2905 Fairfield Ave, Wayne, Ind. **Geology*. Fort Wayne, Nov. 23, 60. Harvard, 82-86. Asst., Mich. Geol. Surv, 00; special asst., U. S. *Geol. Surv*, 00-06, *field asst*, 06- A.A.; Geol. Soc.; Ass. Geog.; Am. Geog. Soc.; Forestry Ass.; Ind. Acad.; Mich. Acad.; Ottawa Field Nat. Club. Glacial and postglacial geology of the region of the Great Lakes, especially in Michigan, Ohio, New York and Ontario; the Niagara gorge; origin of the earth's plan; Pleistocene geology of the Housatonic, Taconic and Niagara quadrangles; Pleistocene geology of Indiana and southern peninsula of Michigan; fundamental principles of geology in relation to external disturbing forces.
- Taylor, Prof. F(red) W(ellington)**, Durham, N. H. *Agronomy*. Wooster, Ohio, Jan. 25, 76. B.S.A., Ohio State, 00. Soil expert, bur. soils, U. S. Dept. Agr, 01-03; *prof. agr, N. H. Col*, 03-08, *agron*, 08-, *dean agr, div*, 15- A.A.; Soc. Agron. Soils; corn.
- Taylor, Frederic W(illiam)**, 3939 W. Seventh St, Los Angeles, Calif. *Agriculture*. Weeping Water, Nebr, April 13, 60. Private study. Nurseryman; prof. hort., Nebraska, 91-93, sec'y, Exp. Sta, 94-95; irrig. engineer, Denver, 95-11; director agr, P. I., 11-14. Supt. Nebr. Fruit Exhibit, Columbian Expos, 93; supt. agr. and hort., Omaha Expos, 98; chief, agr. and hort. dept., La. Purchase Expos, 04; Officier Légion d'honneur; Order of the Rising Sun, Japan; Royal Crown of Italy. Am. Geog. Soc.; Nebr. Hort. Soc. (sec'y, 92-95); fel. Royal Geog. Soc. Horticulture; small fruits; foreign cereals; irrigation.
- Taylor, Dr. Guy B(aker)**, 28 Bedford Court, Wilmington, Del. *Physical chemistry*. Lexington, Ky, Oct. 5, 88. B.S., Kentucky, 08, M.S., 09; fellow, Princeton, 11-13, Ph.D., 13. *Chemist*, B. I. duPont de Nemours and Co, 09-11; Bur. Mines, 13-18; *E. I. duPont de Nemours and Co*, 18- A.A.; Chem. Soc. Equilibrium; coal; explosives; oxidation of ammonia.
- Taylor, H(arden) F(ranklin)**, Bureau of Fisheries, Washington, D. C. *Chemistry, Fisheries*. West Plains, Mo, July 15, 90. A.B., Trinity (N. C.), 13. Principal, high sch., Taboro, N. C., 13-15; scientific asst., *Bur. Fisheries*, 15-18, *director of investigations, fishery products lab*, 18- Scientific asst., U. S. Fisheries Lab, Beaufort, N. C., summers, 11-14; *Bur. Fisheries* representative, interdepartmental committee on fats and oils. A.A.; Chem. Soc.; Fisheries Soc.; Wash. Biol. Soc. Biology; fisheries products; age and mortality of fishes.
- Taylor, Dr. Hawley O(tis)**, 122 E. Capitol St, Washington, D. C. *Physics*. North Derby, Vt, June 4, 76. A.B., Cornell, 09, Ph.D., 13. Asst. physics, Cornell, 08-09, instr., 09-13; research assoc., Mass. Inst. Tech. and Harvard, 13-16; research physicist, Nat. Elec. Signaling Co, 16-17; consulting physicist, *Bur. Standards*, 18-19, *assoc. physicist*, 19- Special adviser, Submarine Defense Ass, 17-18; radio engineer, Sig. C, 18. A.A.; Physical Soc.; Radio Eng. Acoustics; electricity; sound absorption; vibrating telephone diaphragms; wave analysis; radio telegraphy; efficiency of telephonic instruments and circuits.
- Taylor, Dr. Henry Charles**, U. S. Department of Agriculture, Washington, D. C. *Agriculture*. Stockport, Iowa, April 16, 73. B.S.A., Iowa State, 96, M.S.A., 98; Ph.D., Wisconsin, 02; London Sch. Econ, 99; Halle, 00; Berlin, 00-01. Instr. commerce, Wisconsin, 01, chairman, dept. agr. econ, 08-19; *chief, office farm management, U. S. Dept. Agr*, 19- Farm Econ. Ass.; Econ. Ass.; Ass. Geog. Agriculture economics; rent of farm lands; marketing and cost of farm products.
- Taylor, Prof. Hugh S(tott)**, 159 Nassau St, Princeton, N. J. *Physical chemistry*. Lancashire, England, Feb. 6, 90. B.Sc., Liverpool, 09, M.Sc., 10, D.Sc., 14; Nobel Inst, Stockholm, 12-13; Tech. Hochschule, Hanover, 13-14. Instr. *physical chem, Princeton*, 14-15, *asst. prof*, 15- Research chemist, Munitions Inventions Dept, England, 17-19. Chem. Soc.; Electrochem. Soc.; Faraday Soc. Phosphorus oxychlorid-oxid compounds; phase rule; catalysis; ammonia synthesis and hydrogenation; thermodynamics; affinity of chemical reactions.
- Taylor, Prof. James M(orford)**, Hamilton, N. Y. *Mathematics*. Holmdel, N. J., Sept. 15, 43. A.B., Colgate, 67, A.M., 69; LL.D., William Jewell, 91, Sc.D., 19. Principal, gram. sch. and prof. math, Madison, 69-73; *prof. math, Colgate*, 73- A.A.; Math. Soc. Calculus; algebra; trigonometry.
- Taylor, John B(ellamy)**, 23 Lowell Road, Schenectady, N. Y. *Electrical engineering*. Brookline, Mass, Aug. 20, 75. B.S., Mass. Inst. Tech, 97. *With New Eng. Telephone and Telegraph Co*, 97-99; *Gen. Elec. Co*, 99- Prize, Ass. des Industriels de France contre les Accidents du Travail. A.A.; Elec. Eng.; assoc. Physical Soc.; Illum. Eng. Soc.; Electrochem. Soc. Optical projection; analysis of speech and musical tones; inductive disturbances to telephone lines.
- Taylor, Dr. J(ohn) Madison**, Temple University, Philadelphia, Pa. *Medicine*. Lancaster Co, Pa, July 4, 55. A.B., Princeton, 76, A.M., 79; M.D.,

- Pennsylvania, 78. *Practising physician*, 78-; *assoc. prof. non-pharmaceut. therapeut.*, Temple, 10- Chief of clinic to Dr. S. Weir Mitchell, 82-95; co-editor, 'Monthly Cyclopedia and Med. Bulletin.' Am. Acad. Med.; Phila. Col. Physicians; Ass. Col. Alumni (pres); hon. mem. Soc. Hygiène de Paris. Orthokinetics; neurology; diseases of children; psychopathology; physical efficiency.
- Taylor, Norman**, Brooklyn Botanic Garden, Brooklyn, N. Y. *Botany*. Birmingham, England, May 18, 83. Cornell, 00-01. Museum aid, N. Y. Bot. Garden, 04-07, custodian plantations, 08, asst. curator, 09-11; *curator plants*, Brooklyn Bot. Garden, 11- Ed., 'Torreya,' 11-; 'Jour. Int. Garden Club,' 17-; *assoc. ed.*, 'Ecology,' 20-; *mem. expeditions* for N. Y. Bot. Garden to Bahamas, 04, Haiti, 05, Cuba, 06, Santo Domingo, 09. A.A.; Bot. Soc.; Ecol. Soc.; Torreya Bot. Club; fel. N. Y. Acad. North American Naiadales; ecology and taxonomy of the flora of New York and West Indies; photogeography and ecology of Long Island, New York.
- Taylor, Prof. S(amuel) N(ewton)**, Goucher College, Baltimore, Md. *Physics*. Farmingdale, N. Y. Ph.B., Wesleyan, 87; fellow, Clark, 93-96, Ph.D., 96; German universities, 02-03. Exp. electrician, Thomson-Houston Elec. Works, 87-91; teacher science, Maine Wesleyan Sem., 91-93; instr. physics, Purdue, 96-99; *assoc. prof.*, Syracuse, 99-03; *prof. elec. eng.*, Pittsburgh, 03-08; Cincinnati, 08-11; *physics*, Goucher, 11- In charge time service, Allegheny Observatory, 04-05. A.A.; Elec. Eng.; Eng. Educ.; Ind. Acad. Absolute E.M.F. of cadmium cells; mass and velocity of ions in cathode rays; potential phenomena in vacuum tubes.
- Taylor, Dr. T(homas) S(mith)**, Research Building, Westinghouse Co., East Pittsburgh, Pa. *Physics*. Peoli, Ohio, Jan. 30, 83. A.B., Yale, 06, Ph.D., 09; fellow, Manchester, 12-13. Asst. physics, Yale, 07-09; instr., Illinois, 09-12; Yale, 13-15, asst. prof., 15-17; *research physicist*, Westinghouse Elec. and Mfg. Co., 17- Magnesia Ass. fellow, 20. A.A.; Physical Soc.; Heat. and Vent. Eng.; Refrig. Eng. Radioactivity; properties of alpha rays; determination of gas densities by the microquartz balance; theory of heat; heat conduction; dissipation of heat; measurement of air flow.
- Taylor, Dean T(homas) U(lvan)**, University Station, Austin, Tex. *Civil engineering*. Parker Co, Tex, Jan. 2, 58. C.E., Virginia, 83; M.C.E., Cornell, 95. Prof. physics and civil eng., Miller Sch., Va, 83-88; adj. prof. applied math., Texas, 88-91, *assoc. prof.*, 91-97, *prof.*, 97-01, *prof. civil eng.*, 01-, *dean of eng.*, 05- Dist. engineer, U. S. Geol. Surv., 98-10; U. S. Reclamation Service, 15. Civil Eng.; Tex. Acad. (pres). Prismoidal formulas of earthwork and abbreviated river flow; irrigation; water power.
- Taylor, Dr. Walter P(enn)**, Biological Station, La Jolla, Calif. *Zoology*. Elkhorn, Wis., Oct. 31, 88. B.S., California, 11, Ph.D., 14. Asst. biol., Throop, 06-08; asst. curator mammals, museum vert., 08, California, 09-11, curator, 11-16; *asst. biologist*, biol. surv., U. S. Dept. Agr., 16- Mem. advisory committee for protection of migratory birds, U. S. Dept. Agr., 13-16, leader, field parties for investigation of higher vertebrates, Calif., Nev., Ariz. and Wash., 08-19. A.A.; Mus. Ass.; Soc. Mammal. (treas., 19-); Ecol. Soc.; West. Soc. Nat.; *assoc. mem.* Ornith. Union; Cooper Ornith. Club; Calif. Acad.; Wash. Biol. Soc. Vertebrate paleontology; distribution and ecology of vertebrates; wild life conservation; mammals of California.
- Taylor, Dr. W(illiam) A(lton)**, 1315 Gallatin St., N. W., Washington, D. C. *Botany*. Chelsea, Mich., June 23, 63. B.S., Mich. Agr. Col., 88, hon. Sc.D., 13. Asst. pomologist, U. S. Dept. Agr., 91-01, pomologist, in charge field investigations and later *chief*, *bur. plant indust.*, 01- Expert hort. and mem. int. jury, Paris Expos., 00; mem. int. jury, La. Purchase Expos., 04. A.A.; Pomol. Soc. (sec'y., 97-03); Soc. Hort. Sci. (pres., 08-10); Soc. Prom. Agr. Sci.; Wash. Bot. Soc. (v. pres., 08); Wash. Biol. Soc.; Wash. Acad. Pomology; nuciculture; agriculture.
- Taylor, Dr. W(illiam) A(nthony)**, duPont Building, Wilmington, Del. *Chemistry*. Jarrettsville, Md., Nov. 6, 86. A.B., A.M., Randolph-Macon, 08; Ph.D., Hopkins, 14. Research chemist, Carnegie Foundation, 14-16; instr. org. chem., Wisconsin, 15-16; *research chemist*, E. I. duPont de Nemours and Co., 16- Organic chemistry; acids, bases and salts; glucose; mucic acid and its lactones; conductivity of solutions of electrolytes.
- Taylor, W(illiam) C(hittenden)**, 77 E. Fifth St., Corning, N. Y. *Chemistry*. San Francisco, Calif., March 3, 86. B.S., Mass. Inst. Tech., 08. Asst. chemist, U. S. Agr. Exp. Sta., Mayaguez, P. R., 09-10; *Corning Glass Works*, 08-09, 10-20, *chief*, chem. div., 20- Chem. Soc.; Ceramic Soc.; British Soc. Glass Tech. Glass development.
- Taylor, Prof. W(illiam) E(rastus)**, 822 Irving Ave., Syracuse, N. Y. *Mathematics*. Bucklin, Mo., March 18, 70. Ph.B., Syracuse, 93, A.M., 95, Ph.D., 03. Instr. physics and math., Chamberlain Inst., 93-96; math., Syracuse, 97-03, *assoc. prof.*, 03-04, *prof. applied math.*, L. C. Smith Col. of Applied Sci., 04- Math. Soc.; Eng. Educ. The product of an alternant by a symmetric function.
- Taylor, Dr. W(illiam) J(ohnson)**, 1825 Pine St., Philadelphia, Pa. *Surgery*. Worcester Co., Md., Oct. 13, 61. M.D., Pennsylvania, 82. *Attending surgeon*, Phila. Orthop. Hosp. and Infirmary for Nervous Diseases; St. Agnes Hosp. Surg. Ass.; Orthop. Ass.; Am. Med. Ass.; Phila. Col. Physicians (pres); Phila. Acad. Surg. (past pres); Soc. Int. de Chirurg. General surgery.
- Taylor, William Randolph**, 1340 N. 12th St., Philadelphia, Pa. *Botany*. Philadelphia, Dec. 21, 95. B.S., Pennsylvania, 16, M.S., 17, fellow, 17-18, Ph.D., 20. Asst. bot., Pennsylvania, 15-17, *instr.*, 18- Instr. bot., Woods Hole, summers, 19- A.A.; Bot. Soc.; Pa. Bot. Soc. (sec'y., 17-19); Micros. Soc. Cytology; algae; bryophytes.
- Teachout, Dr. Robert B(rown)**, South Lancaster, Mass. *Psychology*. Milton, Vt., May 9, 93. A.B., A.M., Dartmouth, 14; Ph.D., Clark, 17. Asst. prof. psychol., Oregon, 17-18; asst. development specialist grading and testing, E. and R. branch, gen. staff, U.S.A. Psychol. Ass.
- Teague, Dr. Oscar**, 437 W. 59th Street, New York, N. Y. *Bacteriology*. Greenville, Ala., Jan. 8,

78. B.S., Vanderbilt, 98, M.S., 99; M.D., Berlin, 03. Asst. exp. path. med. col., Cornell, 05-08, 12-14; bacter., Bur. Science, P. I., 08-12; director, N. Y. State Quarantine Lab., 14-17; *assoc. bacter., Columbia, 19-* With M.C. U.S.A., 17-19. Delegate to Int. Plague Conf., Mukden, China, 11. Ass. Path. and Bact.; Soc. Bact.; Ass. Immunol.; Soc. Exp. Biol.; London Soc. Trop. Med. Flocculation of colloids; treatment of trypanosomiasis; agglutination of the plague bacillus; pneumonic plague; diphtheria.
- Teepie, Dr. John E(dgar)**, 50 E. 41st St., New York, N. Y., or Montclair, N. J. *Chemistry*. Kempton, Ill., Jan. 4, 74. B.S., Valparaiso, 93, A.B., 94; B.S., Cornell, 99, Ph.D., 03. Prof. chem. and math., Nor. Col., Fremont, Nebr., 94-98; asst., later instr. org. and physiol. chem., Cornell, 99-04; officer and chem. director in various chem. mfg. companies and director, consulting and research laboratories, N. Y., 04-08; *consulting chemist and chem. engineer, 08-* Non-res. lecturer indust. chem., Cornell, 09-10; Columbia, 17; chief, chem. sect., Sig. C., 18; mem. Nat. Research Council. A.A.; Chem. Soc. (treas. and director); Soc. Chem. Indust. (v. chairman, N. Y. sect.); Electrochem. Soc.; Franklin Inst.; Soc. de Chim. indust.; Chem. Gesell. Chemistry of bile pigments; electric preparation of organic compounds; wood turpentine industry; pine oil; utilization of manufacturing waste products; American potash; decolorizing carbons; tartaric acid; oil cracking and refining.
- Teeters, Dean Wilber John**, Iowa City, Iowa. *Pharmacy*. Alliance, Ohio, Oct. 10, 66. B.S., Mt. Union, 93, M.S., 97; Ph.C., Michigan, 95. Demonstrator chem., med. col., Iowa, 95-02, asst. prof. pharmacy, 02, *dean, col. pharmacy, 03-* A.A.; Pharmaceut. Ass.; Iowa Pharm. Ass.; Iowa Acad.
- Tehon, Leo R(oy)**, 1609 Edgar Ave., Mattoon, Ill. *Botany*. Deadwood, S. Dak., June 21, 91. Illinois, 16-17; *with U. S. Dept. Agr., 19-* Bot. Soc. Mycology; plant pathology; fungi of Porto Rico.
- Teller, Edgar Eugene**, 305 Ellicott Square, Buffalo, N. Y. *Geology*. Buffalo, Aug. 3, 45. Lewiston Acad. Paleont. Soc.; Wis. Nat. Hist. Soc. (past pres). Paleontology.
- Temple, Prof. C(harles) E(dward)**, University of Maryland, College Park, Md. *Plant pathology*. Stanberry, Mo., Nov. 4, 77. A.B., Nebraska, 06, A.M., 09. Instr. bot., Michigan, 09-11; prof. and state botanist, Idaho, 11-14; exten. pathologist, Maryland, 14-20, *prof. plant path. and state pathologist, 15-* A.A.; Phytopath. Soc.; Wash. Bot. Soc. Resistance of plants to disease; tomato diseases.
- Temple, Dr. Sterling, R. and H.** Chemical Co., Perth Amboy, N. J. *Chemistry*. Morristown, Minn., Oct. 22, 82. A.B., Hamline, 05, A.M., 06; Ph.D., Minnesota, 15. Teacher chem., Rayen Sch., Youngstown, Ohio, 07-10; prof., Dakota Wesleyan, 10-13; Hamline, 14-15; assoc. prof. indust. chem., Minnesota, 17-18; *research chemist, R. and H. Chem. Co., 19-* Capt., ordnance dept., and major, C.W.S., 18. Chem. Soc.; Electrochem. Soc. Non-ferrous alloys.
- Tennent, Prof. D(avid) H(ilt)**, Bryn Mawr, Pa. *Zoology*. Janesville, Wis., May 28, 73. B.S., Olivet, 00; Hopkins, 00-01, fellow, 02-04, Ph.D., 04, Bruce fellow, 04, 11-12. Acting prof. biol. and physics, Randolph-Macon, 03; lecturer biol., Bryn Mawr, 04-05, assoc., 05-06, assoc. prof., 06-12, *prof., 12-* Instr., Woods Hole, 02-05, in charge of instruction embryol., 20- Soc. Nat.; Soc. Zool. (pres. 16); Phila. Physiol. Soc. Embryology; experimental embryology; cytology.
- Terman, Prof. Lewis M(adison)**, Stanford University, Calif. *Psychology*. Johnson Co., Ind., Jan. 15, 77. A.B., Indiana, 02, A.M., 03; fellow, Clark, 03-05, Ph.D., 05. Principal, high sch., San Bernardino, Calif., 05-06; prof. child study and pedag., State Nor. Sch., Los Angeles, 06-10; asst. prof. *educ., Stanford, 10-12*, assoc. prof., 12-16, *prof., 16-* Lecturer educ., Washington (Seattle), summer, 12; Columbia, summer, 17; mem. committee on classification of personnel, War Dept., 17-19; committee on classification of recruits, 17-19; major, U.S.A., 18-19; mem. Nat. Research Council, 19- A.A.; Psychol. Ass. (councilor, 19-); Ass. Col. Teachers Educ.; Sch. Hygiene Ass. (v. pres, 14, councilor, 14-, pres, 16). Child psychology and hygiene; sleep of school children; genius and stupidity; Binet intelligence tests; measurement of intelligence; intelligence of school children; gifted children; group tests of mental ability; the teacher's health; health work in schools.
- Terry, Dr. Benjamin T(aylor)**, 2001 Peabody Place, Nashville, Tenn. *Pathology*. Birmingham, Ala., June 10, 76. A.B., Vanderbilt, 93, A.M., 00; M.D., Hopkins, 04; fellow, Chicago, 04-05. Asst., chem. lab., Vanderbilt, 98-99; fellow protozool., Rockefeller Inst., 06-08, asst., 08-10, assoc., 10-13; instr. and assoc. *path., Columbia, 14-18; prof., Vanderbilt, 18-* A.A.; Soc. Exp. Biol.; Soc. Pharmacol.; Ass. Path. and Bact. Immunity and chemotherapy in trypanosome infections; standardization of Wassermann reaction; tissue stains.
- Terry, Prof. E(arle) M(elvin)**, University of Wisconsin, Madison, Wis. *Physics*. Battle Creek, Mich., Jan. 16, 79. A.B., Michigan, 02; A.M., Wisconsin, 04, Ph.D., 10. Asst. *physics, Wisconsin, 02-04*, instr., 04-10, asst. prof., 10-16, *assoc. prof., 16-* Mem. research staff, U.S.N. Exp. Sta., New London, Conn.; in charge, radio school, Wisconsin. A.A.; Physical Soc. Effect of temperature upon magnetic properties of iron, nickel and cobalt; modulation in radio telephony.
- Terry, Prof. Elwood I(dell)**, Middlebury, Vt. *Forestry*. Coxsackie, N. Y., May 1, 79. B.S., Harvard, 07, M.F., 18. Chief forest investigations for Mont. dist. U. S. Forest Service, 08-11; director, sch. forestry, Colo. Col., 12-17; exchange prof. *forestry, Harvard, 17-18; prof., Middlebury, and manager, Battell Forest, 19-* Soc. Foresters. Estimation of timber; regeneration of white pine in New England.
- Terry, Dr. Ethel Mary**, University of Chicago, Chicago, Ill. *Chemistry*. Hamilton, N. Y., 87. A.B., Chicago, 07, Ph.D., 13. Instr. *chem., Chicago, 12-18, asst. prof., 18-* Chem. Soc. Saponification of ethyl acetate.
- Terry, Commodore N(athaniel) M(atson)**, U. S. N., Lyme, Conn. *Physics*. Lyme, April 6, 44. A.B., Amherst, 67; Ph.D., Göttingen, 71; hon.

- A.M, Yale, 72, LL.D, 17. Prof. physics, U. S. Naval Acad, 72-17, retired with rank of commodore, 17, head, dept. physics and chem, 86-13. Naval Inst. (mem. board of control, 87-). Applications of electricity to naval service.
- Terry, Dr. Oliver P(erkins)**, 215 Sheetz St, La Fayette, Ind. *Physiology*. La Fayette, July 23, 82. B.S, Purdue, 03; M.S, M.D, St. Louis, 06. Asst. physiol, St. Louis, 04-06; *asst. prof. physiol. and anat*, Purdue, 06- Prof. physiol, Ind. Med. Col, and instr, Woods Hole, 06-07. Physiol. Soc; Am. Med. Ass. Physiological chemistry; paroxysmal hemoglobinuria; effect of anesthetics on catalysis by blood.
- Terry, Dr. Robert J(ames)**, Washington University School of Medicine, St. Louis, Mo. **Anatomy*. St. Louis, Jan. 24, 71. Cornell, 90-92; M.D, Mo. Med. Col, 95; Edinburgh, 98; A.B, Washington (St. Louis), 01; Freiburg, 03. Austin teaching fellow, Harvard, 06-07; demonstrator *anat*, Mo. Med. Col, 96-99; *asst. prof*, Washington (St. Louis), 99-00, *prof*, 00- Collaborator, 'Am. Jour. Anat,' 01-02; ed, 'Med. Bul. Wash. Univ'; dean, Officers' Sch. Oral, Plastic and Neurol. Surg, U.S.A, St. Louis, 17-18. A.A; Ass. Anat. (mem. exec. committee, 08-12); Mo. Audubon Soc. (see'y-treas). Biology; human anatomy; anthropology; variation; cranium; symmetry; respiration.
- Tesla, Dr. Nikola**, 8 W. 40th St, New York, N. Y. **Electrical engineering*. Smiljan, Austria, 57. Polytech, Graz; Prague and Budapest; hon. A.M, Yale; LL.D, Columbia. *Electrical engineer and inventor*. A.A; Elec. Eng; Philos. Soc. Electricity; electric oscillations.
- Test, Charles D**, Tungsten Products Co, Boulder, Colo. *Chemistry*. Dundee, Ill, June 18, 74. B.M.E, Purdue, 94, A.C, 96. Asst. prof. chem, Colo. Sch. Mines, 07-18; chief chemist, West. Potash Works, 18; chem. expert, U. S. Tariff Commission, 18-19; research chemist, fixed nitrogen research lab, American, 19-20; *with Tungsten Prod. Co*, 20- Chem. Soc. Inorganic and analytical chemistry; analysis of lime nitrogen.
- Test, Prof. Louis Agassiz**, 629 Russell St, La Fayette, Ind. *Chemistry*. Dundee, Ill, June 18, 74. B.M.E, Purdue, 94, A.C, 96; Ph.D, Chicago, 07. Prof. chem, Occidental, 07-09; *asst*, Mo. Sch. Mines, 09-13; *assoc*, Iowa State, 13-18; *prof. gen. chem*, Purdue, 18- A.A; Chem. Soc; Ass. Prof. Inorganic chemistry; rate of decomposition of cyanids in solution.
- Test, Prof. W(illiam) H(enry)**, 716 Browne St, La Fayette, Ind. *Chemistry*. Richmond, Ind, Feb. 1, 71. B.S, Purdue, 92, M.S, 93. Asst. chem, Purdue, 93-95, *instr*, 95-01, *asst. prof*, 01- Soc. Chem. Indust. Sugars; water; fuels; valuation of fuels.
- Thacher, Dr. John S(eymour)**, 20 W. 50th St, New York, N. Y. *Pathology, Medicine*. New Haven, Conn, June 10, 56. A.B, Yale, 77; M.D, Columbia, 80. Pathologist, *Presbyterian Hosp*, N. Y, 89-07, *attending physician*, 03-; demonstrator path, Columbia, 96-03, *prof. clin. med*, 03- A.A; *emer. mem.* Am. Physicians; Am. Med. Ass; N. Y. Path. Soc; N. Y. Acad. Med. Clinical medicine.
- Thaler, Prof. J(oseph) A(uker)**, Bozeman, Mont. *Electrical engineering*. Koessen, Austria, Sept. 29, 63. E.E, Minnesota, 00. Instr. math, Minnesota, 00-01; *asst. prof. mech. eng*, Mont. Col, 01-02; *instr. mech*, Purdue, 02-03; *prof. elec. eng*, Mont. Col, 03- Elec. Eng; Eng. Educ; Mont. Eng. Soc. Effects of magnetism on the properties of iron and steel.
- Thalhimer, Dr. William**, Columbia Hospital, Milwaukee, Wis. *Pathology*. San Francisco, Calif, Oct. 12, 85. B.S, Richmond, 03; M.D, Hopkins, 08. Surg. intern, Mt. Sinai Hosp, N. Y. City, 08-10; *instr. path*, Virginia, 10-11; *asst*, Mt. Sinai Hosp, 11-18, *adj. attending surgeon*, 19; *director*, Columbia Hosp. Laboratories, 18- Ass. Path. and Bact; Am. Med. Ass; N. Y. Acad. Med. Experimental pathology and surgery; rheumatic fever; regeneration of bone; gastric ulcer; gastric carcinoma; lethargic encephalitis.
- Thatcher, Prof. B(oscoe) W(ilfred)**, University Farm, St. Paul, Minn. *Agricultural chemistry*. Chatham Center, Ohio, Oct. 5, 72. B.S, Nebraska, 98, A.M, 01, D.Agr, 20. Instr. science, high sch, Beatrice, Nebr, 99-00; *asst. chemist*, Nebr. Exp. Sta, 00-02; chemist, Wash. Exp. Sta, 02-10, *director*, 07-13, *assoc. prof. chem*, Wash. State, 02-10, *prof. agr. chem. and head*, dept. agr, 10-13; *prof. agr. chem*, Minnesota, 13-17; *agr. biochemist*, Minn. Exp. Sta, 13-17, *dean*, dept. agr, and *director*, Exp. Sta, 17- A.A; Soc. Agron. (pres, 11); Soc. Prom. Agr. Sci. (pres, 18-20); Am. Geog. Soc. Biochemistry of resistance to disease in plants; enzymes of plants.
- Thaxter, Prof. Roland**, 7 Scott St, Cambridge, Mass. **Botany*. Newton, Mass, Aug. 28, 58. A.B, Harvard, 82, A.M, Ph.D, 88. Mycologist. Conn. Exp. Sta, 88-91, *asst. prof. crypt. bot*, Harvard, 91-01, *prof*, 01-19, *emer. prof*, 19- Am. ed, 'Annals of Bot,' 07- Nat. Acad; A.A; Bot. Soc. (pres, 09); Phytopath. Soc; Am. Acad; New Eng. Bot. Club; Boston Soc. Nat. Hist; British Mycol. Soc; London Linnean Soc; hon. mem. Bot. Gesell. Thallophytes; fungi; fungous parasites of insects; Laboulbeniaceae.
- Thayer, Abbott H(Anderson)**, Monadnock, N. H. *Painting*. Boston, Mass, Aug. 12, 49. Chauncey Hall Sch, Boston; Ecole des Beaux Arts, Paris, 75-79. Soc. Am. Artists (pres, two years); Nat. Acad. Design; Am. Acad; Insigne Reale Romana Delle Belle Arti Denominata Di San Luca. Concealing coloration of the animal kingdom.
- Thayer, John Eliot**, Lancaster, Mass. *Ornithology*. Boston, Mass, April 3, 62. A.B, Harvard, 85, hon. A.M, 10. A.A; mem. Ornith. Union; Am. Acad; Nuttall Club.
- Thayer, Dr. W(illiam) S(ydney)**, 406 Cathedral St, Baltimore, Md. **Medicine*. Milton, Mass, June 23, 64. A.B, Harvard, 85, M.D, 89; Berlin and Vienna, 89-90; Paris, 93; LL.D, Washington (Md), 07; hon. F. R. C. P. (Ireland), 12. Res. physician, Hopkins Hosp, 91-98, *assoc. med*, Hopkins, 95, *assoc. prof*, 96-05, *prof. clin. med*, 05-18, *med*, 18-21, *assoc*, Hopkins Hosp, 99-05, *assoc. physician*, 05-18, *physician-in-chief*, 18-21. Brig. gen, M.C, and chief consultant, med. service, A.E.F, 18-19; mem. Nat. Research Council (mem. med. sect. and committee on

- foreign relations). D. S. medal. Cong. Am. Physicians and Surg, 16 (pres); Int. Med. Cong, Moscow, 97 (hon. pres); London, 13 (hon. pres). A.A; Am. Physicians (pres); Am. Med. Ass; Soc. Trop. Med. (pres); Soc. Clin. Invest; Md. Med. and Chirurg. Faculty; Wash. Acad; British Soc. Trop. Med; fel. Royal Soc. Med. London; for. mem. Acad. méd. de Paris; Soc. d'hôp, Paris (hon. cor. mem), Lyon (cor. mem); Soc. Royale des Sci. méd. et nat. Bruxelles; cor. mem. Gesell. für Inner. Med. und Kinderheilkunde Wien; hon. mem. Budapest Royal Soc. Physicians; hon. mem. Moscow Therapeut. Soc. Parasites and etiology of malaria; the blood in different pathological conditions; the blood in typhoid fever; cardiac and vascular complications of typhoid fever; cardiac complications of chorea; arteriosclerosis; experimental cardiac murmurs; Adams-Stokes syndrome and heart-block.
- Theobald, Dr. Samuel**, Cathedral and Howard Sts, Baltimore, Md. *Ophthalmology, Otolaryngology*. Baltimore, Nov. 12, 46. M.D. Maryland, 67; Vienna and London, 70-71. Prof. diseases of eye and ear, Baltimore Polyclinic, 84; *surgeon, Baltimore Eye, Ear and Throat Charity Hosp*, 82-; clin. prof. ophthalm. and otol, *Hopkins*, and ophthalm. and aural surgeon, *Hopkins Hosp*, 94-12, *clin. prof. ophthalm. and ophthalm. surgeon*, 12- Ophthalm. Soc. (pres, 09-); Otol. Soc; Am. Med. Ass; Md. Med. and Chirurg. Faculty (pres, 00). Anatomy and pathology of stricture of the lachrymal passages; the mode of production of tinnitus aurium; muscular anomalies of the eyes; otomycosis; the pathogenesis of sympathetic ophthalmitis; subnormal accommodative power as a cause of defective vision and asthenopia in young persons; production of reflex aural neuroses by eye-strain.
- Thiel, A(lbert) F(rederic)**, University Farm, St. Paul, Minn. *Botany*. Staples, Minn, April 26, 87. A.B, Minnesota, 16; A.M, Nebraska, 17. Asst. bot, Nebraska, 16-17; field asst, *bur. plant indust, U. S. Dept. Agr*, 17-19, *asst. pathologist*, 19- Bot. Soc; Phytopath. Soc. Plant physiology, ecology and pathology; stem rust.
- Thiessen, Alfred Henry**, Weather Bureau Custom House, Baltimore, Md. *Meteorology*. Troy, N. Y, April 8, 72. B.S, Cornell. *Meteorologist, U. S. Weather Bur*, 98-; Denver forecast dist, climat. service, Colo. Normal climatic factors of Maryland and Delaware; visibility meter; application of wireless to wind instrument records.
- Thiessen, Dr. Reinhardt**, U. S. Bureau of Mines, Pittsburgh, Pa. *Botany*. New Holstein, Wis, May 1, 76. Ph.B, Lawrence, 95; B.S, Chicago, 03, fellow, 06-07, Ph.D, 07. Asst. principal, high sch, Prescott, Wis, 95-98; teacher science, Red River Valley Univ, 98-01; biol, Des Moines, 02-04; instr. bot, Univ. High Sch, Chicago, 06; *research chemist, U. S. Bur. Mines*, 07- A.A; Bot. Soc; Chem. Soc. Origin and composition of coals, lignite and peat; structure of graphite in relation to crucible making; sulphur compounds in coal.
- Thilly, Prof. Frank**, Ithaca, N. Y. *Philosophy*. Cincinnati, Ohio, Aug. 18, 65. A.B, Cincinnati, 87, LL.D, 08, Missouri, 13, Berlin, 87-89; A.M, Ph.D, Heidelberg, 91; fellow, Cornell, 91-92. Instr. philos, Cornell, 92-93; *prof*, Missouri, 93-04; psychol, Princeton, 04-06; *philos, Cornell*, 06- Ed, 'School Rev', 92-93; 'Univ. of Missouri Studies', 01-04; 'Int. Jour. of Ethics', 09-14. Psychol. Ass; Philos. Ass. (sec'y, 05-08, pres, 12); West. Philos. Ass. Logic; history of philosophy; ethics; history of rationalism.
- Thom, Dr. Charles**, U. S. Department of Agriculture, Washington, D. C. *Botany, Microbiology*. Minonk, Ill, Nov. 11, 72. A.B, Lake Forest, 95, A.M, 97; Ph.D, Missouri, 99. Instr. biol, Missouri, 97-99, bot, 99-01, asst. prof, 01-02; asst, Cornell, 02-04; mycologist in cheese investigations, *U. S. Dept. Agr*, 04-14, *in charge, microbiol. lab, bur. chem*, 14- Delegate, Int. Dairy Cong, 05. A.A; Bot. Soc; Phytopath. Soc; Soc. Bact; Dairy Sci. Ass; Wash. Acad. Food microbiology; saphrophytic molds; cheese and cheese ripening.
- Thom, Dr. W(illiam) T(aylor), Jr**, U. S. Geological Survey, Washington, D. C. *Geology*. Roanoke, Va, June 9, 91. B.S, Washington and Lee, 13; fellow, Hopkins, 16-17, Ph.D, 17. Surveyor, D. C. Water Dept, 09-10; *geologist, U. S. Geol. Surv*, 19- Field asst, various geol. surveys, summers, 12-16; with bur. statist, Fuel Ad, 17-19. Min. and Metal. Eng; Wash. Geol. Soc. Economic geology; stratigraphy.
- Thomas, Prof. A(bram) O(wen)**, University of Iowa, Iowa City, Iowa. *Geology*. Montgomeryshire, Wales, March 21, 76. Ph.B, Iowa, 04, M.S, 09; fellow, Chicago, 15-16. Principal, high sch, Wellman, Iowa, 04-09; *instr. geol, Iowa*, 10-14, asst. prof, 14-18, *assoc. prof*, 19- Field asst, Iowa Geol. Surv, 10-; lecturer geol, Macbride Lakeside Lab, summers, 09-12; *geologist, Iowa exped. to Barbados-Antigua*, 18. A.A; Paleont. Soc; Iowa Acad. (treas, 15-). Invertebrate paleontology; stratigraphy and paleontology of the Devonian and Niagaran of Iowa.
- Thomas, Prof. Arthur W(aldorf)**, Columbia University, New York, N. Y. *Chemistry*. New Brunswick, N. J, Feb. 18, 91. Chemist, Columbia, 12, A.M, 14, Ph.D, 15. Instr. *food chem, Columbia*, 12-17, *asst. prof*, 19- Lieut, S. C, 17-18, capt, A.E.F, 18-19. A.A; Chem. Soc; Soc. Exp. Biol. Starch and amylases; colloids; organic analysis.
- Thomas, Prof. Carl C(lapp)**, Johns Hopkins University, Baltimore, Md. *Mechanical engineering*. Detroit, Mich, July 14, 72. Stanford, 91-94; M.E, Cornell, 95. Asst. engineer, Globe Iron Works Co, 95-97, chief engineer, 97-99; chief draftsman, marine dept, Md. Steel Co, 99-01; prof. marine eng, N. Y. Univ, 01-03; Cornell, 04-08; steam and gas eng, Wisconsin, 08-13; head, dept. mech. eng, Hopkins, 13-20; *consulting engineer, Dwight P. Robinson and Co, Inc*, 20- Manager machinery fabrication, Hog Isl. Ship Yard, 17-19. Mech. Eng; Naval Archit. and Marine Eng. Steam and gas engineering; steam turbines; specific heat of superheated steam; the measurement of steam and of gas by weight instead of by volume by means of an electric meter.
- Thomas, Cecil C(alvert)**, U. S. Department of Agriculture, Washington, D. C. *Botany*. Near

- Huron, S. Dak. A.B., Wabash, 12, A.M., 13; Cornell, 13-17. Asst. bot., Wabash, 12, instr., 13; N. Y. State Col. Agr., Cornell, 13-17; asst. plant disinfection, fed. hort. board, *U. S. Dept. Agr.*, 18, path. inspector, 18-19, asst. plant path., office foreign seed and plant introduction, bur. plant indust., 19- A.A.; Bot. Soc. Seed disinfection; nursery stock propagation.
- Thomas, Prof. Evan, 187 Loomis St., Burlington, Vt. *Mechanics*. Llangranog, South Wales, Aug. 25, 53. B.S., Denison, 76; B.D., Yale, 80; Dartmouth, 84-86. Instr. math, prep. dept., Oberlin, 76-78; minister and journalist; instr. math., Vermont, 92-02; asst. prof., 06-12, assoc. prof., 12-13, *prof. math. and mech., col. eng.*, 13- A.A.; Math. Soc.; Eng. Educ.; Vt. Soc. Eng. Mathematics; pedagogy.
- Thomas, Dr. Henry M., 1228 Madison Ave., Baltimore, Md. *Neurology*. Baltimore, May 25, 61. Haverford, 78-79; Hopkins, 79-82, 87, hon. A.M., 02; M.D., Maryland, 85; Heidelberg, Vienna and Berlin, 86. Asst. neur., Hopkins Hosp., 89-96, *clin. prof., Hopkins, and neurologist, Hopkins Hosp. and Dispensary*, 96- Consulting neurologist, Home for Incurables; Presbyterian Eye, Ear and Throat Hosp.; etc. A.A.; Neur. Ass.; Am. Med. Ass. Diseases of the nervous system.
- Thomas, H(oward) R(ice), University of Texas, Austin, Tex. *Civil engineering*. Montvale, Va., July 12, 87. C.E., Texas, 12; fellow, Illinois, 12-14, M.S., 14. Asst. testing engineer, joint committee, Soc. Civil Eng. and R. R. Eng. Ass., 14-18; *testing engineer*, Emergency Fleet Corp., 18-19; Texas, 19- Soc. Test. Mat. Concrete materials; stresses in railroad track.
- Thomas, Prof. Jacob Earl, 19 Forest Ave., Morgantown, W. Va. *Physiology*. Steilacoom, Wash., Jan. 31, 91. B.S., M.D., St. Louis, 18. Asst. *physiol.*, St. Louis, 14-18, instr., 18-20, asst. prof., 20; *prof., West Virginia*, 20- Iowa Lakeside Lab., 20. Vertebrate physiology.
- Thomas, Dr. J(ohn) J(enks), 88 Bay State Road, Boston, Mass. *Medicine, Neurology*. Columbus, Ohio, Sept. 6, 61. A.B., Williams, 86; A.M., M.D., Harvard, 90. *Physician diseases of nervous system, Boston City Hosp.*, 93-; pathologist, Boston Insane Hosp., 98-03; instr. *neur. med. sch., Tufts*, 02-06, asst. prof., 06-12, prof., 12-16, *emer. prof.*, 16- Physician, Boston Dispensary, 92-96; consulting neurologist, Quincy Hosp., 06-Major, B.E.F., 15; major and consulting psychiatrist, A.E.F., 18-19. A.A.; Neur. Ass. (v. pres., 08-16); Am. Med. Ass.; Boston Soc. Psychiat. and Neur. (pres., 11). Pathology and pathological anatomy of the nervous system.
- Thomas, Roy C(urtis), Agricultural Experiment Station, Wooster, Ohio. *Plant pathology*. Cheshireville, Ohio, Dec. 87. A.B., Wooster, 13; Ohio State, 15-16. Teacher science, high sch., N. Lima, Ohio, 13-15; asst. bot., Michigan, 16-17. Collaborator, seed dept., bur. plant indust., U. S. Dept. Agr., 15. A.A.; Bot. Soc.; Phytopath. Soc.; Ohio Acad.
- Thomas, Stanley J(udson), H. K. Mulford Co., Glenolden, Pa. *Chemistry*. Scranton, Pa., Feb. 10, 89. B.S., Lafayette, 12; M.S., Lehigh, 13, A.M., 15. Instr. chem., Lehigh, 12-16, biol., 12-13, bacter., 13-15, asst. prof., 16-17; *assoc. director, H. K. Mulford Co.* A.A.; Soc. Bact.; Chem. Soc. Sanitary chemistry; bacteriology.
- Thomas, Dr. Walter Stevens, Clifton Springs, N. Y. *Medicine*. Weimar, Tex., Aug. 23, 84. M.D., Texas, 06. Fellow and asst. path., Hopkins, 08-10; instr. and assoc., Washington (St. Louis), 11-17; *director, laboratories, Clifton Springs Sanitarium*, 17- Bacteriology; pathology.
- Thompson, Prof. C(aroline) B(urling), Wellesley College, Wellesley, Mass. *Biology*. Philadelphia, Pa., June 27, 69. B.S., Pennsylvania, 98, fellow, 99-01, Ph.D., 01. Instr. *zool., Wellesley*, 01-03, 05-09, assoc. prof., 09-16, *prof.*, 16- A.A.; Soc. Zool.; Soc. Nat.; Boston Soc. Nat. Hist. Comparative morphology of the nemertean worms; morphology of insects, especially termites.
- Thompson, Charles Henry, Missouri Botanical Gardens, St. Louis, Mo. *Botany*. Turlock, Calif., June 23, 70. B.S., Kansas State, 93, M.S., 98. Instr. bot., Shaw Sch. of Bot., 93-95; bot. asst., Mo. Bot. Garden, 95-96; instr. bot., Missouri, 96-97; *in charge, dept. succulent plants, Mo. Bot. Garden*, 04- Field agent, U. S. Dept. Agr., 93, expert seed tester, 96; forest reserve, Dept. Interior, 00; collaborator, bur. plant indust., U. S. Dept. Agr., 09- St. Louis Acad.; Engelmann Bot. Club; St. Louis Cactus Ass. Systematic botany; Cactaceae; Lemnaceae.
- Thompson, Crystal, Amherst College, Amherst, Mass. *Zoology*. Cassopolis, Mich., July 5, 87. B.S., Michigan, 09, A.M., 10. Asst. comp. anat., Michigan, 08-10; scientific asst., museum of zool., Michigan, 10-18; *curator zool. collections, Amherst*, 18- Curator, N. Dak. Biol. Sta., summer, 19. A.A.; Ecol. Soc.; Soc. Ichthyol. and Herp.; Mus. Ass.; Mich. Acad.; Wash. Biol. Soc. Herpetology; ecology.
- Thompson, Prof. E(dward) P(ayson), Riverside, Calif. *Mathematics*. Ross Grove, Ill., May 4, 58. A.B., Monmouth, 79, A.M., 81; Hopkins, 90-91. Prof. math., Geneva (Pa.), 80-90; math. and chem., Westminster (Pa.), 91-93; math., Miami, 93-05; *orange grower*, 05- Mem. Int. Cong. Math., Paris, 00. Philosophy of mathematics; horticulture.
- Thompson, Prof. Firman, Delaware College, Newark, Del. *Chemistry*. New Carlisle, Ohio, June 20, 74. B.S., Michigan, 97. Asst. chemist, N. Y. Exp. Sta., Geneva, 97-98; Sugar Planters' Exp. Sta., Honolulu, Hawaii, 99-00; first asst. chemist, Govt. Sugar Bur., Queensland, 00-02; asst. chemist, Sugar Planters' Exp. Sta., Honolulu, Hawaii, 03-07; *asst. prof. chem.*, N. Dak. Col., 08-09; *Delaware*, 09- Chem. Soc. Agricultural chemistry; composition of organic matter of soils.
- Thompson, Prof. Geo(rge) E(llsworth), Iowa State College, Ames, Iowa. *Physics*. Warren, Ind., April 2, 87. A.B., Indiana, 09, A.M., 10; Ph.D., Cornell, 13. Instr. *physics*, Cornell, 11-14; *assoc. prof., Iowa State*, 14- Iowa Acad. Photo-electric cells; heat penetration in canned foods.
- Thompson, Gustave W(hyte), 129 York St., Brooklyn, N. Y. *Chemistry*. Brooklyn, July 27, 65. Chief chemist, *Nat. Lead Co.*, 92-14, *director*,

- 14-; v. pres. and director, *Williams Harvey Corp*, 19- A.A.; Chem. Soc.; Soc. Chem. Indust.; Soc. Test. Mat.; Chem. Eng. (pres, 18); N. Y. Chemists Club; Chem. Verein. Analysis of paints and of alloys; paint tests; lead compounds.
- Thompson, Dean Helen B(ishop)**, Kansas State Agricultural College, Manhattan, Kans. *Biochemistry*, B.S., Kansas State, 03, M.S., 07; A.M., Columbia, 13; Ph.D., Yale, 17. Prof. household econ, Lincoln, 07-09; R. I. Col., 09-12; prof. and dean of women, N. H. Col., 13-15; prof. nutrition and dietet, Conn. Col. for Women, 15-18; *prof. nutrition and dietet. and dean, div. home econ, Kansas State*, 18- Lecturer, Brown, 11-12. Home Econ. Ass.; Kans. Acad.; Columbia Biochem. Ass. Nutrition; growth in the albino mouse; baking in high altitudes; tissues of mollusks and crustaceans.
- Thompson, Prof. H(enry) D(allas)**, Princeton, N. J. **Mathematics*. Metuchen, N. J., Aug. 24, 64. A.B., Princeton, 85, fellow, 85-86, A.M., 88, Sc.D., 89; fellow, Hopkins, 86-87; Ph.D., Göttingen, 92. Tutor, later asst. prof. and *prof. math, Princeton*, 88- A.A.; Math. Soc. Hyperelliptic functions; geometry.
- Thompson, Prof. J(ames) E(dwin)**, 3224 Broadway, Galveston, Tex. *Surgery*. Northwich, England, May 21, 63. M.D., London, 87, F.R.C.S., 88. Res. surgeon, Manchester Royal Infirmary, 90; *prof. surg, Texas*, 91- Surgeon, John Sealy Hosp., Galveston. S. Surg. Ass. (pres, 19); Royal Soc. Med.
- Thompson, Col. John T(aliaferro)**, U. S. A. (retired), 501 Fifth Ave, New York, N. Y. *Mechanical engineering*. Newport, Ky, Dec. 31, 60. Grad. U. S. Mil. Acad., 82; U. S. Eng. Sch., 84; U. S. Artillery Sch., 90. All grades from second lieut. to col., U.S.A., 82-14; senior asst. instr. ordnance and gunnery, U. S. Mil. Acad., 96-98; senior asst. to chief of ordnance, U.S.A., 07-14; lecturer ordnance, Army War Col., 07-14; gen. ordnance engineer, Remington Arms Union Metallic Co. and consulting engineer, Remington Arms Co. of Del., 14-17; chief of small arms div, War Dept., advisory engineer to chief of ordnance, director of arsenals, brig. gen. ordnance dept., 17-18; *consulting engineer*, 19- A.A.; Mech. Eng.; Soc. Test. Mat. Steel for rifles; modern weapons of war.
- Thompson, Prof. Joseph O(good)**, Amherst, Mass. **Physics*. Weymouth, Mass., July 29, 63. A.B., Amherst, 84; Ph.D., Strasbourg, 91. Instr. math, Amherst, 87-89; *physics*, Haverford, 91-94; assoc. prof., *Amherst*, 94-18, *prof.*, 18- A.A.; Physical Soc. Elasticity of metals.
- Thompson, Dr. Louis T(en) E(yck)**, Clark University, Worcester, Mass. *Physics*. South Haven, Mich., Oct. 24, 91. B.S., Kalamazoo, 14; A.M., Clark, 15, Ph.D., 17. Instr. and asst. prof. physics, *Clark*, 17-19, *research fellow, ballistic inst. and indust. research laboratories*, 19-, *Nat. Research Council fellow*, 20- Assoc. Physical Soc. Dynamics; thermodynamics; ballistics.
- Thompson, Dr. M(aurice) de Kay**, Massachusetts Institute of Technology, Cambridge, Mass. *Electrochemistry*. Covington, Ky., July 23, 77. B.S., Mass. Inst. Tech., 98; Ph.D., Basel, 03. Asst. physics, *Mass. Inst. Tech.*, 98-01, instr. *electrochem*, 01-07, asst. prof., 07-13, *assoc. prof.*, 13- Electrochem. Soc.; Am. Acad. Applied electrochemistry; dielectric constant of liquid ammonia; Siemen's process for winning copper; free energy of some halogen and oxygen compounds; equilibria of monovariant systems at high temperatures.
- Thompson, Dr. R(alph) L(eroy)**, 1402 S. Grand Ave, St. Louis, Mo. *Pathology*. Lisbon, Maine, Nov. 15, 73. A.B., Bates, 96, A.M., 02; M.D., Harvard, 00. Fellow, Rockefeller Inst., 02-03; asst. pathologist, Boston City Hosp., 03-04; assoc. prof. *path, St. Louis*, 04-06, *prof.*, 06- A.A.; Ass. Path. and Bact.; Am. Med. Ass. Immunity; pathological anatomy; surgery and pathology of the thyroid and parathyroid glands.
- Thompson, Prof. Robert N(eal)**, 25 Greenwood Ave, Atlanta, Ga. *Physics*. Kingston Springs, Tenn., Aug. 23, 75. B.S., Nashville, 05; Chicago, 06-09; Columbia, 15-16. Instr. *physics, Montana*, 09-10, asst. prof. and head of dept., 10-20; *asst. prof, Ga. Tech.*, 20- A.A.; assoc. Physical Soc.; Ass. Prof.
- Thompson, Sanford E(leazer)**, Newton Highlands, Mass. *Engineering*. Ogdensburg, N. Y., Feb. 13, 67. B.S., Mass. Inst. Tech., 89. Engaged in eng. construction, 86-96; *consulting engineer*, 96-17; *Thompson and Lichtner Co.*, 17- Civl Eng.; Mech. Eng.; Soc. Test. Mat. (chairman, C. 9); Concrete Inst. (director and v. pres); Taylor Soc. (director); Boston Soc. Civil Eng. Standardization methods and practise through time and job analysis; industrial management.
- Thompson, Prof. Thomas G(ordon)**, University of Washington, Seattle, Wash. *Chemistry*. Rosebank, N. Y., Nov. 26, 88. A.B., Clark; M.S., Ph.D., Washington (Seattle). Asst. chemist, Am. Brass Co., 06-11; Am. Steel and Wire Co., 12; teaching fellow *chem, Washington (Seattle)*, 14-17, *asst. prof.*, 19- Carnegie scholar, British Iron and Steel Inst., 15; capt, C.W.S., 17-19. Chem. Soc. Inorganic and analytical chemistry.
- Thompson, Prof. W(alter) P(almer)**, University of Saskatchewan, Saskatoon, Sask., Can. *Botany*. Jarvis, Ont., April 3, 89. B.A., Toronto, 10; A.M., Harvard, 12, Ph.D., 14. *Prof. biol. and head of dept, Saskatchewan*, 14- 1851 Exhibition scholar, 10-13. A.A.; Bot. Soc.; Sask. Nat. Soc. (pres, 17). Anatomy and morphology of seed plants; genetics of wheat.
- Thompson, Willard C(handler)**, New Jersey Agricultural College, New Brunswick, N. J. *Poultry husbandry*. Sun Prairie, Wis., Nov. 24, 90. B.S.(Agr), Wisconsin, 12. Acting head, dept. animal husbandry, Arkansas, 12-13; *instr. poultry husbandry, Rutgers*, 13-, *asst. research, N. J. Exp. Sta.*, 13- A.A.; Ass. Instructors and Investigators in Poultry Husbandry. Poultry nutrition, housing and environment; inheritance of egg shell color; egg preservation.
- Thompson, Dr. W(illiam) Gilman**, 142 E. 62d St, New York, N. Y. *Medicine*. New York, Dec. 25, 56. Ph.B., Yale, 77; M.D., Columbia, 81. *Consulting physician, Bellevue and Woman's Hospitals*; *prof. med, med. col, Cornell*, 98-11, *emer. prof.*, 11- Visiting physician, N. Y. Hosp,

- 87-95; Presb. Hosp, 87-12; Bellevue Hosp, 95-16, consulting physician, 16-; prof. physiol. and mat. med, N. Y. Univ, 87-98; pres, Indust. Clinic. Am. Physicians; Am. Med. Ass; N. Y. Acad. Med; fel. N. Y. Acad.
- Thomsen, Dr. Herman Ivah**, 1928 Mt. Royal Terrace, Baltimore, Md. *Mathematics*. Baltimore, Nov. 23, 60. A.B., Harvard, 81; Ph.D., Hopkins, 09. Math. Ass. Invariants of the ternary quartic.
- Thomsen, J(örgen) E(rnst)**, 51 Summit Ave, Jersey City, N. J. *Chemistry*. Denmark, March 26, 75. Copenhagen, 92; Copenhagen Polytech, 96-97, 98-02; Copenhagen Pharmaceut. Col, 97-98. *Chemist*, Smith and Klein, Phila, 03-04; *Dixon's Crucible Co*, 04- Chem. Soc; Danish Civil Eng. Analysis of dried paint; separation of graphitic carbon from amorphous carbon by ethylene bromid; cements; electric furnace; high temperature resistance material; graphite.
- Thomson, Dr. Elihu**, General Electric Co, Lynn, Mass. **Electrical engineering*. Manchester, England, March 29, 53. A.B., A.M., Cent. High Sch, Phila, 70; hon. A.M., Yale, 90; hon. Ph.D., Tufts, 96; hon. Sc.D., Harvard, 09. Asst. prof. chem, Cent. High. Sch, Phila, 70-75, prof, 75-80; *electrician*, Thomson-Houston and Gen. Elec. Companies, 80-; *engineer*, Thomson Elec. Welding Co. Mem. corporation, Mass. Inst. Tech, acting pres, 20; pres, Int. Electrochem. Commission. John Scott medals, 88, 00; Grand Prix (elec. invention), Paris, 89, 00; La. Purchase Expos, 04; Rumford medal, 01; Chevalier and Officer Légion d'honneur, 89; Edison medal, Elec. Eng, 10; Elliott Cresson medal, Franklin Inst, 12; John Fritz medal, 16; Hughes medal, Royal Soc, London, 16. U. S. delegate, Int. Elec. Cong, 93; St. Louis, 04 (pres, chamber of delegates, pres. of cong). Nat. Acad; A.A. (v. pres, 99); Physical Soc. (v. pres, 03, 04); Elec. Eng. (past pres); Chem. Soc; Philos. Soc; fel. Am. Acad. (v. pres); hon. mem. British Inst. Elec. Eng; British Inst. Civil Eng. Phenomena of alternating current induction; high potentials and high frequency apparatus; electric welding; general development in electricity and allied fields.
- Thomson, Dean Francis A(ndrew)**, Moscow, Idaho. *Mining, Metallurgy*. London, England, Dec. 21, 79. E.M., Colo. Sch. Mines, 04, M.S., 14. Professional practise, B.C., Colo., Nev., Idaho and Calif, 96-06; prof. mining and metal, Wash. State, 07-11, acting dean of faculty, 14-16; *dean, sch. mines, Idaho*, 17- Director, Idaho Bur. Mines and Geol, 19-; consulting metallurgist, U. S. Bur. Mines. Min. and Metal. Eng. (chairman, Columbia sect, 14); Eng. Educ; Ass. Prof. Fire assaying; cyanidation of gold and silver ores; flotation; concentration.
- Thomson, R(obert) B(oyd)**, Toronto University, Toronto, Can. *Botany*. Prescott, Ont, Sept. 16, 70. B.A., Toronto, 99. Lecturer and later *assoc. prof, bot, Toronto*, 06- A.A.; Bot. Soc; fel. Royal Soc. Can. Phanerogamic botany; anatomy and reproduction of gymnosperms; anatomy and reproduction of the Araucarian conifers; teratological features of certain conifers.
- Thomssen, Dr. E(dgar) G(eorge)**, 1412 Park Ave, Hoboken, N. J. *Chemistry*. Masulipatam, India, 86. B.S., Columbia, 07, A.M., 08, Ph.D., 10. Chemist, Bayer and Co, 08-09; asst. chem, Columbia, 09-10; chemist, Lightfoot Schultz Co, 11-13; research chemist, dairy div, U. S. Dept. Agr, 13-14; v. pres. and sec'y, Lightfoot Schultz Co, 14- A.A.; Chem. Soc.
- Thorburn, A(ibert) D(avid)**, 3007 Delaware St, Indianapolis, Ind. *Pharmacy*. Near St. Catharina, Ont, Nov. 11, 72. Grad, Chicago Col. Pharmacy, 94. Asst. prof. chem, Chicago Col. Pharmacy, 94-97; chemist, Searle and Hereth Co, 01-06; in charge of production of med. preparations, Pitman-Moore Co, 06-19; *Swan Myers Co*, 19- Prof. mat. med, Ill. Med. Col, 01-04; assoc. prof. pharmacol, Indiana, 13-17. Chem. Soc. (pres, Ind. sect, 13-15, councilor, 16-18); Pharmaceut. Ass. Drugs; medicinal products.
- Thorner, Prof. J(ohn) J(ames)**, University of Arizona, Tucson, Ariz. *Biology*. Rantoul, Ill, Feb. 8, 72. B.S., S. Dak. Col, 95; Nebraska, 97, A.M., 01. Instr. sciences, high sch, Nebr. City, 97-01; *biologist, Arizona*, and *botanist, Ezp. Sta*, 01- Asst, Nebr. Bot. Surv, 97-01. A.A.; Bot. Soc; Bot. Cent. States; Int. Ass. Bot. Ecological aspects of the flora of eastern Nebraska; taxonomy and ecology of the flora of Arizona; range conditions in Arizona.
- Thornberry, Martin H(armon)**, Rolla, Mo. *Metalurgy*. Newtonia, Mo, July 13, 82. B.S., Mo. Sch. Mines, 12, B.S. (Metal), 17, Metal. Eng, 20. *Research metallurgist, Mo. Sch. Mines*, 15- Min. and Metal. Eng. Chemistry; flotation; leaching.
- Thornburg, Prof. C(harles) L(ewis)**, Lehigh University, South Bethlehem, Pa. *Mathematics, Astronomy*. Barboursville, W. Va, April 17, 59. Fellow, Vanderbilt, 80-83, B.S., 82, C.E., 83, Ph.D., 84. Teacher, pub. schools, W. Va, 77-79; asst. eng, Vanderbilt, 84, instr, 85-87, adj. prof, 87-95; *prof. math. and astron, Lehigh*, 95- A.A.; Math. Soc; Eng. Educ.
- Thorndike, Prof. Edward L(ee)**, Teachers College, New York, N. Y. **Psychology*. Williamsburg, Mass, Aug. 31, 74. A.B., Wesleyan, 95, Sc.D., 19; A.B., Harvard, 96, A.M., 97; Ph.D., Columbia, 98. Instr. educ. and teaching, Col. for Women, Western Reserve, 98-99; psychol, Teachers Col, Columbia, 99-01, adj. prof, 01-03, *prof. educ. psychol*, 04- Head, dept. comp. psychol, Woods Hole, 00-02; chairman, committee on classification of personnel, U.S.A., 17-18. Nat. Acad; A.A. (chairman, sections II and L); Soc. Nat; Psychol. Ass. (pres, 12); Econ. Ass; Sociol. Soc; Galton Soc; Philos. Ass; fel. N. Y. Acad. (pres). Animal psychology; educational psychology; educational statistics.
- Thorndike, Sturgis H(opper)**, 15 Beacon St, Boston, Mass. *Civil engineering*. Beverly, Mass, June 11, 68. A.B., Harvard, 90; B.S., Mass. Inst. Tech, 95. Engineer, City of Boston, 95-13; *partner, Fay, Spofford and Thorndike*, 14- Instr, Mass. Inst. Tech, 04-06. Civil Eng; New Eng. Water Works Ass; Boston Soc. Civil Eng. (director, 19-). Engineering economics.
- Thorndike, Dr. T(ownsend) W(illiam)**, 20 Newbury St, Boston, Mass. *Dermatology*. Boston, 72. Harvard, 94-95, M.D., 02. Dermatologist, Carney Hosp, 07-14; *Boston City Hosp*, 07-; *prof. dermat, med. sch, Tufts; Harvard Med. Sch.* A.A.; Am. Med. Ass; Anthropol. Ass; New

- Eng. Soc. Dermat. (v. pres, 15-). Dermatology; syphilis; history of medicine.
- Thorne, Charles Embree**, Ohio Agricultural Experiment Station, Wooster, Ohio. *Agriculture*. Greene Co, Ohio, Oct. 4, 46. Mich. Agr. Col. 66; Antioch, 68-70; hon. M.S.A., Ohio State, 90. Farm manager, Ohio State, 77-81; *director, Ohio Exp. Sta.*, 87- Assoc. ed., 'Farm and Fireside,' 81-88. A.A.; Soc. Prom. Agr. Sci. (pres, 16); Soc. Agron. (pres, 15); Soc. Animal Production. Maintenance of soil fertility; farm manures.
- Thornton, Dr. William M(ynn), Jr.**, Johns Hopkins University, Baltimore, Md. *Chemistry*. Charlottesville, Va, Feb. 7, 84. A.B., Hampden-Sidney, 04; A.M., Virginia, 07; Yale, 12, Ph.D, 14. Asst. chem, Mass. Col. 07-08; chemist, Va. Geol. Surv, 08-11; tutor, Col. City of N. Y., 14-15; chemist, E. I. duPont de Nemours and Co, 15-17; *assoc. chem, Hopkins*. Chem. Soc. Analytical chemistry; laboratory appliances; mineralogy.
- Thorp, Prof. F(rank) H(all)**, 200 Mt. Vernon St, West Roxbury, Mass. **Chemical technology*. Bloomington, Ill, Feb. 25, 64. B.S., Mass. Inst. Tech, 89; Ph.D., Heidelberg, 93. Asst. chem, *Mass. Inst. Tech.*, 89-91, instr, 94-00, asst. prof. indust. chem, 01-16. Field asst, U. S. Geol. Surv, 86-87; *assoc. ed.*, 'Jour. Indust. and Eng. Chem,' 08-09. A.A. The preparation of boiled linseed oil; oxims of substituted benzophenones.
- Thorp, Dr. Lambert**, Alameda Apartments, Avondale, Cincinnati, Ohio. *Chemistry*. Cincinnati, Sept. 1, 82. B.S., Mass. Inst. Tech, 06; M.S., Michigan, 10, Ph.D, 12. Asst. chem, Michigan, 09-12; instr. org. chem, Illinois, 12-15; research chemist, Parke, Davis and Co, 15-17; *v. pres, Am. Laboratories Co*, 17- A.A.; Chem. Soc. Organic chemistry; synthetic drugs; photographic developers; perfumes.
- Thorvaldson, Prof. T(horbergur)**, University of Saskatchewan, Saskatoon, Can. *Chemistry*. Iceland, Aug. 24, 83. B.A., Manitoba, 06; A.M., Harvard, 09, Ph.D, 11, 13-14; Tech. Hochsch, Dresden, 11-12; Liverpool, 12-13. Asst. chem, Manitoba, 06-08; asst. prof, *Saskatchewan*, 14-17, *prof*, 17- A.A.; Chem. Soc; Can. Inst. Chem. Atomic weights of iron and lead; thermochemistry; liquids; carbon photography.
- Thro, Prof. William C**, 477 First Ave, New York N. Y. *Medicine*. Elmira, N. Y., May 1, 75. B.S.A., Cornell, 00, A.M., 01, M.D., 07. Instr. histol. and embryol, Cornell, 01-05; bacteriologist, research lab, Dept. Health, N. Y. City, 08-09; instr. bacter, Univ. and Bellevue Hosp. Med. Col, 09-10; asst. prof. *clin. path, med. col, Cornell*, 10-18, *prof*, 18-; *pathologist, clinic functional re-education, Italian Hosp.* A.A.; Ass. Anat; Am. Med. Ass; Ass. Path. and Bact; Soc. Bact; Ass. Immunol; Soc. Exp. Biol. Entomology; embryology; bacteriology of tuberculosis; rhinoscleroma; fermentation of Streptococci; blood diseases; asthma; calcium in the blood.
- Thurlow, O(scar) G(owan)**, Alabama Power Co, Birmingham, Ala. *Civil engineering*. Newburyport, Mass, June 7, 81. B.S., Mass. Inst. Tech, 04. *Chief engineer, Ala. Power Co*, 15-; *v. pres, Dixie Constr. Co*, 18- Consulting engineer, U. S. Govt, 18- Civil Eng; Mech. Eng. Hydraulic engineering.
- Thurston, Prof. Edward D(ay), Jr.**, Columbia University, New York, N. Y. *Mechanical engineering*. New York, Oct. 23, 82. A.B., Columbia, 05, M.E., 07. Asst. *mech. eng, Columbia*, 07-08, tutor, 08-09, instr, 09-15, *asst. prof*, 15- Mech. Eng; Automotive Eng. Gas power.
- Thurstone, Prof. L(ouis) L(eon)**, Carnegie Institute of Technology, Pittsburgh, Pa. *Psychology*. Chicago, Ill, May 29, 87. M.E., Cornell, 12; Ph.D., Chicago, 17. Asst. *psychol, Carnegie Inst. Tech*, 15-17, instr, 17-18, asst. prof, 18-19, *assoc. prof*, 19- Mem. trade test staff, War Dept, U.S.A. Psychol. Ass; Eng. Educ. (chairman, committee no. 22). Learning curve equation; trade tests; intelligence tests for colleges.
- Thwaites, F(redrik) T(urville)**, University of Wisconsin, Madison, Wis. *Geology*. Madison, Dec. 23, 83. A.M., Wisconsin, 08. Asst. geologist, Wis. Geol. and Nat. Hist. Surv, 08-11; *curator, geol. museum, Wisconsin*, 11-; *geologist, Wis. Geol. and Nat. Hist. Surv*, 16-
- Thwing, Prof. Charles B(urton)**, 3339 Lancaster Ave, Philadelphia, Pa. **Physica*. Theresa, N. Y., March 9, 60. A.B., Northwestern, 88; Ph.D., Bonn, 94. Instr. physics, acad, Northwestern, 88-93; Wisconsin, 94-96; prof, Knox, 96-01; Syracuse, 01-05; Western Reserve, 05-06; *manufacturer pyrometers, Phila*, 06- Physical Soc; Electrochem. Soc; Ceramic Soc; Optical Soc. Dielectric constant; gravitation; color photography; thermoelectric properties of alloys; calorimetry.
- Thyng, Prof. F(rederick) W(ilbur)**, Tufts College Medical School, Boston, Mass. *Anatomy*. Ross Corners, Maine, Feb. 12, 78. A.B., Colby, 02; A.M., Tufts, 03, Ph.D, 05. Austin teaching fellow histol. and embryol, Harvard Med. Sch, 05-07; instr. biol, Tufts, 07-08; asst. *anat*, Northwestern, 08-09, asst. prof, 09-10; instr, Univ. and Bellevue Hosp. Med. Col, 10-12, asst. prof, 12-19, *assoc. prof*, 19-21; *prof, Tufts*, 21- Ass. Anat. The hypophysis in Amblystoma; squamosal bone in tetrapodous Vertebrata; mammalian and human embryology.
- Tibbals, Prof. C(harles) Austin, Jr.**, 511 Hawthorn Lane, Winnetka, Ill. *Chemistry*. New York, N. Y., July 23, 81. Columbia, 99-02; A.B., Wisconsin, 04, A.M., 06, Ph.D, 08. Asst. chem, Wisconsin, 03-05, instr, 05-08; asst. prof, *Armour*, 08-10, *assoc. prof*, 10- Capt, O.D, 18-19; O.D.R.C, 19- A.A.; Chem. Soc. Inorganic chemistry; chemistry of tellurium; high explosives.
- Ticknor, Dr. A(rthur) A(nderson)**, 6 Ramsey Ave, City Point, Va. *Chemistry*. West Claremont, N. H., Oct. 6, 92. Ph.B., Yale, 14, Cott-a-Lapp fellow, 16-17, Ph.D, 17. Asst. anal. chem, Sheffield Sci. Sch, Yale, 14-16; *research chemist, Calco Chem. Co*, 17-20; *Tubize Artificial Silk Co. of Am*, 20- Chem. Soc. Organic chemistry; dyes and intermediates; pharmaceuticals; derivatives of amino acids.
- Tidd, George W(ashington)**, Selma, Ala. *Engineering*. Wakefield, Ohio, Sept. 28, 73. B.S., Valparaiso, 98; M.S., Iowa State, 11. Head, science dept, Steinman, 98-04; teacher pub. sch.

- and engineer, 04-13; head, dept. physics, Kansas State Nor. Sch, 13-17; prof. math. and eng, Phillips, 17-18; head, dept. eng, Marion Mil. Inst, 18-19; private practise, 19-20; gen. manager, *Ala. Concrete Products Co*, 20- A.A.; Physical Soc; Chem. Soc; Elec. Eng; Ass. Eng; Okla. Eng. Soc; Iowa Science Teachers Ass. (pres). Strength of materials; optical properties of metals.
- Tidestrom, Ivar**, U. S. Department of Agriculture, Washington, D. C. *Botany*. California, 91-95; Catholic Univ, 96-98, Ph.B, 97. *Asst. botanist, bur. plant indust, U. S. Dept, Agr.* Bot. Soc; Torrey Bot. Club; Wash. Bot. Soc; Wash. Biol. Soc.
- Tigert, Prof. Jno. J(ames)**, University of Kentucky, Lexington, Ky. *Psychology*. Nashville, Tenn, Feb. 11, 82. A.B, Vanderbilt, 04; B.A, Oxford, 07, M.A, 15. Prof. psychol. and philos, Central (Mo), 07-09; prof. and pres, Ky. Wesleyan, 09-11; *prof. psychol. and philos, Kentucky*, 11-17, *psychol*, 17- Mem. Army Educ. C, A.E.F, 18-19. A.A; Ky. Acad. Relation of retardation and defective sensation; psychology of evidence.
- Tilden, Prof. C(harles) J(oseph)**, Yale University, New Haven, Conn. *Civil engineering*. Brookline, Mass, Oct. 3, 73. B.S, Harvard, 96; A.M, Yale, 19. Structural draftsman, 97-00; asst. engineer, N. Y. Rapid Transit Commission, 01-03; instr. civil eng, Cornell, 04; Michigan, 05-06, asst. prof, 06-08, junior prof, 08-11, prof. and head dept, eng. mech, 11-13; prof. civil eng, Hopkins, 13-19; *prof. eng. mech. and chairman of dept, Yale*, 19- Capt, reserve E.C, 17-; with dept. educ. and training, Emergency Fleet Corp, 18. A.A; Civil Eng. Reinforced concrete tests; structural steel work; eccentric tension in angles; reinforced concrete highway bridges; stress distribution in girders; civil engineering history.
- Tilden, Prof. Josephine E(lizabeth)**, 2105 First Ave, S, Minneapolis, Minn. *Botany*. Davenport, Iowa. B.S, Minnesota, 95, M.S, 97. Instr. bot, Minnesota, 98-02, asst. prof, 02-10, prof, 10- A.A; Bot. Soc. American algae; the algae of the Hawaiian Islands; South Pacific algae; Myxophyceae of North America; index Algarum universalis.
- Tileston, Prof. Roland**, Colorado College, Colorado Springs, Colo. *Physics*. Mass, 86. A.B, Dartmouth, 07, A.M, 11. Transitman, B. and N. and O. C. Street Ry, 07-08; instr. physics, Dartmouth, 08-11; field chief, Doherty Co, 12-13; *prof. physics, Colo. Col*, 13- Math. Ass. Optics; radioactivity; spectroscopy; emanation electroscope.
- Tileston, Prof. Wilder**, 101 Grove St, New Haven, Conn. *Medicine*. Concord, Mass, Jan. 22, 75. A.B, Harvard, 95, M.D, 99. Asst. clin. chem, Harvard Med. Sch, 01-03, clin. med, 06-08; asst. prof. med, Yale, 09-19, *prof. clin. med*, 19- Asst. visiting physician, L. I. Hosp, Boston; consulting physician, Mass. Charitable Eye and Ear Infirmary. Am. Physicians; Soc. Clin. Invest. Internal medicine; hematology; tuberculosis; the digestive system; diseases of the pancreas.
- Tillman, Prof. S(amuel) E(scue)**, West Point, N. Y. *Chemistry, Geology*. Shelbyville, Tenn, Oct. 2, 47. Grad, U. S. Mil. Acad, 69; A.M, Yale, 06. Officer, E.C, U.S.A., 72-81; prof. chem, miner. and geol, U. S. Mil. Acad, 81-11, retired, 11-17, supt, 17-19. Asst. astronomer, U. S. transit of Venus exped, Tasmania, 74-75; asst. engineer, U. S. Geog. Surv, War Dept, west of 100th meridian, 73-74, 76-79; brig. gen, 19. D. S. medal. A.A. Essential principles of chemistry; heat; mineralogy.
- Tillotson, Dr. E(dwin) Ward, Jr**, Mellon Institute, Pittsburgh, Pa. *Chemistry, Mineralogy*. Farmington, Conn, Feb, 84. A.B, Yale, 06, fellow, Ph.D, 09. Asst. chem, Yale, 06-07; industrial fellow, Kansas, 09-13; *asst. director, Mellon Inst*, 13- Chem. Soc. (chairman, Pittsburgh sect, 20); Ceramic Soc. (sec'y, glass div, 19-). Organic chemistry; the relation between the optical properties and the chemical composition of glass.
- Tillson, Geo(rge) W(illiam)**, 313 S. Catherine Ave, La Grange, Ill. *Civil engineering*. Thomaston, Maine, Dec. 18, 52. B.S, C.E, Bowdoin, 77, Sc.D, 19. City engineer, Omaha, Nebr, 87-92; asst. engineer, Dept. Pub. Works, Brooklyn, N. Y, 95-02; chief engineer, Bur. of Highways, Borough of Brooklyn, 02-07; Borough of Manhattan, 07-11; consulting engineer to borough pres, Borough of Brooklyn, 11-18, retired, 18. Civil Eng. (past director, past treas); Soc. Munic. Improv. (past pres. and sec'y); Road Ass. (past pres); West. Soc. Eng; Brooklyn Eng. Club (past pres); N. Y. Munic. Eng. (past pres). General improvement of cities; street pavements.
- Tillyer, Edgar D(erry)**, 4 Maple St, Southbridge, Mass. *Optical science*. Dover, N. J. 81. B.S, Rutgers, 02, M.S, 05; George Washington, 03. Asst, 'Nautical Almanac' Office, 02-06; U. S. Naval Observatory, 06-11; Bur. Standards, 11-16; *optical designer, Am. Optical Co*, 16- Physical Soc; Illum. Eng. Soc; Wash. Acad. Astronomy; optical design; aberration free spectacle lens.
- Tilney, Prof. Frederick**, 22 E. 63d St, New York, N. Y. *Neurology*. Brooklyn, N. Y, June 4, 76. A.B, Yale, 97; M.D, L. I. Col Hosp. 03; Ph.D, Columbia, 12. Lecturer embryol, L. I. Col. Hosp; *prof. neur, Columbia*. Ass. Anat; Neur. Ass; N. Y. Neur. Soc; N. Y. Med. Soc. Comparative histology of hypophysis cerebri; axial veins and lymphatic in Tragulus; venous return to iliac veins; morphology of the diencephalic floor; craniate homology; vascularization of the nervous system; nucleo-genesis of the optic thalamus; form and functions of the central nervous system.
- Tilton, Prof. John L(ittlefield)**, Morgantown, West Va. *Geology*. Nashua, N. H, Jan. 11, 63. A.B, Wesleyan, 85, A.M, 88; A.M, Harvard, 95; fellow, Chicago, 02-03, Ph.D, 10. Asst. nat. hist. Wesleyan, 86-88; prof. geol. and physics, Simpson, 88-20; *assoc. prof. geol, West Virginia*, 20- Geologist, Iowa Geol. Surv. A.A; fel. Iowa Acad. (pres, 07. Geology of central and southwestern Iowa.
- Timberlake, P(hilip) H(unter)**, Sugar Planters' Experiment Station, Honolulu, Hawaii. *Economic entomology*. Bethel, Maine, June 5, 83. A.B, Bowdoin, 08; A.M, Harvard, 10. Entomological asst, bur. entom, U. S. Dept. Agr, 10-

- 15; *asst. entomologist, exp. sta., Hawaiian Sugar Planters Ass.*, 16- A.A.; Entom. Soc.; Ass. Econ. Entom.; Wash. Entom. Soc.; Hawaiian Entom. Soc. Insect parasites.
- Timme, Dr. Walter**, 2 W. 67th St, New York, N. Y. *Neurology*. New York, Feb. 24, 74. B.S. Col. City of N. Y., 93; M.D. Columbia, 97. Chief of clinic, Vanderbilt Clinic, 13-15; *asst. attending physician, Neur. Inst., N. Y. City*, 15-20, *attending physician*, 20- Prof. endocrinol., Broad St. Hosp., N. Y. City, 20- Neur. Ass.; Am. Med. Ass.; Therapeut. Soc.; Ass. Research Nervous and Mental Diseases; N. Y. Acad. Med. Neuro-endocrinology; control of growth; pituitary disturbances.
- Tinker, Dr. Martin B(uel)**, Cornell University, Ithaca, N. Y. *Surgery*. Granville, Mass., March 17, 69. M.D. Jefferson Med. Col., 93; B.S. Harvard, 95; M.D. Berlin 99. Asst. physiol., Harvard, 95-96; demonstrator surg. and path., Jefferson Med. Col., 97-00; first asst. res. surgeon, Hopkins Hosp., 00-03; lecturer surg., Cornell, 03-09, *asst. prof.*, 09-11. Lieut. col., M.R.C., A.A.; Am. Med. Ass. (sec'y, surg. sect., 11); Col. Surg.; Am. Acad. Med.; Ass. Surg.; N. Y. State Med. Soc. (chairman, surg. sect., 12); Gesell. Chirurg. Thyroid and abdominal surgery; hand disinfection; surgical tuberculosis.
- Tisdale, Dr. W(endell) H(olmes)**, U. S. Department of Agriculture, Washington, D. C. *Plant pathology*. Georgiana, Ala., Jan. 5, 92. B.S. Ala. Polytech, 14; M.S. Wisconsin, 15, Ph.D., 17. *With U. S. Dept. Agr.*, 16-18; N. C. Exp. Sta., 18-19; *bur. plant indust., U. S. Dept. Agr.*, 19- A.A.; Phytopath. Soc. Diseases of the tomato, flax, corn and rice.
- Titchener, Prof. E(dward) Bradford**, Cornell University, Ithaca, N. Y. **Psychology*. Chichester, England, Jan. 11, 67. Malvern Col., 81-85; B.A., Oxford, 90, M.A., 94, Sc.D., 06; Ph.D., Leipzig, 92; LL.D., Wisconsin, 04; hon. Sc.D., Harvard, 09; Litt.D., Clark, 09. Asst. prof. *psychol., Cornell*, 92-95, Sage prof., 95-10, *Sage prof. in grad. sch.*, 10-, prof. in charge of music, 96-98. Lecturer biol., univ. exten., Oxford, 92; Am. ed., 'Mind', 94-; assoc. ed., 'Am. Jour. Psychol.', 95-21, ed. 21-; non-res. lecturer psychol., Columbia, 07-08; Illinois, 09. Third, Fourth and Sixth Psychol. Congresses (mem. int. committee). A.A.; Psychol. Ass.; Philos. Soc.; fel. London Zool. Soc.; fel. Royal Soc. Med.; London Aristot. Soc.; hon. mem. Mind Ass. Vision; affective processes; attention; action; thought processes; perception; systematization of experimental psychology.
- Tittmann, Otto H(ilgard)**, Leesburg, Va. *Geodesy*. Belleville, Ill., Aug. 20, 50. High sch.; hon. Sc.D., Stevens; Washington (St. Louis); LL.D., George Washington. Aid, U. S. Coast and Geod. Surv., 67-00, supt., 00-15. Asst. astronomer, transit of Venus exped., 74; *asst. in charge*, U. S. Weights and Measures, 87-94; mem. permanent committee, Int. Geod. Ass., 00-15; U. S. Commissioner, Alaska Boundary, 06-; U. S. Commissioner, U. S. and Canada Boundary, 08-15. Astron. Soc.; Philos. Soc.; Wash. Philos. Soc. (pres., 99).
- Titus, Prof. E(dward) G(aige)**, 673 Sixth Ave., Salt Lake City, Utah. *Entomology*. Quaker Street, N. Y., May 26, 73. B.S., Colo. Agr. Col., 99, M.S., 01; Sc.D., Harvard, 11. Teacher, pub. schools, Colo., 97, 98, 00; *asst. zool., physiol. and entom.*, Colo. Agr. Col., 00-01; field asst. to state entomologist, Ill., 01-03; special field agent, bur. entom., U. S. Dept. Agr., 03-07, in charge, gipsy moth lab., 06-07; *assoc. prof. zool. and entom.*, Utah Col., 07-08, *prof.*, 08-16, entomologist, Exp. Sta., 07-16; technologist sugar plant investigations, bur. plant indust., U. S. Dept. Agr., 16-20; *director agr. research, Utah-Idaho Sugar Co.*, 20- Mem. Utah State Hort. Commission, 09-12, 16-18. A.A.; Ass. Econ. Entom.; Entom. Soc.; Soc. Prom. Agr. Sci.; Phytopath. Soc.; Ecol. Soc.; fel. Utah Acad. (pres., 12); Utah Eugen. Soc. (sec'y, 12-); Wash. Entom. Soc. Genetics; sugar-beet breeding; Apoidea; inheritance of valuable human characters.
- Tobie, Prof. Walter Eaton**, 3 Deering St., Portland, Maine. *Anatomy*. Lewiston, Maine, Dec. 12, 69. M.D., Maine, 99. Asst. demonstrator and lecturer anat. and instr. surg., *Maine*, 03-06, *prof. anat.*, 06-; *surg., Bowdoin*, 17-; pathologist, *Maine Gen. Hosp.*, 02-03, *adj. surgeon*, 03-06, *assoc. surgeon and later visiting surgeon*, 06- Mem. State Board of Anat., Maine. Ass. Anat.; Am. Med. Ass.; Maine Med. Ass. (sec'y, 03-08). Pathology; renal casts; congenital cystic kidney; surgical anatomy of the abdominal wall.
- Tobin, Dr. Elise**, 515 Lexington Ave., Brooklyn N. Y. *Chemistry*. Brooklyn, Feb. 23, 94. B.S. Barnard, 15, Ph.D., Bryn Mawr, 19. Limits of esterification.
- Toch, Maximilian**, 52 Ninth St, Long Island City, N. Y. **Chemistry*. New York, July 17, 64. N. Y. Univ., 84-86; Columbia, 87-90. Lecturer org. chem., Columbia, 05-06; *munic. lecturer paint*, Col. City of N. Y., 09; *adj. prof. indust. chem., Cooper Union*, 20- Eighth Int. Cong. Applied Chem., N. Y. City, 12 (mem. exec. committee, pres. sect. on paints). A.A.; Chem. Soc.; Soc. Chem. Indust. (past chairman, N. Y. Sect.); Chem. Eng.; Soc. Test. Mat.; N. Y. Chemists Club (past pres.); fel. London Chem. Soc.; London Soc. Chem. Indust. (past v. pres.); London Paint and Varnish Soc.; Chem. Gesell.; Chem. Verein. Chemistry and technology of paints; materials for permanent painting.
- Todd, Prof. C(lare) C(hrisman)**, College Station, Pullman, Wash. *Chemistry*. McMinnville, Oregon, March 4, 80. B.S., Wash. State, 06; fellow, Chicago, Ph.D., 14. Instr. asst. prof., *assoc. prof. and later prof. org. and physiol. chem. and head, dept. chem., Wash. State*, 07- A.A.; Chem. Soc. Organic chemistry.
- Todd, Prof. David**, Observatory House, Amherst, Mass. *Astronomy*. Lake Ridge, N. Y., March 19, 55. Columbia, 70-72; A.B., Amherst, 75, A.M., 78; Ph.D., Washington and Jefferson, 88; F.R.S.A., London, 03. Asst. U. S. Transit of Venus Commission, 75-78; chief asst., 'Nautical Almanac' Office, 78-81; *prof. astron. and higher math*, Smith, 81-87; *astron. and navigation*, and director observatory, *Amherst*, 81-20, *emer. prof.*, 20- Chief, eclipse expeditions, Texas, Japan, 87, West Africa, 89-90, Japan, 96, Tripoli, 00, Dutch East Indies, 01, Tripoli, 05, Russia, 14, Florida, 18, mid-Atlantic, 19; in charge observa-

- tions of transit of Venus, Lick Observatory, 82; Mars exped. S. Amer. 07. Imp. Saki cup, Emperor of Japan, 97. A.A.; Astron. Soc.; Wash. Philos. Soc.; Astron. Gesell.; cor. mem. Cherbourg Soc. Nat. des Sci. nat. et math.; Soc. Geog. de Lima. Observations and tables of Jupiter's satellites; total eclipses; solar parallax; trans-Neptunian planet; sun's corona; improvements in observatories and instruments, especially the automatic photography of total eclipses; photography of Mars; standard time; mountain observatories; maps and tables of future eclipses.
- Todd, Prof. James C(ampbell)**, 848 Tenth St, Boulder, Colo. *Pathology*. Shreve, Ohio, March 17, 74. Ph.B., Wooster, 97; M.D., Pennsylvania, 00. Asst. biol., Wooster, 95-96; res. physician, Allegheny Gen. Hosp., 00-01; asst. path., Denver, 04-05, lecturer, 05-08, assoc. prof., 08-10, prof., 10-11; *prof.*, Colorado, 11-16, *clin. path.*, 16- Sec'y, Boulder Div. med. sch., Colorado, 11-16. A.A.; Am. Med. Ass.; Micros. Soc.; Ass. Prof. Clinical laboratory methods; tuberculosis; animal parasitology; hematology.
- Todd, Prof. J(ames) E(dward)**, University of Kansas, Lawrence, Kans. **Geology*. Clarksfield, Ohio, Feb. 11, 46. A.B., Oberlin, 67, A.M., 70; Sheffield Sci. Sch., Yale, 70; summer sch. geol., Harvard, 75. Prof. nat. science, Tabor, 71-92; geol. and miner., South Dakota, 92-03; state geologist, S. Dak., 93-03; asst. prof. geol., Kansas, 07-18, retired, 18; *private research*, 18- Adj. prof. nat. science, Beloit, 81-83; asst. geologist or field asst., U. S. Geol. Surv., 81-88, 97-; Mo. Geol. Surv., 92; Minn. Geol. Surv., 92-93. A.A.; Geol. Soc.; Wash. Geol. Soc.; cor. mem. Iowa Acad. Cross fertilization of flowers; colors of animals; moraines; margin of drift and loess in Missouri, Iowa, Nebraska, South Dakota and North Dakota; the Cretaceous of South Dakota; the artesian areas of the Dakotas; areal geology of James River valley; Pleistocene of Kansas; economic geology of the middle west.
- Todd, Dr. John L.**, McGill University, Montreal, Can. *Parasitology*. Victoria, B. C., Sept. 10, 76. B.A., McGill, 98, M.D., C.M., 00; M.R.C.S., L.R.C.P., Univ. Col. London, 07; hon. D.Sc., Liverpool, 09. House surgeon, Royal Victoria Hosp., Montreal, 00-01; research asst. and asst. lecturer, Liverpool Sch. Trop. Med., 01-05, director, research laboratories, 05-07; *assoc. prof. parasitol.*, McGill, 07- Liverpool Sch. Trop. Med. exped. to Gambia, 11; League of Red Cross Societies typhus exped. to Poland, 20. Mary Kingsley medal, Liverpool Sch. Trop. Med., 10. Ass. Path. and Bact.; Soc. Exp. Biol.; Soc. Trop. Med.; Soc. de Path. exot. Tropical medicine; trypanosomiasis; tick fever; typhus.
- Todd, Dr. J(ohn) W(elhoff)**, University of Southern California, Los Angeles, Calif. *Psychology*. Aurora, Ind., Nov. 20, 80. A.B., Indiana, 05, A.M., 10; Ph.D., Columbia, 12. Asst. exp. psychol., Indiana, 09-10; Columbia, 10-12; assoc. prof. *psychol.*, North Dakota, 13-19; *prof.*, *Southern California*, 20- Acting director, exp. psychol. laboratories and psychol. clinic, Indiana, 15-16. Experimental psychology; reaction time; association; fatigue; educational measurements.
- Todd, Prof. T(homas) Wingate**, Western Reserve Medical School, Cleveland, Ohio. *Anatomy*. Sheffield, England, Jan. 15, 85. M.B., Ch.B., Manchester, 07; F.R.C.S., London, 11. Demonstrator *anat.*, Manchester, 07-08, senior demonstrator, 08-09, lecturer, 10-12; *prof.*, *Western Reserve*, 12- House surgeon, Manchester Royal Infirmary, 09-10; surg. research scholar, Manchester, 12; examiner dental anat., 11-12; surgeon to zool. collection, 10-12; Cleveland, 12-16. A.A.; Ass. Anat. (v. pres, 20); Anthropol. Ass.; Anat. Soc. Gt. Britain and Ireland (councilor, 12); cor. mem. Soc. d'Anthrop. de Paris. Clinical and veterinary anatomy; dental anatomy; anthropology.
- Todd, W(alter) E(dmond) Clyde**, Carnegie Museum, Pittsburgh, Pa. *Ornithology*. Smithfield, Ohio, Sept. 6, 74. High sch. Asst. biol. surv., U. S. Dept. Agr., 91-99; *curator ornith.*, Carnegie Museum, Pittsburgh, 99- Fel. Ornith. Union; Wash. Biol. Soc. Ornithology of western Pennsylvania and the Hudson Bay region; geographic distribution of the birds of eastern North America; neo-tropical birds.
- Toll, Prof. Charles H(ansen)**, Amherst College, Amherst, Mass. *Psychology*. Denver, Colo., May 21, 82. A.B., Hamilton, 04; A.M., Harvard, 05, John Harvard fellow, 06-08; Ph.D., Freiburg, 09. Asst. prof. *philos.*, Amherst, 09-12, *assoc. prof.*, 12- A.A.; Psychol. Ass.; Philos. Ass. Dissociation.
- Tolman, Prof. Cyrus Fisher, Jr.**, Stanford University, Calif. **Geology*. Chicago, Ill., June 2, 73. B.S., Chicago, 96, fellow, 97-98. *Consulting geologist*, 00-; prof. geol., Arizona, 05-06, geol. and mining eng., 06-12; assoc. prof. *econ. geol.*, Stanford, 12-18, *prof.*, 18- Territorial geologist, Ariz., 11-12. A.A.; fel. Geol. Soc. Min. Eng.; Am. Geog. Soc. Graphical solution of fault problems; petroleum and ore deposits.
- Tolman, Dr. Edward C(hace)**, University of California, Berkeley, Calif. *Psychology*. West Newton, Mass., April 14, 86. B.S., Mass. Inst. Tech., 11; A.M., Harvard, 12, Ph.D., 15. Instr. psychol., Northwestern, 15-18; *California*, 18-20, *asst. prof.*, 20- Psychol. Ass. Experimental and theoretical psychology; tests; animal behavior.
- Tolman, Prof. Gilbert**, Waterville, Maine. *Physics*. Milo, Maine, Oct. 15, 72. B.M.E., Maine, 96; A.M., Columbia, 01. Instr. science, Shaw Univ., 96-00; asst. physics, Columbia, 01-03; *prof.* physics and elec. eng., R. I. Col., 03-09; *physics*, Colby, 09- Instr. physics, Mechanics' Inst., N. Y. Physical Soc. The absorption of light by incandescent gases.
- Tolman, L(ucius) M(oody)**, 7217 Yale Ave., Englewood Station, Chicago, Ill. *Chemistry*. Brookfield, Vt., April 7, 75. B.S., Pomona, 96; M.S., California, 98. Chemist, Board of Health, Oakland, Calif., 98-99; asst. chemist, bur. chem., U. S. Dept. Agr., 00-06; chemist, bur. internal revenue, Treasury Dept., 06-07; chief, food inspection lab, bur. chem., U. S. Dept. Agr., 07-13, food inspection div., 13-14, cent. food and drug inspection district, 14-17; *chief chemist*, Wilson and Co., 17- Chairman of Joint Committee on the Unification of Methods of Analysis of Fats and Oils. A.A.; Chem. Soc. (v. pres, 06, pres, Wash. sect, pres, Chicago sect, 17); Agr.

- Chem; Chem. Eng; Leather Chem. Ass; Soc. Cotton Products Analysts; Franklin Inst; Wash. Acad. Chemistry of fats and oils, sugars, food products and distilled liquors; effect of age on the composition of whiskies; vinegars; denatured alcohol.
- Tolman, Prof. Richard C(hace)**, Fixed Nitrogen Research Laboratory, Washington, D. C. **Physics, Chemistry*. West Newton, Mass, March 4, 81. B.S, Mass. Inst. Tech, 03, Dalton fellow, 05-07, Ph.D, 10; Berlin and Crefeld, 03-04. Asst. tech. anal, Mass. Inst. Tech, 04-05, instr. theoret. chem, 07-09, research assoc. physical chem, 09-10; asst. prof, Cincinnati, 11-12; chem, California, 12-16; prof. physical chem, Illinois, 16-18; assoc. director, *fixed nitrogen research lab, nitrate div, ordnance dept, U.S.A.*, 19-20, *director*, 20- Chief, dispersoid sect. and major, C.W.S., 18. A.A; Physical Soc; Chem. Soc; Wash. Acad. Ionization; colloids; relativity of motion; metallic conductors; principles of similitude; statistical mechanics.
- Tomlinson, Dr. C(harles) W(eldon)**, Gulf Oil Corporation, Denver, Colo. *Geology*. Detroit, Mich, April 23, 92. A.B, Wisconsin, 13, fellow, 13-14, A.M, 14; fellow, Chicago, 15-16, Ph.D, 16. Asst. *geol.* Minnesota, 14-15; prof, Miss. Agr. Col, 16-17; assoc, Illinois, 17-18; *geologist, Gulf Oil Corp.*, 18- A.A. Origin of red beds; Paleozoic stratigraphy of northern Rocky Mountain states; stratigraphic variation in the Pennsylvanian of Kansas.
- Tondorf, Rev. F(rancis) A(nthony)**, Georgetown University, Washington. D. C. *Seismology*. Boston, Mass, July 17, 70. A.B, Woodstock, 95, Hopkins, 97-99; Ph.D, Georgetown, 14. Prof. physics, Loyola, 95-97; *Georgetown*, 02-05, asst, astron. observatory, 05-07, *prof. physics*, 13- A.A; Seismol. Soc. Microseisms; epicenters.
- Tone, Frank J(erome)**, Carborundum Co, Niagara Falls, N. Y. *Chemical engineering*. Bergen, N. Y, Oct. 16, 68. E.E, Cornell, 91. With Gen. Elec. Co, 91-93; Pittsburgh Railway Co, 93-95; *works manager and pres, Carborundum Co*, 95- Chem. Soc; Electrochem. Soc. (pres, 18); Chem. Eng; Min. Eng; Soc. Chem. Indust; Ceramic Soc. Silicon; silicon compounds; silfrax; artificial abrasives; high temperature refractories.
- Tool, Dr. Arthur Q(uincy)**, U. S. Bureau of Standards, Washington, D. C. *Physics*. Monroe, Iowa, Dec. 5, 77. B.S, Grinnell, 04; A.M, Nebraska, 06; Ph.D, Berlin, 14. Instr. physics, Nebraska; *assoc. physicist, Bur. Standards*. Physical Soc; Optical Soc; Physik. Gesell. Optical constants of metals; mobility of ions in gases; photo-electric effect.
- Toole, Dr. Eben H(enry)**, U. S. Department of Agriculture, Washington, D. C. *Botany*. Baraboo, Wis, Jan. 6, 89. A.B, Wisconsin, 15, A.M, 16, fellow, 19-20, Ph.D, 20. Asst. bot, Wisconsin, 15-16; instr, Kansas State, 16-17; asst. prof. plant physiol. and path, Purdue, 17-19; *asst. path. seed lab, bur. plant indust, U. S. Dept. Agr.*, 20- Asst. pathologist, office cereal investigations, U. S. Dept. Agr, 18-19. A.A; Bot. Soc; Phytopath. Soc; Wis. Acad; Ind. Acad. Plant physiology and pathology; plant nutrition and metabolism.
- Torbert, John B(ryant)**, 3415 Ashley Terrace, Cleveland Park, D. C. *Geography, Geology*. Washington, D. C, May 8, 67. LL.B, George Washington, 88, LL.M, 89. Topog. and geol. draftsman, U. S. Geol. Surv, 86-93; topog. draftsman and geographer, topographer's office, U. S. Post Office Dept, 93-08; *geol. draftsman, U. S. Geol. Surv.*, 08- Hist. cartographer, Jamestown Expos, 07; geol. cartographer, Alaska-Yukon-Pacific Expos, 09; diploma of highest excellence, Turin, 11. Mem. Int. Geog. Cong, Washington, 04. Wash. Anthropol. Soc; Wash. Geol. Soc. Development of maps; geography as an aid to history; relation and influence of topography on human activities and the progress of the world; primitive map making; growth and development of United States illustrated by a series of maps; the earliest authentic arctic explorations; the derivation and meaning of geographic names; influence of sea power on American history.
- de la Torre Buenos, J(ose) R(ollin)**, 11 North Broadway, White Plains, N. Y. *Biology*. Lima, Peru, Oct. 6, 71. Col. City of N. Y., 88-90; sch. mines, Columbia, 90-92. Mem. board of editors, 'N. Y. State List of Insects.' Entom. Soc; Ecol. Soc; Agassiz Ass; Wash. Entom. Soc; Wash. Biol. Soc; Brooklyn Entom. Soc. (rec. sec'y, 15, 18, pub. committee, 13-, ed, 18-, v. pres, 20); London Entom. Soc; Soc. entom. de France; Soc. Entom. de España; Soc. Ibérica de Cient. Nat; Soc. Cubana Hist. Nat. Life histories, ethology, distribution and taxonomy of heteropterous Hemiptera, especially aquatic forms.
- Torrey, Prof. Harry Beal**, University of Oregon, Eugene, Oregon. **Biology*. Boston, Mass, May 22, 73. B.S, California, 95, M.S, 98; fellow, Columbia, 00-01, Ph.D, 03. Asst. zool, California, 95-98, instr, 98-00, 01-04, asst. prof, 04-08, assoc. prof, 08-12; *prof. biol.* Reed, 12-20; *zool, Oregon*, 20-, *director research med. science and prof. exp. biol., med. sch.*, 20- Librarian, Marine Biol. Ass. of San Diego, 02-12; temporary asst, Bur. Fisheries, 06. A.A; Soc. Nat; Soc. Zool; Forestry Ass; West. Soc. Nat. (pres, 14). Taxonomy, embryology, non-sexual reproduction, regeneration and behavior of invertebrates; experimental biology; problems of differentiation.
- Torrey, Prof. John C(utler)**, Cornell University Medical College, New York, N. Y. *Bacteriology*. Burlington, Vt, April 19, 76. A.B, Vermont, 98; Ph.D, Columbia, 02; fellow, med. col, Cornell, 04-07. Asst. zool, Columbia, 00-01; bacteriologist, Sea Side Hosp, Staten Isl, N. Y., 03-04; asst. instr. histol. and bacter, *med. col, Cornell*, 03-04, lecturer hygiene and instr. exp. path, 08-10, asst. prof. exp. path. and lecturer hygiene, 10-16, *prof. hygiene*, 16- Ed, 'Jour. Immunol.' Ass. Path. and Bact; Soc. Exp. Biol; Soc. Bact; Ass. Immunol; Pub. Health. Ass; Harvey Soc. The development of the mesoblast in Thalasemia; cytological changes accompanying the secretion of diastase; dysentery and dysentery-like organisms; absorption; immunity to the gonococcus; canine distemper; bacteriology of typhoid fever; regulation of intestinal bacteria through diet.

- Torrey, Dr. R(ay) E(than)**, Clark Hall, Amherst, Mass. *Botany*. N. Leverett, Mass, Dec. 15, 87. B.S., Mass. Col. 12; A.M., Harvard, 16, fellow, 16-17, Sheldon traveling fellow, 17-18, Ph.D., 18. Asst. prof. biol., Grove City, 12-15; Wesleyan, 18-19; *instr. biol.*, Mass. Col., 19- A.A. Morphology; lignitic woods.
- Tory, Pres. H(enry) Marshall**, University of Alberta, Strathcona, Alberta, Can. *Mathematics*. Guysboro, N. S., Jan. 11, 64. B.A., McGill, 90, M.A., 95, D.Sc., 03, LL.D., 07. Lecturer math. and demonstrator physics, McGill, 92-98, lecturer math., 98-03, assoc. prof., 03-08; *pres.*, *Alberta*, 08- See'y, Univ. Exam. Board, 96-02; chairman, committee on coal research, Can. Conservation Commission; director educ. service, C.E.F., 17-20. Math. Soc.; fel. Royal Soc. Can. Comparison of Le Chatellier pyrometers with platinum resistance pyrometers; standardizing thermo-junctions; effect of dissolved gases on metallic surfaces; a direct reading air thermometer.
- Tottingham, Dr. W(illiam) E(dward)**, University of Wisconsin, Madison, Wis. *Agricultural chemistry*. Templeton, Mass, Nov. 2, 81. B.S., Mass. Col. 03; M.S., Wisconsin, 08; Hopkins, 12-13, Ph.D., 17. Asst. chem., Mass. Exp. Sta., 05; *instr.*, Mass. Col. 06; asst. chemist, N. Y. Exp. Sta., Geneva, 07; *instr. agr. chem.*, *Wisconsin*, 07-10, asst. prof., 10-17, *assoc. prof.*, 17- A.A.; Chem. Soc.; Bot. Soc. Reinforcement of manures; fertilizing effects of sulphur compounds; physiological nutrient solutions for plants; chlorin in plant nutrition.
- Toumey, Prof. J(ames) W(illiam)**, 459 Prospect St., New Haven, Conn. **Forestry*. Lawrence, Mich., April 17, 64. B.S., Mich. Agr. Col., 89, M.S., 96; M.A., Yale, 06; Sc.D., Syracuse, 20. *Instr. bot.*, Mich. Agr. Col., 90-91; *prof.*, Arizona, 92-98; *supt.*, sect. forest extension, bur. forestry, U. S. Dept. Agr., 99-00; asst. prof. forestry, Yale, 01-03, *prof.* and *director*, bot. gardens, 03-10, *Morris K. Jesup prof. silviculture*, *Forest School*, 10-; acting *director*, 10-11, *director*, 11-, *dean*, 13- Mem. forestry committee, Nat. Research Council. A.A.; Soc. Nat.; Soc. Foresters (chairman, New Eng. sect, mem. exec. council, chairman, committee forest classification); Forestry Ass.; Bot. Soc. Seeding and planting in the practise of forestry; desert plants in relation to environment; the relation of the root systems of woody plants to environmental factors; the relation of forest cover to run-off of streams; light measurements and tolerance.
- Toussaint, C(amille) A(ugust)**, 3688 Boulevard, Jersey City, N. J. *Mathematics*. Jersey City, June 11, 81. A.B.; Columbia, 03, A.M., 04. Asst. *math.*, Columbia, 04-07; *instr. Col. City of N. Y.*, 07- A.A.; Math. Soc. Differential equations; surface theory.
- Towar, Prof. J(ames) D(eLoss)**, Lansing, Mich. *Agriculture*. Lansing, Mich. Sept. 26, 63. B.S., Mich. Agr. Col., 85, M.S., 02. Agriculturist, R. I. Exp. Sta., 91-98; Mich. Exp. Sta., 98-02; *prof. agr.*, South. Australia, 02-04; Wyoming, and *director*, Exp. Sta., 07-10. Lecturer, farmers' institutes, Mich., 04-07. Farm crops and fertilizers; dry farming.
- Tower, Geo(rge) W(arren), Jr.**, 142 Woodland Ave., New Rochelle, N. Y. *Geology, Mining*. Cambridge, Mass., Oct. 27, 71. A.B., Harvard, 94, A.M., 95. *Instr. physics*, Boston, 94; teacher science, high sch., Quincy, Mass., 95; geologist, U. S. Geol. Surv., 95-99; *geologist and mining engineer*. Consulting mining engineer, Guggenheim Bros. Min. Eng.; Mont. Eng. Soc.; Wash. Geol. Soc. Economic geology; mining and mine examinations.
- Tower, Prof. O(lin) F(reeman)**, Western Reserve University, Cleveland, Ohio. **Physical chemistry*. Brooklyn, N. Y., March 19, 72. A.B., Wesleyan, 92, A.M., 93; Ph.B., Leipzig, 95. Asst. *chem.*, Wesleyan, 93-94, 96-98; *instr.*, *Adelbert*, 98-01, asst. *prof.*, 01-07, *prof. and head, chem. lab.*, 07- Asst. chemist in food investigation, U. S. Dept. Agr., Middletown, Conn., 95-98. A.A.; Chem. Soc.; Electrochem. Soc.; London Chem. Soc.; Chem. Gesell. Manganese superoxid electrodes; conduct of aqueous solutions of various organic salts of Ni and Co; transport number of sulphuric acid; action of nitrogen on water vapor at high temperatures.
- Tower, Prof. R(alph) W(infred)**, American Museum of Natural History, New York, N. Y. *Physiology*. Amherst, Mass., May 24, 70. Colby, 88-90; A.B., Brown, 92, A.M., 93, Ph.D., 03; Leipzig, 93-94; Harvard Med. Sch., 00-01. Demonstrator anat., Brown, 94-95, *instr. chem. physiol.*, 95-98, asst. *prof.*, 98-01; *assoc. prof.*, 01-03; *curator anat. physiol. books and publications*, *Am. Museum Nat. Hist.*, 03- Expert special agent for Fisheries Census, 08-09. A.A.; Soc. Nat.; fel. N. Y. Acad. (librarian, 04-, *rec. sec'y* and *ed.*, 17-); *cor. mem.* Cuban Nat. Hist. Soc. Opening of brick-red gland in *Limulus*; function of the swim bladder in fishes; organic constituents of scales of fish; biliary calculi in the squeteague; does KCN prolong the life of the unfertilized egg of the sea urchin; production of sound in drumfishes, the sea robin and the toad fish; the origin of the red blood corpuscle in mammals and birds.
- Tower, Dr. Walter S(heldon)**, Consolidated Steel Corporation, 165 Broadway, New York, N. Y. *Geography*. West Bridgewater, Mass., July 26, 81. A.B., Harvard, 03, A.M., 04; Ph.D., Pennsylvania, 06. *Instr. geog.*, Pennsylvania, 06-08, asst. *prof.*, 08-11; Chicago, 11-14, *assoc. prof.*, 14-16, *prof.*, 16-19; special expert, U. S. Shipping Board, 18-19; *trade adviser*, *Consol. Steel Corp.*, 19- Asst. *prof.*, summer quarter, Chicago, 09, 10. Ass. Geog.; Explorers Club. Economic and commercial geography, especially of Latin America.
- Tower, Dr. William Lawrence**, American Hospital, Tampico, Mex. **Zoology*. Halifax, Mass., Dec. 22, 72. Lawrence Sci. Sch., Harvard, 93-96, grad. sch., 98-00; B.S., Chicago, 02. Asst. *entom.*, Mass. Dept. Agr., 93; zool., Harvard, 94-96; *instr.*, Cent. High Sch., Akron, Ohio, 97-98; asst., Harvard, 98-00; *prof. zool. and physiol.*, Antioch, 00; asst. *embryol.*, Chicago, 01-02, *assoc. embryol. and comp. anat.*, 03, *instr. embryol.*, 04-07, asst. *prof.* and *later assoc. prof. zool.*, 07-18; *capt. Sanit. C.*, 18- A.A.; Soc. Nat.; Soc. Zool.; Ecol. Soc.; Chicago Acad. Nervous system of cestodes; insect metamorphoses; development of

colors and color pattern in insects; effect of temperature, moisture, etc., upon insect variations; production of new characters, races and species in insects (experimental); evolution in chrysomelid beetles; heredity and bionomic processes; tropical biology.

Tower, W(inthrop) V(ose), Mayaguez, P. R. *Entomology*. Roxbury, Mass, March 30, 81. B.S. Mass. Col. 03. Entomologist, P. R. Exp. Sta, 06-11; entomologist and sec'y to Board of Commissioners Agr. San Juan, 11-13; director, Insular Exp. Sta, 13-18; *entomologist, P. R. Exp. Sta, 18-*

Towle, Prof. W(illiam) M(ason), 323 Pearl St, Burlington, Vt. *Mechanical engineering*. Franklin, Vt, Dec. 21, 51. B.S. Worcester, 77. Instr. machine tool work, Rose, 86-88; instr. and foreman machine shop, Sibley Col, Cornell, 89-91; asst. prof. practical meech, Pa. State, 92-02; assoc. prof. and supt. shops, Syracuse, 02-04; prof, *indust. eng. Clarkson Col. Tech.*, 07-17, *emer. prof.*, 17- A.A.; Mech. Eng; Eng. Educ; Royal Soc. Arts. Industrial engineering.

Town, Dr. Clara Harrison, 51 rue Claude Bernard, Paris, France. *Psychology*. Philadelphia, Pa, Oct. 11, 74. B.S. Temple, 07; Ph.D, Pennsylvania, 09. Res. psychologist, Friends Asylum, Frankford, Pa, 05-10; asst. psychol. clinic, Pennsylvania, 09-11; state psychologist, Lincoln State Sch. and Colony, Ill, 11-14; psychologist, orthogenic clinic, Rush Med. Col, 14-16; prof. psychol, Colo. State Teachers Col, 16-18; psychologist, child welfare research sta, Iowa, 18-19; director, orthogenic clinic and classes, pub. schools, Kansas City, Mo, 19-20. Instr. psychol, Pittsburgh, summer, 13. Psychol. Ass. Abnormal psychology.

Towne, Dr. Henry R(obinson), 420 Park Ave, New York, N. Y. *Mechanical engineering*. Philadelphia, Pa, Aug. 28, 44. Pennsylvania, 65, hon. A.M, 85; Sorbonne, Paris, 66; Commercial Sci.D, N. Y. Univ, 19. *Chairman, The Yale and Towne Mfg. Co*, 69- A.A.; Mech. Eng. (pres, 88); N. Y. Merchants' Ass. (pres, 06-13). Industrial management.

Townley, Prof. Sidney D(ean), Stanford University, Calif. *Astronomy*. Waukesha, Wis, April 10, 67. B.S. Wisconsin, 90, fellow, 90-92, M.S, 92; fellow, California, 92-93; Sc.D, Michigan, 97. Asst. astron, Wisconsin, 90-92; instr, Michigan, 93-98; California, 98-03; astronomer in charge, Int. Lat. Observatory, Ukiah, Calif, 03-07; asst. prof. *applied math, Stanford*, 07-09, assoc. prof, 09-18, *prof*, 18- Lecturer astron, California, 04-07. A.A.; Astron. Soc; Seismol. Soc. (sec'y-treas, chief ed, 'Bul,' 11-); Pacific Astron. Soc. (pres, 16); Calif. Acad; Wis. Acad; Astron. Gesell. Practical astronomy; variable stars; asteroids; comets; variations of latitude; earthquakes.

Townsend, Dr. C(harles) H(askins), Aquarium, New York, N. Y. *Zoology*. Parnassus, Pa, Sept. 29, 59. Pub. schools; Acad. Nat. Sciences, Phila, 82-83; hon. Sc.D, Washington and Jefferson, 09. Asst, U. S. Fish Commission, 83; naturalist, U. S. Str. 'Corwin,' arctic exped, 85; res. naturalist, 'Albatross' exped, 86-96; chief, div. fisheries, U. S. Fish Commission, 97-02; *director, N. Y. Aquarium*, 02- Mem. U. S. Fur-

seal Commission, 96-97; fishery expert, Russo-Am. arbitration, The Hague, 02; acting director, Am. Museum Nat. Hist, 10- A.A.; mem. Ornith. Union; Fisheries Soc; fel. N. Y. Zool. Soc. Commercial fisheries; fish culture; fur-seal industries; deep sea exploration; mammalogy; ornithology.

Townsend, Charles H(enry) T(ylor), U. S. Department of Agriculture, Washington, D. C. *Entomology*. Oberlin, Ohio, Dec. 5, 63. Med. dept, George Washington, 87-90, B.S, 08. Asst. entomologist, U. S. Dept. Agr, 89-91; prof. entom, zool. and physiol, N. Mex. Col. and entomologist, Exp. Sta, 91-93; curator, museum, Inst. Jamaica, 93-94; temporary field agent, div. entom, U. S. Dept. Agr, 94-98; biogeographer and syst. entomologist, N. Mex. Col. Exp. Sta, 98-99; teacher agr. and sciences, Batangas Prov. High Sch, P. I, 04-06; expert in charge dipterous parasites, gipsy moth lab, bur. entom, U. S. Dept. Agr, 07-09, on furlough inaugurating Entom. Service, Peru, 10; in charge collections of Muscoidea, U. S. Nat. Museum, 07; *entomologist, Brazilian Govt.* Entom. Soc; Ass. Eeon. Entom; Ecol. Soc; Wash. Entom. Soc; Wash. Biol. Soc. Muscoidea, with special reference to their geological history, ontogeny, phylogeny, bionomics and distribution.

Townsend, Dr. C(harles) O(rrin), U. S. Department of Agriculture, Washington, D. C. *Plant pathology*. Washtenaw Co, Mich, Jan. 16, 63. B.P, Mich. State Nor. Sch, 91; B.S. Michigan, 88, M.S, 91; Leipzig, 95-97, Ph.D, 97. Prof. nat. science, St. John's (Md), 88-91; Wesleyan (Ga), 91-95; instr. bot, Barnard, Columbia, 97-98; prof, Md. Col. and state plant pathologist, 98-01; plant pathologist in charge sugar-beet investigations, U. S. Dept. Agr, 01-09; consulting agriculturist, U. S. Sugar and Land Co, 10-12; *pathologist, bur. plant. indust, U. S. Dept. Agr*, 12-14, in charge sugar-beet investigations, 14-15, *in charge sugar plant investigations*, 15- A.A.; Phytopath. Soc; Soc. Agron; Soc. Prom. Agr. Sci. Physiology and pathology of plants; the influence of nuclei on the formation of the cell-wall; diseases of the sugar-beet; the development of a beet seed ball containing a single seed; treatment of beet seed balls to improve germination; selection of sugar-beets to increase tonnage, sugar content, alkali resistance; improved methods of cultivating and breeding sugar plants.

Townsend, Dr. Charles W(endell), 98 Pinckney St, Boston, Mass. *Pediatrics*. Boston, Nov. 10, 59. A.B, Harvard, 81, M.D, 85. *Practising physician*. Visiting physician, Sea Shore Home, 87-90; physician to out-patients, Children's Hosp, 87-03; Boston Lying-in Hosp, 87-98; Mass. Gen. Hosp, 91-09; visiting physician, Floating Hosp, 07-09. Mem. Can. Geol. Surv. exped. to Labrador, 15. A.A.; Am. Med. Ass; Pediat. Soc; mem. Ornith. Union; Nuttall Ornith. Club (past v. pres); New Eng. Pediat. Soc. (v. pres, 09); Mass. Audubon Soc. (director). Ornithology.

Townsend, Clinton Paul, 918 F St, Washington, D. C. *Chemistry*. Fulton, N. Y, July 31, 68. B.S, Columbia, 99. Examiner electrochem, U.

- S. Patent Office, 96-03; *mem. patent law firm, Byrnes, Townsend and Brickenstein, 03-*; *research director, Union Carbide and Carbon Corp, 19-* Consulting chemist, ordnance dept, 18-; *mem. exec. board, Nat. Research Council, 19-* Chem. Soc.; Electrochem. Soc. (v. pres, 09); Soc. Chem. Indust.; Soc. de chim. indust. Electrolytic alkali industry.
- Townsend, Prof. E(dgar) J(erome)**, 510 John St, Champaign, Ill. **Mathematics*. Litchfield, Mich, Feb. 22, 65. Ph.B, Albion, 90, LL.D, 15; Ph.M, Michigan, 91; Ph.D, Göttingen, 00. Instr. *math*, Chicago Manual Training Sch, 91-93; asst. prof, *Illinois*, 93-95, assoc. prof, 95-05, *prof*, 05-, dean, col. science, 05-13. A.A; Math. Soc. Foundations of geometry; calculus; functions of a complex variable.
- Tozzer, Prof. Alfred M(arston)**, Harvard University, Cambridge, Mass. **Anthropology*. Lynn, Mass, July 4, 77. A.B, Harvard, 00, A.M, 01, Ph.D, 04. Instr. archeol, *Harvard*, 05-12, asst. prof. *anthrop*, 12-19, *assoc. prof*, 20-, asst. and later *curator, Peabody Museum*, 05- Am. fellow, Archeol. Inst, 02-05; *mem. exped. to Cent. Amer*, 02-05; in charge, Peabody Museum exped. to Cent. Amer. and Brit. Honduras, 09; director, Int. Sch. Archeol. and Ethnol, Mexico, 13-14. A.A; Anthropol. Ass. (permanent sec'y); Antiq. Soc.; Folk-lore Soc. (treas); fel. Ethnol. Soc.; Am. Acad; Royal Anthropol. Inst; cor. mem. Paris Soc. des Américanistes. Ethnology and archeology of Central America; ethnology of the Navajo Indians.
- Trabue, Prof. M(arion) R(ex)** Teachers College, Columbia University, New York, N. Y. *Psychology*. Kokomo, Ind, April 30, 90. A.B, Northwestern, 11; A.M, Columbia, 14, Ph.D, 15. Instr. educ. administration, *Teachers Col. Columbia*, 14-16, *asst. prof, educ*, 17-, *director, bur. educ. service*, 19- Chief psychol. examiner, Sanit. C, 17-18. A.A; Psychol. Ass; Nat. Soc. Study of Educ; Nat. Ass. Directors Educ. Research. Measurement of intelligence and educational achievements.
- Tracey, J(oshua) I(rving)**, Yale University, New Haven, Conn. *Mathematics*. Upperco, Md, Aug. 19, 83. B.S, Dickinson, 06; fellow, Hopkins, 10-12, Ph.D, 12. Instr. *math*, Pennington Sem, 06-08; Baltimore Polytech, 09-10; *Yale*, 12-16, *asst. prof*, 16- Math. Soc. Rational curves of the fourth and fifth degree and associated covariant curves.
- Tracy, Dr. F(rederick)**, 173 Walmer Road, Toronto, Can. *Philosophy*. Claremont, Ont, May 18, 62. Pickering, 83-84; B.A, Toronto, 89, fellow, 90-92; fellow, Clark, 92-93, Ph.D, 93. Commercial master, Pickering, 85; lecturer philos, *Toronto*, 93-05, assoc. prof, 05-16. *prof. ethics*, 16- Lecturer pedag, *McMaster*, 01-07. Philos. Ass; Religious Educ. Ass; Ill. Soc. Child Study; Ont. Child Study Ass. Left-handedness; the psychology of childhood; theory of knowledge; child study.
- Tracy, Prof. Henry C(arroll)**, University of Kansas, Lawrence, Kans. *Anatomy*. Hartford, Vt, July 11, 79. A.B, Dartmouth, 02; A.M, Brown, 05, Ph.D, 10. Submaster, high sch, Bellows Falls, Vt, 02-04; asst. physiol, Brown, 04-07; asst. biologist, R. I. Fish Commission, 07-10; instr. anat, Northwestern, 10-13; *prof*, Marquette, 13-20; *Kansas*, 20- Scientific asst, U. S. Bur. Fisheries, Woods Hole, 10, 11. A.A; Ass. Anat. Life histories of fishes; the swim bladder; nervous system in fishes.
- Tracy, Prof. J(ohn) C(layton)**, 345 Winthrop Ave, New Haven, Conn. *Mathematics*. Williamantic, Conn, Nov. 3, 69. Ph.B, Yale, 90, C.E, 92. Struct. engineer, King Bridge Co, 90-91; instr, civil eng, *Yale*, 91-02, asst. prof. struct. eng, 02-15, *prof. civil eng*, 15- Eng. Educ. Descriptive geometry; surveying; mechanics applied to the calculation of stresses and the strength of materials.
- Tracy, William W**, The Kenesaw, 16th and Irving Sts, Washington, D. C. *Horticulture*. Hudson, Ohio, May 21, 45. B.S, Mich. Agr. Col, 67, M.S, 70, hon. Sc.D, 07. Prof. hort, Mich. Agr. Col, 70-72; *supt. of testing gardens, U. S. Dept. Agr*, 02- Soc. Hort. Sci. Varietal differences in garden vegetables.
- Transeau, Prof. E(dgar) N(elson)**, Ohio State University, Columbus, Ohio. **Botany*. Williamsport, Pa, Oct. 21, 75. A.B, Franklin and Marshall, 97; Chicago, 00-01; Ph.D, Michigan, 04. Prof. biol, Alma, 04-06; *mem. staff, Cold Spring Harbor*, 06-07; *prof. bot*, Nor. Sch, Charleston, Ill, 07-15; *Ohio State*, 15-, *head of dept*, 18- A.A; Soc. Nat; Bot. Soc; Ass. Geog; Ecol. Soc; Ill. Acad; Ohio Acad. Plant physiology; vegetation of Ohio; transpiration; ecology of bog plants; taxonomy and ecology of freshwater algae.
- Traphagen, Dr. F(rank W(eiss))**, Rapid City, S. Dak. *Metalurgy*. Eaton, Ohio, July 20, 61. Ph.B, Columbia, 82, Ph.D, 83. Instr. chem, Staunton Mil. Acad, 84-87; *prof*, Col. of Mont, 87-93; Mont. Col. and chemist, Mont. Exp. Sta, 93-03; *prof. metal. and assaying*, Colo. Sch. of Mines, 03-16; *S. Dak. Sch. Mines*, 16- Assayer, Champion Mining Co, 90-93; in charge Mont. mining exhibits, Columbian Expos, 93; consulting expert for various mining companies. A.A; Chem. Soc; Min. Eng; Soc. Chem. Indust; West. Ass. Tech. Chem. and Metal. (pres, 04); Franklin Inst; London Chem. Soc. Chemistry of soils; foods; metallurgical chemistry and ore dressing; plants and waters poisonous to stock.
- Trask, Dr. John W(illiam)**, 3311 Newark St, Washington, D. C. *Public health*. Bay City, Mich, Feb. 18, 77. M.D, Michigan, 01. Asst. surgeon, *U. S. Pub. Health Service*, 02-07, passed asst. surgeon, 07-09, *surgeon*, 14- In charge, div. sanit. reports and statist, 09- Ass. Mil. Surg; Pub. Health Ass. (chairman, sect. vital statist, 15-); Am. Med. Ass; Statist. Ass. Sanitation; vital statistics; tuberculosis; malaria; spread and geographic distribution of disease.
- Traum, Dr. J(acob)**, University of California, Berkeley, Calif. *Veterinary science*. Galicia, Austria, Nov. 23, 82. D.V.M, Cornell, 05. With bur. animal indust, U. S. Dept. Agr, 05-14; *assoc. prof. vet. science, California*, 14- Vet. Med. Ass. Infectious abortion in cattle; bovine tuberculosis.
- Trautwine, John C(resson), Jr**, 257 S. Fourth St, Philadelphia, Pa. *Civil and hydraulic engineer-*

- ing. Philadelphia, March 17, 50. Private schools. Mem. Civil Service Exam. Boards, Phila, 93-95; sec'y, Ass. of Eng. Societies, 94-05; chief, Bur. of Water, Phila, 95-99; ed, 'Civil Engineer's Pocket-Book.' Civil Eng; Am. Water Works Ass; New Eng. Water Works Ass; Franklin Inst; Phila. Eng. Club; British Inst. Civil Eng.
- Treadwell, Prof. Aaron L(ouis)**, Vassar College, Poughkeepsie, N. Y. **Zoology*. Redding, Conn, Dec. 23, 66. B.S, Wesleyan, 88, M.S, 90; Ph.D, Chicago, 99. Asst. nat. hist, Wesleyan, 88-91; prof. biol. and geol, Miami, 91-00; biol, Vassar, 00-14, zool, 14- Mem. staff, Woods Hole, 98-06, 13; Carnegie Institution at Dry Tortugas, Bermuda, Porto-Rico, Tobago, Fiji and Samoa. A.A.; Soc. Nat. (sec'y, 12); Soc. Zool. Annelid morphology and embryology; West Indian polychaetes.
- Trelease, Dr. Sam F(arlow)**, Johns Hopkins University, Baltimore, Md. *Plant physiology*. St. Louis, Mo, July 3, 92. A.B, Washington (St. Louis), 14; Ph.D, Hopkins, 17. Asst. *plant physiol*, Hopkins, 16-17; asst. prof, Univ. Philippines, 17-19, assoc. prof, 19-20; *instr*, Hopkins, 20- Lecturer, forest sch, Univ. Philippines, 19-20; collaborator, Bur. Forestry, P. I, 19-20; ed, 'Philippine Agriculturist,' 19-20, mem. ed. board, 'Philippine Jour. Sci'; 'Bot. Abstracts,' 20- A.A.; Bot. Soc. Agricultural botany; ecology; mineral requirements of plants; water relations.
- Trelease, Prof. W(illiam)**, University of Illinois, Urbana, Ill. **Botany*. Mount Vernon, N. Y, Feb. 22, 57. B.S, Cornell, 80; Sc.D, Harvard, 84; LL.D, Wisconsin, 02; Missouri, 03; Washington (St. Louis), 07. Prof. bot, Wisconsin, 83-85; Washington (St. Louis), 85-13; director, Mo. Bot. Garden, 89-12; *prof. bot. and head of dept*, Illinois, 13- Special agent on cotton insects, U. S. Dept. Agr, 79; lecturer bot, Hopkins, 83-84; in charge summer sch. bot, Harvard, 83-84; chairman Am. editors, 'Bot. Centralblatt,' 00-20. Nat. Acad; A.A. (chairman, G, 00); Soc. Nat. (pres, 03); Bot. Soc. (pres, 95, 18, sec'y, 06); Soc. Prom. Agr. Sci; Bot. Cent. States (pres, 05); Philos. Soc; Torrey Bot. Club; Am. Acad; Wis. Acad; Ill. Acad. (pres, 16); Calif. Acad; Iowa Acad; Mass. Hort. Soc; Wis. Hort. Soc. (sec'y, 82-85); Boston Soc. Nat. Hist; Cambridge Entom. Club (pres, 88); St. Louis Acad. (sec'y, 96-03, pres, 09-12); Phila. Acad; Phila. Col. Pharm; Acad. Int. Geog. Bot. (pres, 96); Soc. Cient. Ant. Alz; Edinburgh Bot. Soc; Soc. d'Aclimat. de France; Soc. bot. de France; Soc. Nat. Sci. Cherbourg; Bot. Gesell; Copenhagen Bot. Soc; Soc. Royale de Bot. de Belg; Soc. Centr. Forest. Belg. Botany and entomology, especially pollination arrangements, parasitic fungi and certain groups of flowering plants; Agaveae; Yuccaeae; Phoradendron; Quercus; Piper.
- Tressler, Dr. Donald K(iteley)**, Mellon Institute, Pittsburgh, Pa. *Chemistry*. Cincinnati, Ohio, Nov. 7, 94. A.B, Michigan, 13; Ph.D, Cornell, 18. Scientist, bur. soils, U. S. Dept. Agr, 17; instr. chem, Oregon Col, 17-18; asst, Bur. Fisheries, 18-19; *indust. fellow*, Mel-
- lon Inst, 20- Fishery industries; soil potash; salting of fish; shark and skate liver oils.
- Trettien, Prof. Augustus W(illiam)**, Toledo University, Toledo, Ohio. *Psychology*. Appleton, Wis, Sept, 3, 67. B.L, Wisconsin, 99; Ph.D, Clark, 04. Prof. psychol, Stato Nor. Sch, Oshkosh, Wis, 00-07; South Dakota, 07-11; assoc. prof. educ, Kansas, 11-14; *prof. psychol. and director, psychol. clinic*, Toledo, 15- A.A; Psychol. Ass. Education; personal efficiency; instincts and habits; speech defects; hysteria; emotional disturbances.
- Trevor, Prof. J(oseph) E(illis)**, The Circle, Ithaca, N. Y. **Physics*. Lockport, N. Y, Oct. 11, 64. Cornell, 88-90; Ph.D, Leipzig, 92. Asst. prof. gen. and physical chem, Cornell, 92-00, *prof*, 00-08, *thermodynamics*, 08- Thermodynamics.
- Trimble, Dr. H(arry) C(lyde)**, University Place, Grand Forks, N. Dak. *Chemistry*. Geneva, Iowa, March 7, 89. A.B, Cornell (Iowa), 10; M.S, Chicago, 16, Ph.D, 18. Teacher chem. and physics, high sch, Cherokee, Iowa, 10-12; asst. physics and biol, Bradley Polytech, 12-14; org. chem, Chicago, 15-17; instr, chem, North Dakota, 17-18, *asst. prof*, 18- Chem. Soc. Organic chemistry; molecular rearrangements of amins, amids and amidins.
- Triplett, Prof. Norman**, 1225 Merchant St, Emporia, Kans. *Philosophy, Psychology*. Perry, Ill, Oct. 1, 61. A.B, Illinois, 89; A.M, Indiana, 98; Ph.D, Clark, 00. Supt. pub. sch, New Berlin, Ill, 89-91; instr. sciences, high sch, Quincy, Ill, 94-97; pedag, Mt. Holyoke, 00-01; *prof. psychol. and child study*, Kansas State Nor. Sch, 01-06, *philos. and psychol*, 06- Psychol. Ass. Dynamogenic factors in competition; the psychology of conjuring deceptions; the educability of the perch; rhythm; nursery rhymes; the faults of children; individual psychology; pedagogical arrests and peculiarities.
- Tripp, Prof. M(yron) O(wen)**, Orono, Maine. *Mathematics*. Grand Haven, Mich, March 19, 74. B.S, Valparaiso, 95; A.B, Indiana, 01; Ph.D, Columbia, 09. Instr. math, Col. City of N. Y, 03-12; prof, Muncie Nor. Inst, Ind, 12-14; Olivet, 14-17; asst. prof, Maine, 17-19, *assoc. prof*, 19- Math. Soc. Theory of abstract groups.
- Troland, Dr. L(eonard) T(hompson)**, Harvard University, Cambridge, Mass. *Psychology, Physics*. Norwich, Conn, April 26, 89. B.S, Mass. Inst. Tech, 12; A.M, Harvard, 14, Ph.D, 15, Sheldon traveling fellow, 15-16, fellow, 16-17. Instr. psychol, Harvard, 16-19, *faculty instr*, 19-; *research engineer*, Kalmus, Comstock and Westcott, Inc, 18- A.A; Psychol. Ass; Physical Soc; Illum. Eng. Soc; Optical Soc. (mem. exec. committee, 18-20). Physiological and photographic optics; acoustics; enzymes.
- Troop, Prof. James**, Purdue University, La Fayette, Ind. *Entomology*. Bennington, N. Y, March 14, 53. B.S, Mich. Agr. Col, 78, M.S, 82. Prof. hort. and entom, Purdue, 84-12, *entom*, 12- Stato entomologist, Ind, 99-07. A.A; Entom. Soc; Ass. Econ. Entom; Pomol. Soc; Ass. Prof. Life history and control of the codling moth and other injurious insects; control of the tropical poultry mite by fumigation.

- Trotter, Dr. Spencer**, 'Pennyscroft,' Cheyney, Pa. *Zoology*. Philadelphia, Pa, Feb. 8, 60. M.D., Pennsylvania, 83. Res. physician, Pa. Hosp, 83-85; *prof. biol.* Swarthmore, 88- A.A.; mem. Ornith. Union; Phila. Acad; fel. Royal Geog. Soc. Ornithology; anthropology; history of nature names; Americana.
- Trowbridge, Prof. A(rthur) C(arleton)**, Iowa City, Iowa. *Geology*. Glasgow, Mo, March 4, 85. B.S., Chicago, 07, Ph.D., 11. Asst. *geol.* Chicago, 07-09, instr. 09-11; *prof.* Iowa, 11- Field asst. Ill. Geol. Surv, 07, geologist, 10. A.A.; Geol. Soc; Iowa Acad. Stratigraphic geology; terrestrial deposits; physiographic work in driftless area.
- Trowbridge, Prof. Augustus**, Princeton, N. J. **Physics*. New York, N. Y., Jan. 2, 70. Columbia, 90-93; Ph.D., Berlin, 97. Instr. physics, Michigan, 98-00; asst. prof. math. physics, Wisconsin, 00-03; *prof.* 03-06; *physics*, Princeton, 06- Chairman, div. physical sciences, Nat. Research Council, 20. Nat. Acad; A.A.; Physical Soc; Philos. Soc; Wash. Acad. Infra-red radiation; explosive mixtures; internal combustion engine.
- Trowbridge, Prof. D(ie) Hector**, Lewis Institute, Chicago, Ill. *Chemistry*. Centerville, Mich, Nov. 19, 73. B.S., Michigan, 98. Instr. physics and chem, high sch, Adrian, Mich, 98-99; *Lewis Inst.* 99-07, asst. prof. chem, 07-13, *prof. anal. chem.* 13- Asst. chem, Michigan, summers, 99, 00. Chem. Soc. Influence of moisture on dielectric strength of oils; influence of temperature and pressure on gases used for heating and lighting; sanitary inspection of water, milk and cream; gases and fuels; deposition of silver on glass and china.
- Trowbridge, Prof. E(dwin) A.**, Agricultural Experiment Station, Columbia, Mo. *Animal husbandry*. Mondovi, Wis, April 27, 85. B.S.A., Wisconsin, 06. Asst. *animal husbandry*, Missouri, 06-07, instr. 07-10, *asst. prof.* 10-, *chairman*, dept. *animal husbandry*, Exp. Sta., 09- A.A.; Soc. Animal Production. Horse feeding; live stock breeding.
- Trowbridge, Prof. John**, Cambridge, Mass. **Physics*. Boston, Mass, Aug. 5, 43. B.S., Harvard, 66, Sc.D., 73. Instr. *physics*, Lawrence Sci. Sch, Harvard, 67-69; Mass. Inst. Tech, 69-71; asst. prof, Harvard, 71-81, *prof.* 81-13, *emer. prof.* 13- Mem. Int. Commission on Electrical Units; assoc. ed, 'Am. Jour. Science.' Nat. Acad; Philos. Soc; Am. Acad. (pres, 08). Electricity; light; spectra of gases at high temperatures.
- Trowbridge, Prof. P(erry) F(ox)**, Agricultural College, N. Dak. *Chemistry*. Three Rivers, Mich, April 25, 66. B.Pd, Mich. Nor. Col, 92, M.Pd, 08; Ph.B., Michigan, 92, A.M., 05; Ph.D., Illinois, 06. Instr. pedag, Mich. Nor. Col, 92-93; asst. chem, Michigan, 93-95, instr. 95-02; asst. nutrition and instr. chem, Illinois, 05-07, asst. prof. chem, 07; agr. chem. and assoc. chemist, Exp. Sta, Missouri, 07-08, *prof.* and chemist, 08-18; *director*, N. Dak. Exp. Sta., 18- Prof. math, Kalamazoo, 94. A.A.; Chem. Soc; Agr. Chem. (pres, 18); Soc. Agron; Soc. Animal Production. Chemistry of nutrition.
- Troxell, Dr. Edward L(eflingwell)**, Yale University, New Haven, Conn. *Vertebrate paleontology*. Deshler, Nebr, April 15, 84. A.B., Northwestern, 08, A.M., 11; Ph.D., Yale, 14; Sorbonne, Paris, 19. Asst. geol, Amherst, 13-14; asst. curator, museum, Michigan, 14-17; *assoc. paleont.* Yale, 19-, *asst. prof. geol.* Trinity (Conn), 20- Private collecting expeditions. Paleont. Soc. Paleontology; museum methods.
- Troy, Prof. Hugh C(harles)**, Cornell University, Ithaca, N. Y. *Dairy husbandry*. Spencer, N. Y. B.S.A., Cornell, 96, Chemist, Cayudutta Chem. Co, 96-97; asst. *dairying*, Cornell, 97-12; *prof.* 12- Chemist, N. Y. State Dept. Agr, 97-12, consulting chemist, 12- Chem. Soc; Ass. Dairy Instructors; N. Y. Dairymen's Ass. Testing of dairy products; analysis of food products.
- True, Dr. A(lfred) C(harles)**, U. S. Department of Agriculture, Washington, D. C. *Agriculture*. Middletown, Conn, June 5, 53. A.B., Wesleyan, 73, A.M., 76, hon. Sc.D., 06; Harvard, 82-84; hon. Ph.D., Erskine, 86. Principal, high sch, Essex, N. Y, 73-75; instr, State Nor. Sch, Westfield, Mass, 75-82; Wesleyan, 84-88; ed, office of exp. stations, U. S. Dept. Agr, 88-91, asst. director, 91-93, *director*, 93-15, *states relations service*, 15- Dean, Grad. Sch. Agr, 02-16; ed, 'Exp. Sta. Record.' A.A.; Soc. Prom. Agr. Sci; Ass. Agr. Col. (pres, 14); Wash. Philos. Soc. Agricultural education and the organization and management of institutions for agricultural research.
- True, Prof. Gordon H(aines)**, University Farm, Davis, Calif. *Agriculture*. Baraboo, Wis, 68. B.S., Wisconsin. Instr. dairy husbandry, Mich. Agr. Col, 94-99; *prof.* animal husbandry, Arizona, 99-03; agr. and animal husbandry, Nevada, 03-13, *director*, Exp. Sta., 12-13; *prof.* animal husbandry, California, 13- Agent and expert, irrig, U. S. Dept. Agr; mem. state board of agr, Nev, 00-13; state quarantine officer, Nev, 12-13. A.A.; Ass. Prof. Animal husbandry; arid farming in Nevada; relation of irrigation to chemical composition of grain.
- True, Dr. Rodney H(oward)**, University of Pennsylvania, Philadelphia, Pa. **Plant physiology*. Baraboo, Wis, Oct. 14, 66. B.S., Wisconsin, 90, M.S., 92; Ph.D., Leipzig, 95. Instr. pharmacog, Wisconsin, 96-97, asst. prof, 97-00; lecturer bot, Harvard, 01-02; physiologist in charge physiological investigations, bur. plant indust, U. S. Dept. Agr, 02-20; *prof. bot. and director, bot. garden*, Pennsylvania, 20- Mem. revision committee, ninth edition, 'U. S. Pharmacopoeia.' A.A. (v. pres, G, 20); Bot. Soc; Agr. Hist. Soc. (pres, 19); D. C. Fed. Employees Union Number Two (pres, scientific-tech. sect, 19). Electrolytic dissociation and physiological action in solutions; growth rate; turgor and temperature change; tea and tobacco fermentations; toxic action of solutions, simple and mixed; physiological findings of mineral plant nutrients; utilization of marls.
- Trueblood, Dr. H(oward) M(offitt)**, American Telephone and Telegraph Co, 195 Broadway, New York, N. Y. *Thermodynamics*. Richmond, Ind, April 16, 84. B.S., Earlham, 02; Haverford, 03; Mass. Inst. Tech, 08-09; fellow, Harvard, 12-13, Ph.D., 13. Aid and asst, U. S. Coast

- and Geod. Surv, 03-08; asst. physics, Harvard, 12-14; instr. and asst. prof. elec. eng, Pennsylvania, 14-17. A.A.; Physical Soc; Elec. Eng; Soc. de Physique. Joule-Thomson effect in superheated steam.
- Truman, O(rley) H(osmer)**, Lowell Observatory, Flagstaff, Ariz. *Astronomy*. Iowa Falls, Iowa, July 9, 88. A.B, Iowa, 11, M.S, 12. Instr. Graceland, 12-13; math. and astron, Iowa, 13-19; astronomer, *Lowell Observatory*, 19- Mem. Lowell eclipse exped, 18. Astron. Soc; Pacific Astron. Soc. Spectroscopy of the spiral nebulae.
- Trumbull, Prof. Harlan L(eo)**, Hudson, Ohio. *Physical chemistry*. Adair, Iowa. A.B, Washington (Seattle), 07, A.M, 08; Ph.D, Chicago, 11. Instr. chem, Washington (Seattle), 11-16, asst. prof, 16-18; fellow, Mellon Inst, and Capt, C.W.S, 18-19; *research chemist*, B. F. Goodrich Co, 19- A.A; Chem. Soc. Molecular weights; ionization of solutions by light.
- Trumpler, Dr. Robert (Julius)**, Lick Observatory, Mt. Hamilton, Calif. *Astronomy*. Zürich, Switzerland, Oct. 2, 86. Zürich, 06-08; Ph.D, Göttingen, 10. Astronomer, Swiss Geod. Commission, 11-15; asst, Allegheny Observatory, 15-19; *Kellogg fellow*, *Lick Observatory*, 19- Astron. Soc; Pacific Astron. Soc; Astron. Gesell. Telegraphic longitude determinations; positions, proper motions and parallaxes of fixed stars; stellar clusters.
- Truog, Prof. E(mil)**, University of Wisconsin, Madison, Wis. *Agriculture*. Independence, Wis, March 6, 84. B.S, Wisconsin, 09, M.S, 12. *Assoc. prof. soils*, Wisconsin, 09- Chem. Soc. Availability of phosphates; soil acidity; feeding power of plants.
- Tucker, Dr. Beverley Randolph**, 212 W. Franklin St, Richmond, Va. *Medicine*. Richmond, Va, April 26, 74. M.D, Med. Col. of Va, 05. *Prof. neur. and psychiat*, *Med. Col. of Va*, 13-; *physician in charge*, *Tucker Sanitarium*. Mem. Int. Pellagra Commission, 08-11. Neur. Ass; Therapeut. Soc; Am. Med. Ass. Pellagra; pituitary gland disturbance; brain tumors; lethargic encephalitis.
- Tucker, E(lbert) S(tephen)**, U. S. Department of Agriculture, Washington, D. C. *Entomology*. Claridon, Ohio, Aug. 16, 67. Garfield, 89. Asst. entom, Kansas, 91-98, museum asst. systematic entom, 02-06; asst. in charge, green bug lab, Tex. Exp. Sta, 07; special agent, bur. entom, U. S. Dept. Agr, 08-11; assoc. entomologist, La. Exp. Sta, and acting state entomologist, La, 12-17; *cotton entomologist*, U. S. Dept. Agr, 17- Collaborator, agent, and field asst, U. S. Dept. Agr, 13-17. Kans. Acad; Ass. Econ. Entom. Economic and systematic entomology.
- Tucker, Prof. R(ichard) H(awley)**, Lick Observatory, Mt. Hamilton, Calif. *Astronomy*. Wiscasset, Maine, Oct. 29, 59. C.E, Lehigh, 79. Asst, Dudley Observatory, 79-83; instr. math. and astron, Lehigh, 83-84; asst, Argentine Nat. Observatory, Colorado, 84-93; astronomer, Lick Observatory, 93-08; director, Southern Observatory, Carnegie Institution, Argentina, 08-11; astronomer, *Lick Observatory*, 11- A.A; Astron. Soc; Philos. Soc; Pacific Astron. Soc; Soc. Astron. de Mex; Astron. Gesell. Meridian circle work; Cordoba Durchmusterung; meridian circle observations.
- Tucker, Samuel A(uchmuty)**, 155 E. 61st St, New York, N. Y. *Chemistry*. New York, April 29, 69. Ph.B, Columbia, 95. Asst. physics, Col. Physicians and Surg, Columbia, 95-97, head demonstrator physics and chem, 97-98, tutor indust. chem, Columbia, 98-05, adj. prof. and later prof. electrochem, 05-19; *chief chemist*, *Chem. Foundation, Inc*, 19- Consulting chemist, O.D, U.S.A; chem. adviser, W.I.B; major, C.W.S. Chem. Soc. (v. chairman, N. Y. sect, 10); Soc. Chem. Indust; Electrochem. Soc; fel. London Chem. Soc. Electrochemistry; electric furnace; varnish; storage battery; carbids; nitrogen fixation.
- Tucker, Prof. W(illiam) M(otier)**, 505 Ballantine Road, Bloomington, Ind. *Geology*. Holton, Ind, Nov. 18, 77. A.B, Indiana, 08, A.M, 09, Ph.D, 16. Asst. geog, Ind. State Nor. Sch, 02-03, instr, 07; teaching fellow, Indiana, 08-10; asst. geologist, Ind. Geol. Surv, 09-12, 15-17; head, geog. dept, State Nor. Sch, Moorhead, Minn, 13-15; adj. prof. *geol*, Texas, 17; *asst. prof.*, Ohio State, 17-20; *Indiana*, 20- Asst. geologist, Ohio Geol. Surv, 18-20; mem. Gimble exped. to British Guiana, 10. A.A; Ind. Acad; Ohio Acad. Hydrology of Indiana; pyrite deposits in Ohio coals.
- Tucker, Dr. Willis G(aylord)**, 80 Howard St, Albany, N. Y. *Chemistry*. Albany, Oct. 31, 49. M.D, Albany Med. Col, 70; hon. Ph.G, Albany Col. Pharmacy, 82; Ph.D, Union, 82. Prof. chem, Albany Med. Col, 76-01, chem. and toxicol, 01-15, registrar, 82-14, dean of faculty, 14-15; prof. chem, Albany Col. of Pharmacy, 81-18, dean of faculty, 83-18. Analyst, N. Y. State Dept. Health, 81-91, director, bur. chem, 91-07; mem. governing board, Union Univ, 72- A.A; Chem. Soc. Food and drug adulteration; water analysis; toxicology.
- Tuckerman, Dr. Alfred**, 58 K St, Newport, R. I. *Chemistry, Bibliography*. New York, N. Y, Jan. 15, 48. A.B, Harvard, 70; Ph.D, Leipzig, 74. Asst, Astor Library, 76-80. A.A; Chem. Soc; Library Ass; N. Y. Acad. Index to the literature of the spectroscopy and of thermodynamics.
- Tuckerman, Dr. Frederick**, Amherst, Mass. *Anatomy*. Greenfield, Mass, May 7, 57. B.S, Mass. Col. and Boston, 78; M.D, Harvard, 82; London and Berlin, 82-83; fellow, Clark, 89-90; Berlin, London and Heidelberg, 92-94; A.M. and Ph.D, Heidelberg, 94. Lecturer anat. and physiol, Mass. Col, 83-86. A.A; Soc. Nat; Ass. Anat; Forestry Ass; cor. mem. Appalachian Mt. Club; Boston Soc. Nat. Hist; Anat. Gesell. Anatomy, morphology and embryology of the gustatory organs in Vertebrata, chiefly in Mammalia.
- Tuckerman, Prof. L(ouis) B(ryant)**, U. S. Bureau of Standards, Washington, D. C. *Physics*. West Williamsfield, Ohio, Sept. 26, 79. A.B, Western Reserve, 01; Nebraska, 01-02. Asst. physics, Ohio State, 02-04; Berlin, 04-06; instr, Nebraska, 06-07, adj. prof, 07-08, asst. prof, 08-13, assoc. prof, 13-16, prof, 16-19; *with Bur. Standards*, 19- A.A; Physical Soc; Optical Soc; Wash. Acad; Wash. Philos. Soc;

- Physik. Gesell. Spectrophotometry; double refraction.
- Tufts, Prof. James H (ayden)**, University of Chicago, Chicago, Ill. *Philosophy*. Monson, Mass., July 9, 62. A.B., Amherst, 84, LL.D., 04; B.D., Yale, 89; Berlin and Freiburg, 91-92; Ph.D., Freiburg, 92. Instr. math., Amherst, 85-87; philos., Michigan, 89-91; asst. prof., Chicago, 92-94, assoc. prof., 94-00, dean, senior colleges, 99-04, *prof. philos.*, 00-, *head, dept. philos.*, 05-A.A.; Psychol. Ass.; Philos. Ass. (pres., 14); West. Philos. Ass. (pres., 05, 14). Development of individuality and its influence upon philosophy; morality; industrial relations.
- Tufts, Prof. Warren P (orter)**, University Farm, Davis, Calif. *Pomology*. Cedarville, Ohio, Jan. 8, 90. B.S., California, 12; M.S., Oregon Col., 14. Instr. *pomol.*, Oregon Col., 14-15; *California*, 15-17, *asst. prof.*, 17- A.A.; Soc. Hort. Sci. Pollination and pruning of deciduous fruits.
- Tugman, Prof. Orin**, University of Utah, Salt Lake City, Utah. *Physics*. Rockville, Ind., May 26, 80. A.B., Indiana, 03, A.M., 06; Ph.D., Cornell, 09. Asst. physics, Indiana, 03; Purdue, 03-06; Cornell, 06-08, instr., 08-09; asst. physicist, Bur. Standards, 09-11; engineer, Western Elec. Co., 11-13; assoc. physicist, Eastman Kodak Co., 13-15; assoc. prof. *physics*, Utah, 15-19, *prof.*, 19- A.A.; Physical Soc; fel. Utah Acad. (pres., 19). Spectroscopy; electrical oscillations; photographic plates; metallic films; photographic reversal.
- Tulloss, Rev. Rees E (dgar)**, 372 E. Madison Ave., Springfield, Ohio. *Psychology*. Leipsic, Ohio, July 26, 81. A.B., Wittenberg, 06, B.D., 09; Ph.D., Harvard, 18. *Pres.*, Wittenberg. A.A. Learning process in telegraphy and typewriting; radio operating.
- Tunncliffe, Dr. Ruth**, 637 S. Wood St., Chicago, Ill. *Bacteriology*. Macomb, Ill., May 1, 76. A.B., Vassar, 96; M.D., Rush Med. Col., 03. Intern, hosp., *McCormick Inst. for Infectious Diseases*, 03-04, *research worker*, 03- Contract surgeon, U.S.A., 18. Ass. Path. and Bact; Am. Med. Ass; Ass. Tuber. Immunity; anaerobic bacteria; phagocytosis; measles; influenza.
- Tupper, Dr. Walter W (esselhoeft)**, Ann Arbor, Mich. *Botany*. Newtonville, Mass., April 22, 88. A.B., Harvard, 10, A.M., 12, Sc.D., 18. Austin teaching fellow *bot.*, Harvard, 10-12, asst., Harvard and Radcliffe, 12-13; instr., *Michigan*, 13-20, *asst. prof.*, 20- With Bur. Aircraft Production and Red Cross, 18-19. A.A.; Bot. Soc; New Eng. Bot. Club; Mich. Acad. Morphology and anatomy of woody plants; cell size; vascular tissue.
- Turley, Prof. Louis Alvin**, 763 Asp Ave., Norman, Okla. *Medicine*. Utah, Feb. 6, 79. B.S., Idaho, 03; A.M., Harvard, 06, Ph.D., 16. *Prof. path. and asst. dean, sch. med.*, Oklahoma, 08- Pathology; histology; bacteriology; carcinoma; myxadenoma of the intestines; chronic nephritis; bacteriology and pathology of tonsils.
- Turlington, Dr. J (ohn) E (dwin)**, University of Florida, Gainesville, Fla. *Agronomy*. Clinton, N. C., June 1, 84. B.Agr., N. C. Col., 07; M.S., Cornell, 11, Ph.D., 12. Adj. prof. agron., Georgia, 12-13; supt., Craven Co. Farm Life Sch., N. C., 13-16; *prof. agron.*, Florida, 16- Teacher, summer sch., North Carolina, 13. Soc. Agron. Soils; fertilizers; farm management.
- Turneure, Prof. F (rederick) E (ugene)**, University of Wisconsin, Madison, Wis. *Civil engineering*. Freeport, Ill., July 30, 66. C.E., Cornell, 89; hon. D.Eng., Illinois, 05. Instr. civil eng. Washington (St. Louis), 90-92; *prof. bridge and hydraulic eng.*, Wisconsin, 92-03, *eng. and dean, col. of mech. and eng.*, 03- A.A.; Civil Eng; Eng. Educ. (pres., 09); Soc. Test. Mat; West. Soc. Eng; Wis. Eng. Soc. (pres., 09). Reinforced concrete; stresses in bridges under moving train loads.
- Turner, Prof. B (enjamin) B (ernard)**, 1017 Park Ave., Indianapolis, Ind. *Pharmacology*. Hongkong, Feb. 6, 71. Cent. Tech. Col., London, 88-92; B.S., London, 94; Ph.D., Göttingen, 99; Strasbourg, 04; Hopkins, 07-08. Lecturer chem., Borough Polytech. Inst., London, England, 92-97; asst. chem., Cornell, 00-01, 02-03; prof., Conn. Col., 03-06; Carnegie research asst. chem. and pharmacol., Hopkins, 08-15; assoc. prof. *pharmacol.*, Indiana, 15-17, *prof.*, 17- Acting asst. prof. chem., Missouri, 01-02. Chem. Soc; fel. London Chem. Soc. Chemistry; dielectric constants; vividiffusion; plasmaphaeresis.
- Turner, Dr. C (harles) H (enry)**, 4540 Garfield Ave., St. Louis, Mo. *Biology*. Cincinnati, Ohio, Feb. 3, 67. B.S., Cincinnati, 91, M.S., 92; Ph.D., Chicago, 07. Asst. biol., Cincinnati, 90-92; prof. biol. and head, dept. science and agr., Clark (Ga.), 92-05; principal, pub. sch., Cleveland, Tenn., 05-06; *instr. biol. and chem.*, Haines Nor. Sch., Augusta, Ga., 07-08; *biol.*, *Summer High Sch.*, St. Louis, 08- Int. Cong. Zool., Boston, 07 (see'y, animal behavior sect). A.A.; Entom. Soc; Ecol. Soc; Ill. Acad; St. Louis Acad. (see'y entom. sect, 13-, mem. council, 19-). Invertebrate neurology; entomology; animal behavior; taxonomy of American Entomotraca.
- Turner, C (hester) F (rancis)**, Box 95, West Lafayette, Ind. *Entomology*. Rock Creek, Kans., May 12, 90. B.S., Kansas State, 12. Field asst., Kans. Entom. Commission, 12-13; *scientific asst.*, *bur. entom.*, U. S. Dept. Agr., 14- A.A.; Entom. Soc; Ass. Econ. Entom. Embryology of *Chelonus texanus*.
- Turner, Prof. C (lair) E (lsmere)**, Massachusetts Institute of Technology, Cambridge, Mass. *Biology*. Harmony, Maine, April 28, 90. A.B., Bates, 12; A.M., Harvard, 13; Mass. Inst. Tech., 14-15. Acting head, dept. biol., Bates, 13-14; asst. research, *Mass. Inst. Tech.*, 14-15; *instr. biol.* and assoc. research, 15-19, *asst. prof.*, 19-; *hygiene, med. and dental schools*, Tufts, 19- Instr., Sch. for Health Officers, 15-; editorial asst., 'Am. Jour. Public Health,' 14-15. A.A.; Soc. Bact; Micros. Soc; Pub. Health Ass; Boston Soc. Bact. Sanitation; natural purification of streams; dental and general hygiene.
- Turner, Prof. C (larence) L (ester)**, Beloit, Wis. *Zoology*. Delaware, Ohio, 90. A.B., Ohio Wesleyan, 12, A.M., 14; Ph.D., Wisconsin, 18. Instr. zool., Kansas, 14-15; asst. biol., Wisconsin, 15-16; instr. asst. prof. and later *prof.*, Marquette, 16-17; *zool.*, Wooster, 17; *Beloit.* A.A.; Ass. Anat; Ecol. Soc; Fisheries Soc; Ohio Acad. Ecology; embryology; anatomy and embryology

of vertebrates; insect ecology; physiology and habits of fishes.

Turner, Claude A (len) P (orter), Minneapolis, Minn. *Civil engineering*. Lincoln, R. I., 69. C.E., Lehigh, 90. Asst. engineer, Columbus Bridge Co., 92; Pottsville Iron and Steel Co., 96; Gillette Herzog Co., 97-00; engineer, Am. Bridge Co., 01; *consulting engineer*, 01- Civil Eng; Eng. Educ; Soc. Test. Mat. Stresses; skew details; reinforced concrete; theory of flat slabs.

Turner, Prof. H (enry) W (ard), Mills Building, San Francisco, Calif. **Geology*. Silver Lake, Pa., Aug. 22, 57. Cornell, 74-76, 81; Leipzig, 79-80; B.S., George Washington, 95. Asst. entom., Cornell, 80; U. S. Dept. Agr., 82; asst. geologist, U. S. Geol. Surv., 83-95, geologist in charge of party, 95-01; consulting econ. geologist and mining engineer, 01-04, 08-09; manager, Marfa and Mariposa quicksilver mine, 04-05; consulting engineer, Ladd Metals Co., 06-07; geologist, Kyshtim Mining Works, Russia, 11; Russian Mining Corp., 14; *v. pres.*, Oroville Dredging, Ltd., 16- Geol. Soc; Min. Eng; Min. and Metal. Soc; Inst. Min. and Metal. Gt. Britain; cor. mem. Madrid Nat. Hist. Soc. Geology, especially petrography and ore deposits; nomenclature of igneous rocks; geological mapping and structure studies.

Turner, Dr. W (illiam) A (bbey), St. Lawrence University, Canton, N. Y. *Chemistry*. Housatonic, Mass., May 13, 87. Ph.B., Yale, 10, A.M., 14, Ph.D., 16. Asst. chem., Mass. Col., 10-12; Yale, 12-16; instr., Pennsylvania, 16-17; *asst. prof.*, Wesleyan, 19-20; *St. Lawrence*, 20- Lieut., Sanit. C., 17-19. A.A.; Chem. Soc. Sulphates; vanadium.

Turner, Prof. W (illiam) D (eGarmo), Rolla, Mo. *Chemistry*. Sioux City, Iowa, Sept. 25, 89. B.S., Chicago, 09, Ph.D., 17. Commercial chemist, 09-15; *assoc. chem.*, Chicago, 15-17; *asst. prof.*, *Mo. Sch. Mines*, 17-19, *prof.* and *head of dept.*, 19- Chem. Soc; Electrochem. Soc. Diffusion of gases; atomic weight of chlorin; potash from oak ashes; xylene isomers.

Turrentine, Dr. J (ohn) W (illiam), Santa Barbara, Calif. *Chemistry*. Burlington, N. C., July 5, 80. Ph.B., North Carolina, 01, M.S., 02; Ph.D., Cornell, 08. Instr. chem., Lafayette, 02-05; asst., Cornell, 05-06, electrochem., 06-08; instr. physical chem., Wesleyan, 08-11; chemist, *bur. soils*, U. S. Dept. Agr., 11-17, *in charge, exp. kelp potash plant*, 17- A.A.; Chem. Soc; Wash. Acad. Chemistry of rare earths; electrochemistry; corrosion of metals; chemistry of hydrazine; reduction of hydronitric acid; salines and potash resources of the United States; fish fertilizer industries; city wastes; kelp as a source of potash, blacking carbon, iodine and ammonia; by-product ammonia.

Tuttle, Prof. Albert H (enry), University of Virginia, Charlottesville, Va. *Cytology*. Cuyahoga Falls, Ohio, Nov. 19, 44. B.S., Pa. State, 68, M.S., 72; Harvard, 70-72; Hopkins, 82-83. Teacher nat. sciences, State Nor. Sch., Platteville, Wis., 68-70; instr. micros., Harvard, 70-72; *prof. zool. and geol.*, Pa. State, 72-73; *zool. and comp. anat.*, Ohio State, 74-88; *biol.*, Virginia, 88-13, retired, 13. Asst. commissioner from

Ohio (educ) to Vienna Expos, 73; New Orleans Expos, 84. A.A. (gen. sec'y, 76, v. pres, 82); *fel. Royal Micros. Soc.* Microzoology; histology; the cytology of the green Algae.

Tuttle, E (lbert) B (arrett), Bell Telephone Co. of Pennsylvania, Philadelphia, Pa. *Physics*. Niles, Mich., April 17, 74. B.S. (E.E.), Iowa State, 99, E.E., 09; fellow, Cornell, 05-06. Instr. physics, Iowa State, 00-05; elec. engineer, Cent. District and Printing Telegraph Co., 06-10; *asst. engineer*, Bell Telephone Co. of Pa., 10- Assoc. Radio Eng; mem. Elec. Eng. Sound and sound transmission; hysteresis in iron; speech transmission.

Tuttle, Prof. Franklin E (lliott), 125 E. Maxwell St., Lexington, Ky. *Chemistry*. Hadley, Mass., June 17, 64. A.B., Amherst, 89; Ph.D., Göttingen, 93. Instr. chem. and miner, Pa. State, 89-93, asst. prof. chem., 93-04, *prof. quant. anal.*, 04-06; *chem.*, Kentucky, 06- Mem. U. S. Assay Commission, 16. A.A.; Chem. Soc; Soc. Chem. Indust; Chem. Gesell; Soc. de Chim. indust. Analytical chemistry; terpenes; crystallography.

Tuttle, Dr. George T (homas), McLean Hospital, Waverley, Mass. *Psychiatry*. Northwood, N. H., March 18, 50. A.B., Dartmouth, 72; M.D., Harvard, 78. Asst. physician, McLean Hosp., 79-03; med. supt., 04-19. Clin. instr. psychiatrist, Harvard, 05-12. Medico-Psychol. Ass; Boston Soc. Psychiat. and Neur. Kidney diseases and insanity; hallucinations; hydrotherapeutics; the male nurse.

Tuttle, John B (etley), 68 Bank St., New York, N. Y. *Chemistry*. Philadelphia, Pa., May 25, 82. B.S., Pennsylvania, 08. Lab. asst., Bur. Standards, 08-10, asst. chemist, 10-15, *assoc. chemist*, 15-18; research chemist, Firestone Tire and Rubber Co., 18-19, chief chemist, plant 2, 19-20; *consulting chemist*, 20- Chem. Soc. (sec'y, rubber sect, 16, 17, chairman, 18); N. Y. Chemists Club. Printing inks; oils and varnishes; gumarabic; pigments; rubber.

Tuttle, Dr. J (ohn) R (oss), General Chemical Co., 25 Broad St., New York, N. Y. *Chemistry*. Tweed, Can., 92. M.A., Queen's (Can.), 12, 1851 Exhibition fellow, 13-15; fellow, Columbia, 15-16, Ph.D., 16. *Research chemist*, Gen. Chem. Co., 16- Chem. Soc.

Tweedy, Frank, U. S. Geological Survey, Washington, D. C. *Topography*. New York, N. Y., June 12, 54. C.E., Union, 75. Engineer, N. Y. State Adirondack Surv., 75-79; sanit. engineer under late George E. Waring, Jr., Newport, R. I., 80-81; asst. topographer, North. Transcont. Surv., 82-83; topographer, U. S. Geol. Surv., 84-15, *topographic engineer*, 15- Flora of the Yellowstone Park.

Twenhofel, Prof. W (illiam) H (enry), University of Wisconsin, Madison, Wis. *Geology*. Covington, Ky., April 16, 75. A.B., Yale, 08, A.M., 10, Ph.D., 12. Prof. nat. science, East Tex. Nor. Col., 04-07; asst. prof. *geol.*, Kansas, 10-13, *assoc. prof.*, 13-16; *Wisconsin*, 16- Shaler Mem. exped. to Baltic, 14; state geologist, Kans., 15-16; guide, excursion A 1, Int. Geol. Cong., Toronto, 13. A.A.; Paleont. Soc; Geol. Soc; Kans. Acad; Wis. Acad. Sedimentation; invertebrate paleontology; stratigraphy of Silurian and Co-

- manchean of Kansas; geology of Anticosti Island.
- Twiss, Prof. Edith Minot**, Vassar College, Poughkeepsie, N. Y. *Botany*. Columbus, Ohio, 73. A.B., Ohio State, 95; M.S., Chicago, 07, fellow, 08-09, Ph.D., 09. Teacher, various high schools, 95-10; asst. prof. bot., Washburn, 10-12, prof. bacter., 12-13, bot., 13-20; asst. prof., Vassar, 20-A.A.; Bot. Soc.; Pub. Health Ass.; Kans. Acad. Bacteriology of foods.
- Twiss, Prof. W(ilfred) C(harles)**, University of Utah, Salt Lake City, Utah. *Botany*. San Jose, Calif., July 9, 68. A.B., Southern California, 95; A.M., California, 10; Ph.D., Columbia, 19. Instr. bot., Utah, 11-12, asst. prof., 12-15, assoc. prof., 15-19, prof. and head of dept., 19- A.A.; Torrey Bot. Club; Am. Geog. Soc. Cytology; Erythrophyllum delesserioides; plastids and mitochondria.
- Twitchell, Dr. E(rnest)**, Wyoming, Ohio. *Chemistry*. Cincinnati, Ohio, Feb. 26, 63. B.S., Cincinnati, 86, hon. Sc.D., 15. Chemist and factory manager and later chem. director, *The Emery Candle Co.*, 87-; pres., *The Am. Oil Treating and Hardening Co.*; chairman, board of directors, *The Twitchell Process Co.* Assoc. ed., *Jour. Indust. and Eng. Chem.*, 08-; Perkins medal, 19. A.A.; Chem. Soc.; Soc. Chem. Indust. Chemistry of the fats and fatty acids.
- Twitchell, Prof. Mayville W(illiam)**, Department of Conservation and Development, Trenton, N. J. *Geology*. Washington, D. C., Oct. 14, 68. B.S., George Washington, 99, M.S., 00; Ph.D., Hopkins, 05. Prof. geol., South Carolina, 05-12; state geologist, S. C., 11-12; asst. state geologist, N. J., 12- Fel. Geol. Soc.; fel. Paleont. Soc. Cenozoic Echinoidea; the Mesozoic and Cenozoic Echinodermata of the United States; Tertiary deposits of the Atlantic Coastal Plain; mineral resources of South Carolina and New Jersey; underground waters of New Jersey.
- Twitmyer, Dr. Edwin B(urket)**, University of Pennsylvania, Philadelphia, Pa. *Psychology*. McElhattan, Pa., Sept. 14, 73. Ph.B., Lafayette, 96, M.S., 99; Ph.D., Pennsylvania, 02. Instr. psychol., Pennsylvania, 97-07, asst. prof., 07-14, prof. and asst. director, psychol. lab. and clinic, 14- A.A.; Psychol. Ass. The patellar tendon reflex; control of fine measuring instruments; diagnosis and methods of correction of speech defects.
- Tyler, Prof. A(nsel) A(ugustus)**, James Millikin University, Decatur, Ill. *Biology*. East Bridgewater, Pa., March 7, 69. A.B., Lafayette, 92, A.M., 95; Ph.D., Columbia, 97. Instr. biol., Union, 97-98; bot., Syracuse, 98-99; assoc. prof. biol., Arizona, 99-00; prof. science, Bellevue, 00-05, biol., 05-16, dean, 11-15; prof. biol., James Millikin, 16- A.A.; Nebr. Acad. (pres., 08); Omaha Fontenelle Forest Ass. (sec'y, 10-16). Nature and origin of stipules.
- Tyler, Prof. H(arry) W(alter)**, Massachusetts Institute of Technology, Cambridge, Mass. **Mathematics*. Ipswich, Mass., April 16, 63. B.S., Mass. Inst. Tech., 84; Göttingen, 87-88; Ph.D., Erlangen, 89. Asst. math., Mass. Inst. Tech., 84-86, instr., 86-90, asst. prof., 90-92, assoc. prof., 92-93, prof., 93-, head of dept., 02-; sec'y faculty, 89-90, 91-06. A.A.; Math. Soc.; Ass. Prof. (sec'y, 16-); Am. Acad. (librarian, 12-14, cor. sec'y, 14-); Math. Soc.; Math. Ass.; Math. Verein. Determinants.
- Tyler, Prof. Hazen G(reeley)**, 520 Nostrand Ave., Brooklyn, N. Y. *Mechanical engineering*. Brooklyn, N. Y., March 21, 90. E.E., Brooklyn Polytech., 11, M.S., 12, M.E., 13; Sc.D., N. Y. Univ., 16. Instr. mech. eng., Brooklyn Polytech., 11-16; Rensselaer, 16-17; engineer, West. Elec. Co., 17-; asst. prof. mech. eng., N. Y. Univ., 17- Engineer, N. Y. Edison Co., 12-13. Mech. Eng.; Elec. Eng.; Eng. Educ. Thermodynamics; steam engineering; refrigeration.
- Tyler, Prof. John M(ason)**, Amherst, Mass. *Biology*. Amherst, May 18, 51. Amherst, 69-73; Göttingen, 76-78; Leipzig, 78-79; hon. Ph.D., Colgate. Teacher, Phillips Acad., 73-74; prof. biol., Amherst, 79-18, emer. prof., 18- Soc. Nat.; Soc. Zool. Child growth.
- Tyler, Prof. R(ichard) G(rimes)**, University of Texas, Austin, Tex. *Engineering*. Georgetown, Tex., Oct. 16, 85. C.E., Texas, 08; B.S., Mass. Inst. Tech. Asst. engineer, State Reclamation Dept., Tex., 12-13; asst. city engineer, Austin, Tex., 13-14; city engineer, Paris, Tex., 15-16; adj. prof. highway and sanit. eng., Texas, 17-19, assoc. prof., 20- Research assoc. eng., bur. econ. geol. and technol., Texas, 17- Assoc. Civil Eng.; Austin Eng. Club (pres., 19). Highway and sanitary engineering; water purification; sewage disposal; road materials.
- Tyrode, Dr. Maurice Vejux**, 416 Marlboro St., Boston, Mass. *Pharmacology*. Besançon, France, Nov. 6, 78. M.D., Harvard, 00; Dalton research fellow, Mass. Gen. Hosp., Boston, 00-01. Asst. pharmacol., Harvard Med. Sch., 00-01, instr., 01-08, faculty instr., 08- Formerly reviewer pharmacol. and toxicol., 'Boston Med. and Surg. Jour.' A.A.; Am. Med. Ass.; Soc. Pharmacol.; Boston Med. Library Ass.; Boston Soc. Med. Sci. Pharmacology and therapeutics; functions of isolated kidney; action of strophanthus, zygadenus, dog-wood, mercurial proteid compound, camphoric acid, thiosinamin; the action of the saline purgatives; the action of salts and the ions of Ca and Mg.
- Tyrrill, J(oseph) B(urr)**, 14 Walmer Road, Toronto, Can. *Geology*. Weston, Ont., Nov. 1, 58. Upper Canada, 73-76; B.A., Toronto, 80, M.A., 89; B.S., Victoria (Ont.), 89. Geologist, Can. Geol. Surv., 81-99; consulting mining engineer, 99- Back premium, Royal Geog. Soc.; Murchison medal, London Geol. Soc. A.A.; Geol. Soc.; Min. Eng.; Min. and Metal. Soc.; hon. mem. Explorers Club; hon. mem. Minn. Hist. Soc.; fel. Royal Soc. Can.; British Inst. Min. and Metal. (councilor). Mining geology; geography and geology of northern and western Canada; history of northwestern America.
- Tyzzer, Prof. E(rnest) B(Edward)**, 41 Fairmont Ave., Wakefield, Mass. **Pathology*. Wakefield, Aug. 30, 75. Ph.B., Brown, 97, A.M., 98; M.D., Harvard, 02, Bullard fellow, 02-03. Asst. path., Harvard, 03-05, supt. cancer research, 05-16, asst. prof. path., 08-16, George Fabyan prof. comp. path., 16- A.A.; Ass. Path. and Bact.; Soc. Exp. Path.; Ass. Cancer Research (mem. ed. committee); Soc. Exp. Biol.; Am. Med. Ass.; Am. Acad.; Boston Soc. Nat. Hist. Protozoa in

fishes; *Coccidium oviforme* in the rabbit's liver; leucocytes of the rabbit; etiology of variola and vaccinia; histology of skin lesions in varicella; pathology of the brown-tail moth dermatitis; inoculable and spontaneous tumors and heredity in mice; a fatal disease of the Japanese waltzing mouse due to *B. piliformis*; differentiation of *Leishmania* and *Leptomonads* of insects; a *Monostomum* of the European sparrow; black-head in turkeys.

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Udden, Prof. J(ohan) A(ugust), University of Texas, Austin, Tex. *Geology*. Lekåsa, Sweden, March 19, 59. A.B. Augustana, 81, A.M., 89, hon. Ph.D., 00; Minnesota, 86. Instr. nat. science and civics, Bethany (Kans), 81-88; prof. nat. hist. and geol. Augustana, 88-11; geologist, *bur. econ. geol. and tech. Texas*, 11-14, *director*, 14- Special asst. Iowa Geol. Surv., 97-02; asst. geologist, Univ. of Tex. Mineral Surv., 03-04; geologist, Ill. Geol. Surv., 06-11; special agent, U. S. Geol. Surv., 08-14. Knighted by King of Sweden, 11. A.A.; fel. Geol. Soc.; Min. Eng.; cor. mem. Iowa Acad. Stratigraphic and areal geology; work of the atmosphere; elastic sediments; erratics of till in the upper Mississippi Valley.

Uglow, Dr. W(illiam) L(awrence), University of British Columbia, Vancouver, B. C. Can. *Geology*. Ottawa, Can. April 29, 84. M.A. Queen's (Can), 06, B.S., 11; M.S. Wisconsin, 12, Ph.D., 14. Mine valuation engineer, Wis. Geol. Surv., 13-14; mining geologist, Vinegar Hill Zinc Co., 14-15; Cerro de Pasco Copper Corp., 16-17; *assoc. prof. geol. and miner. British Columbia*, 18- Lecturer geol. Minnesota, 15-16; field engineer, Can. Munition Resources Commission, 17-18; with Can. Geol. Surv., 03, 09, 12. Min. and Metal. Eng.; Can. Min. Inst.; Ass. Prof. Eng. B. C. Mineralogy; geology of zinc, lead, platinum, nickel, manganese and copper deposits.

Uhle, Dr. F(riedrich) Max, Quito, Ecuador. *Archeology*. Dresden, Germany, March 25, 56. Göttingen, 76-77; Ph.D., Leipzig, 80. Asst. Royal Zool. Anthropol. and Ethnol. Museum, Dresden, 81-88; Royal Museum of Völkerkunde, Berlin, 88-91; ethnol. exped. for German Govt., to S. Amer., 92-95; for Univ. of Pa., 95-97, in dept. archeol., 97-98; exped. for Univ. of Calif. to Peru, 99-01, 03-05; lecturer anthrop., California, 01-03; director, Museo de Hist. Nacional, Lima, 06-11; founding director, Museum Ethnol. and Anthropol., Santiago, Chile, 12-16; with *Academia Nacional de Hist. Quito, Ecuador*. Silver medal, Columbian Exhib., Madrid, 92; hon. prof., Univ. San Marco, Lima. Hon. mem. Davenport Acad.; hon. mem. Royal Anthropol. Inst.; Paris Soc. des Américanistes; Soc. Chil. de Hist. y Geog.; Geog. Soc. of La Paz, Sucre (Bolivia), and Lima; cor. mem. Vienna Anthropol. Gesell. Origin of South American civilizations; Malayan ethnology; ruins of Tiahuanaco; Pachacamac; report on second South American expedition.

Uhlenhuth, Dr. Eduard, Rockefeller Institute, New York, N. Y. *Biology*. Vienna, July 19, 85. Ph.D., Vienna, 09. Asst. Biol. Versuchs-Ansalt, Vienna, 11-13; fellow, *Rockefeller Inst.*, 14-16, *assoc.*, 16- Soc. Exp. Biol.; Soc. Ichthyol.

and Herp; Ass. Study Int. Secretions; fel. N. Y. Acad. Experimental biology and pathology; regeneration; growth; transplantation; development; internal secretions.

Uhler, Dr. H(orace) S(cudder), Yale University, New Haven, Conn. **Physics*. Baltimore, Md., Aug. 5, 72. A.B., Hopkins, 94, fellow, 04-05, Ph.D., 05. Lab. asst. physics, Hopkins, 94-96; instr. acad., Northwestern, 96-97; director, lab., University Sch., Baltimore, 97-02; Carnegie asst. physical chem., Hopkins, 05; instr. *physics, Yale*, 06-09, *asst. prof.*, 09- Assoc. ed., 'Physical Rev'; 'Am. Jour. Sci'; 'Math. Monthly.' A.A.; Physical Soc.; Optical Soc.; Math. Ass.; Ass. Prof.; life mem. Soc. de Physique. Geometrical optics; spectroscopy; X-rays.

Uhlinger, Dr. R(oy) H(eman), 1907 Benedum-Trees Building, Pittsburgh, Pa. *Chemistry*. Hartford, Ohio, May 15, 87. B.S. Allegheny, 10; fellow, Pittsburgh, 10-11, A.M., 11, Ph.D., 14. Chemist, Am. Nitro-Products Co., 14-15; Supt. Carbo-Hydrogen Co. of Am., 15-16; research chemist, *Benedum-Trees Oil Co.*, 16-17, *consulting chemist*, 19- Capt., C.W.S., 17-19. Chem. Soc. Engineering; analysis of the zinc group; bromination of oils and fats; natural gas products.

Ullmann, Prof. H(arry) M(aas), 20 W. Church St., Bethlehem, Pa. *Chemistry*. Springfield, Mo., April 14, 68. A.B., Hopkins, 89, Ph.D., 92; Munich and Paris, 92-94. Instr. quant. and indust. anal., *Lehigh*, 94-04, asst. prof., 04-10, asst. prof., 10-14, *prof. chem.*, 14- A.A.; Chem. Soc.; Chem. Gesell. P-sulphamin benzoic acid; acetins; titanium in cement rocks; ash and phosphorus in coke; ash and phosphorus in coal; aging of wool fats.

Ulrey, Prof. Albert B(rennus), 35th St. and University Ave., Los Angeles, Calif. *Biology*. North Manchester, Ind., Dec. 31, 60. A.B., Indiana, 92, A.M., 94; Woods Hole, 92; Rush Med. Col., Chicago, 00-01. Instr. zool., Indiana, 92-94; *prof. biol.*, Manchester, 95-99; *Southern California*, 01-, *director, Venice Marine Biol. Sta.*, 01- Prof. biol., Summer Sch. of Biol., Warsaw, Ind., 95; instr. histogenesis, biol. sta., Indiana, summers, 96, 97. A.A.; S. Calif. Acad. South American Characiniidae; Embiotocidae; embryology of *Paragordius varius* Leidy; starfishes of southern California.

Ulrey, Dr. Dayton L, 5637 Darlington Road, Pittsburgh, Pa. *Physics*. North Manchester, Ind., Sept. 19, 84. A.B., Indiana, 11, A.M., 12; Ph.D., Stanford, 17. Teaching fellow physics, Indiana, 11-12; instr., Pittsburgh, 12-15; asst., Stanford, 15-17; asst. prof., Pittsburgh, 17-18; *research physicist, Westinghouse Elec. and Mfg. Co.*, 18- A.A.; Physical Soc. Specific inductive capacity; evolution and occlusion of gases by glasses; moisture penetration of insulating materials.

Ulrich, Dr. E(dward) O(scar), U. S. Geological Survey, Washington, D. C. **Geology*. Cincinnati, Ohio, Feb. 1, 57. Pulte and Ohio Med. Colleges, 76-78; A.M., German Wallace, 86, Ph.D., 92. Curator, Cincinnati Soc. Nat. Hist., 77-79; paleontologist, Geol. Surveys of Ill., Minn. and Ohio, 85-89, 91-97; asst. geologist, Ky. Geol. Surv., 89-90; *geologist, U. S. Geol. Surv.*

- 97- Supt. mines, Boulder Co, Colo, 80-83; assoc. ed, 'Am. Geologist,' 88-97; assoc. paleont., U. S. Nat. Museum, 14- Nat. Acad; A.A.; Geol. Soc; Wash. Acad; Paleont. Soc. (pres); Wash. Geol. Soc. (pres); Wash. Biol. Soc. Stratigraphy; invertebrate paleontology; paleogeography.
- Ulrich, Dr. E(lmer) B(ixler)**, Drexel Hill, Delaware Co, Pa. *Plant physiology*. Brickerville, Pa. April 5, 80. M.Pd, West Chester State Nor. Sch, 99; B.S, Muhlenberg, 07; Ph.D, Pennsylvania, 10. *Teacher biol. Cent. High Sch, Phila*, 08- Lecturer, Pennsylvania, 10-11. A.A; Pa. Bot. Soc. Leaf movements of Oxalidaceae.
- Ulrich, Prof. John Linck**, Johns Hopkins University Medical School, Baltimore, Md. *Psychology*. Menlo Park, Calif, Dec. 12, 77. B.S, Pennsylvania, 08, M.S, 09; fellow, Hopkins, 10-11, Ph.D, 13. Instr. psychol, Catholic, 13-16, assoc. prof, 16-20; asst. *physiol, Hopkins*, 20- A.A; Psychol. Ass. Animal psychology; human psychology and physiology.
- Umpleby, Prof. Joseph B(ertram)**, University of Oklahoma, Norman, Okla. *Geology*. Graysville, Ohio, Nov. 20, 83. A.B, Washington (Seattle), 07; M.S, Chicago, 09, fellow, 09-10, Ph.D, 10. Asst. geol, Washington (Seattle), 06-08; asst. geologist, U. S. Geol. Surv, 08-12, geologist, 12-20; mineral specialist, Am. Commission to Negotiate Peace, 18-19; *prof. geol. and director, sch. eng. geol, Oklahoma*, 19- Geologist, Wash. Geol. Surv, 09, 10; acting assoc. prof. geol, California, 15-16. A.A; Geol. Soc; Ass. Petrol. Geol; Min. Eng; Okla. Acad; Wash. Acad; Wash. Geol. Soc. Economic and stratigraphic geology; genesis of ore and petroleum deposits.
- Underhill, Prof. A(nthony) L(ispenard)**, 615 Sixth St, S. E, Minneapolis, Minn. *Mathematics*. Bath, N. Y, June 6, 77. B.S, Chicago, 00, Ph.D, 06. Instr. *math*, Princeton, 05-07; Wisconsin, 07-09; asst. prof, *Minnesota*, 09-20, *assoc. prof*, 20- Asst. prof. math, Chicago, summer quarter, 10-; capt, C.A.C, 17-19. Math. Soc. Calculus of variations.
- Underhill, Charles Reginald**, The Acme Wire Co. New Haven, Conn. *Electrical engineering*. Chappaqua, N. Y, Nov. 2, 74. Self educated; correspondence and private instruction. With West. Elec. Co, 92-00; chief elec. engineer, Varley Duplex Magnet Co, 00-04; consulting elec. engineer, N. Y. City, 04-09; ed. and tech. writer, Westinghouse Elec. and Mfg. Co, 09-10; chief engineer, Am. Elec. Fuse Co, 10-11; *consulting elec. engineer, The Acme Wire Co*, 11- Lecturer electromagnets in various colleges; radio officer and capt, U.S.A, 17-19. A.A; fel. Elec. Eng; Mech. Eng; mem. Physical Soc; assoc. Radio Eng; assoc. Automotive Eng. Electromagnets, solenoids and electromagnetic windings; signalling systems; wireless telegraphy and telephony; wire and wireless printing telegraph systems.
- Underhill, Prof. Frank P(ell)**, 445 Orange St, New Haven, Conn. **Experimental medicine*. Brooklyn, N. Y, Dec. 21, 77. Ph.B. Yale, 00, Ph.D, 03. Asst. *physiol. chem, Yale*, 00-03, instr, 03-07, asst. prof, 07-13, *prof*, path. chem, 13-18, *exp. med*, 18- Goldsmith lecturer, N. Y. Path. Soc, 13; lecturer, Harvey Soc, 19; consulting path. chemist war gas investigations, Bur. Mines, 17-18; chairman, committee on biochem, Nat. Research Council, 17-19; lieut. col, C.W.S, A.E.F, 18; U. S. representative and v. pres. Interallied Gas Conf, Paris, 18. Assoc. ed, 'Jour. Biol. Chem'; 'Chem. Abstracts'; 'Jour. Urol.' A.A; Soc. Exp. Biol; Physiol. Soc; Soc. Pharmacol; Soc. Biol. Chem. (v. pres, 17); assoc. mem. Am. Med. Ass; Chem. Soc. Physiology of amino acids, proteoses and lethal war gases; the pancreas and diabetes; absorption from the liver; carbohydrate metabolism; experimental nephritis; pernicious vomiting of pregnancy; intermediary metabolism with reference to thyroids and parathyroids.
- Underwood, Dr. H(enry) W(eeden), Jr**, Massachusetts Institute of Technology, Cambridge, Mass. *Chemistry*. Wakefield, R. I, August 14, 95. Ph.B, Brown, 16, M.S, 17, fellow, 17-19, Ph.D, 19. Research fellow, Brown, 19-20; *instr. org. chem, Mass. Inst. Tech*, 20- Chem. Soc. Organic acids; vat dyestuffs.
- Underwood, Prof. P(aul) H(alladay)**, Ithaca, N. Y. *Civil engineering*. Ludlowville, N. Y, Dec. 29, 81. C.E, Cornell, 07. Instr. *civil eng, Cornell*, 07-12, *asst. prof*, 12- Asst. engineer, Isthmian Canal Commission, 11. A.A. Surveying; geodesy; hydraulic engineering; least squares.
- Underwood, W(illiam) Lyman**, Massachusetts Institute of Technology, Cambridge, Mass. *Biology*. Belmont, Mass, March 5, 64. Pub. sch. *Lecturer biol, Mass. Inst. Tech*, 00- Chairman, Board of Health, Belmont, 08- A.A; Ornith. Union; Mass. Zool. Soc; Mass. Audubon Soc; Am. Acad; Boston Soc. Nat. Hist; Nuttall Ornith. Club; Boston Bact. Club. Bacteriology applied to canning and preserving; extermination of mosquitoes.
- Unnewehr, Prof. E(mory) C(arl)**, Baldwin-Wallace College, Berea, Ohio. *Physics*. Batesville, Ind, Nov. 9, 85. B.S.M.E, Purdue, 09; Columbia. With dept. *physics*, Baldwin-Wallace, 12-16; lecturer, Columbia, 16-18, *prof*, *Baldwin-Wallace*, 18- A.A; Physical Soc; Ohio Acad. Characteristic X-rays.
- Updegraff, Prof. Harlan**, Swarthmore, Pa. *Education*. Sigourney, Iowa, Aug. 22, 74. Ph.B, Cornell (Iowa), 94; A.M, Columbia, 98, 00-02, 05-07, fellow, Teacher's Col, 06-07; Ph.D, 08. Principal and supt, pub. schools, Iowa and Md, 94-97, 98-00, 02-05; asst. educ, Teachers Col, Columbia, 00-02; chief, Alaska, div, U. S. Bur. Educ, 07-10, collector, compiler statist. and chief, div. sch. admin, 10-12; *prof*, educ. and head of dept, Northwestern, 12-13; *educ. admin, Pennsylvania*, 13- Lecturer sch. admin, George Washington, 08-09; expert asst. conference of chief state educ. officers, 10-13. A.A. The moving school in Massachusetts; school expenses, boards and chief executive officers; teachers' certificates and salaries.
- Updegraff, Prof. Milton**, Prescott, Ariz. **Astronomy*. Decorah, Iowa, Feb. 20, 61. B.S, B.C.E, Wisconsin, 84, M.S, 86. Aid, U. S. Coast and Geod. Surv, 82, 83; asst. astronomer, Washburn

- Observatory, Wisconsin, 84-87; astronomer, Argentine Nat. Observatory, Cordoba, 87-90; prof. astron. and director, Laws Observatory, Missouri, 90-99; *prof. math.*, U.S.N., 99-, observer, U. S. Naval Observatory, 99-02, 08-10; director, Nautical Almanac, 07-10; in charge sci. work, geod. surv., Am. Samoa, 14. A.A.; Astron. Soc; Wash. Philos. Soc; St. Louis Acad; Astron. Gesell. Errors of meridian circles; orbits of comets; astronomical time keeping; star places; errors of 6-inch transit circles and clocks of U. S. Naval Observatory; observations of fixed stars.
- Upham, Dr. Warren**, Minnesota Historical Society, St. Paul, Minn. **Geology, Archeology*. Amherst, N. H., March 8, 50. A.B., Dartmouth, 71, hon. A.M., 94, Sc.D., 06. Asst., N. H. Geol. Surv., 74-78; Minn. Geol. Surv., 79-85; U. S. Geol. Surv., 85-93; Minn. Geol. Surv., 93-94; librarian, Western Reserve Hist. Soc, 95; sec'y and librarian, *Minn. Hist. Soc.*, St. Paul, 95-14, *archeologist*, 14- A.A. (sec'y, E, 98); Geol. Soc; Archeol. Inst; Minn. Hist. Soc; N. H. Hist. Soc; Minn. Acad; Boston Soc. Nat. Hist; London Victoria Inst. The glacial lake Agassiz; glacial lakes; moraines; till; drumlins; eskers; kames; causes of the ice age; climatology; antiquity of mankind and its relation to the ice age; flora and fauna of Minnesota; origins and meanings of geographic names.
- Upton, Prof. Fred W (ilbert)**, Station A, Lincoln, Nebr. *Chemistry*. Byron, Ill., Feb. 2, 83. B.S., Nebraska, 07, A.M., 08; Ph.D., Chicago, 10. Instr. chem., Cincinnati, 10-12; Chicago, 12-13; head, dept. agr. chem., Nebraska, 13-18, *prof. chem., chairman of dept. and director, chem. laboratories*, 18- A.A.; Chem. Soc. Substituted succinic acids; colloids; soils; sugars.
- Upton, Prof. Walter L (yman)**, Washington University, St. Louis, Mo. *Electrical engineering*. Cleveland, Ohio, July 3, 77. B.S., Princeton, 99, E.E., 02, M.S., 03; London, 07; M.E.E., Harvard, 08. Instr. *elec. eng.*, Princeton, 04-06; asst. prof., Ohio State, 08-10; prof., Vermont, 10-12; asst. prof., Union, 12-14, assoc. prof., 14-20; *prof., Washington (St. Louis)*, 20- Consulting engineer, Gen. Elec. Co., 18-19. A.A.; Elec. Eng. (chairman, Schenectady sect, 17); Eng. Educ. London Elec. Eng. Electrical science; engineering education.
- Uptegrove, Prof. Clair**, University of Michigan, Ann Arbor, Mich. *Metallurgy*. Central Lake, Mich., Nov. 30, 84. B.Ch.E., Michigan, 14. Chemist and metallurgist, Detroit Copper and Brass Rolling Mills, 14-16; instr. *chem. eng.*, Michigan, 16-17, asst. *prof.*, 19- Chem. Soc. Non-ferrous metallurgy; brass; heat treatment of non-ferrous alloys.
- Upton, Clifford B (rewster)**, Teachers College, Columbia University, New York, N. Y. *Mathematics*. Detroit, Mich., May 10, 77. Grad. Mich. State Nor. Col., 98; A.B., Michigan, 02; Columbia, 03-05, A.M., 07; Göttingen, 07; Paris, 08-10. Instr. *math.*, secondary sch., 98-00; Horace Mann Sch., Columbia, 02-10, asst. *Teachers Col.*, 04-07, instr., 07-10, asst. *prof.*, 10-17, *assoc. prof.*, 17-, sec'y, 11-19, *provost*, 19- Math. Soc; Math. Ass; Ass. Teachers Math. Middle States and Md. The teaching of mathematics in elementary and secondary schools; modern calculating machinery and its uses; the teaching of mathematics in France; college administration.
- Urban, Prof. Wilbur M (arshall)**, 18 Rope Ferry Road, Hanover, N. H. *Psychology*. Philadelphia, Pa., March 27, 73. A.B., Princeton, 95; Ph.D., Leipzig, 97. Reader in philos., Princeton, 97-98; *prof. philos. and psychol.*, Ursinus, 98-02; *philos.*, Trinity (Conn.), 02-20; *Dartmouth*, 20- Asst. ed. 'Diet. Philos. and Psychol.' Psychol. Ass; Philos. Ass. The psychology of feelings and emotions, with special reference to the psychology of value; the memory of emotions in connection with esthetic creation and appreciation; experimental psychology of the value-judgment.
- Uren, Prof. Lester Charles**, University of California, Berkeley, Calif. *Mining engineering*. Grass Valley, Calif., Sept. 1, 88. B.S., California, 11. With Eagle-Shawmut Mining Co., 04-12; *assoc. prof. petroleum eng.*, California, 12- Engineer, Fuel Ad, 18; capt., C.W.S., A.E.F., 18-19. Min. and Metal. Eng. Petroleum engineering.
- Uriarte, Prof. Leopoldo**, 825 Mexico St, Buenos Aires, Argentina. *Medicine*. Buenos Aires, July 10, 74. Nat. Col. and Med. Univ. of Buenos Aires. Asst. practitioner, Buenos Aires hospital, 94-97; director of lab, Hosp. of Infectious Diseases, 01; substitute *prof. Med.* Univ. of Buenos Aires, 01, *special prof.*, 11- Chief of sect, bacter inst, Pub. Health Dept, 12; chief, practical work in study of infectious diseases, 01-12; mem. commission to study plague in Paraguay. Various scientific societies. Infectious diseases.
- Urie, Frank D (ickinson)**, Elgin Observatory, Elgin, Ill. *Astronomy, Physics*. Toledo, Ohio, June 27, 87. A.B., Michigan, 09. Asst., Detroit Observatory, Michigan, 09-10; astronomer, *Elgin Observatory*, 10-16, *asst. director*, 16- Astron. Soc. Chronographic registration of radio time signals; watch tests.
- Urner, Prof. S (amuel) E (verett)**, Mountain View, Calif. *Mathematics*. Mitchell, Ind., July 29, 87. Ph.B., Baker, 06; Harvard, 08-10, Ph.D., 11. Instr. *math.*, high sch., Independence, Kans., 06-08; Wisconsin, 10-11; asst. *prof.*, Miami, 11-18, *assoc. prof.*, 18-19. Math. Soc. Transformations of real variables.

V

- Vail, Miss Anna Murray**, 19 rue Carnot, Montreuil-sur-mer, Pas de Calais, France. *Botany*. New York, N. Y., Jan. 7, 63. Private instruction, Europe; student under Dr. N. L. Britton. Librarian, N. Y. Bot. Garden, 00-07. A.A.; Torrey Bot. Club. Taxonomy of Leguminosae and Asclepiadaceae; phylogeny.
- Valasek, Joseph**, University of Minnesota, Minneapolis, Minn. *Physics*. Cleveland, Ohio, April 27, 96. B.S., Case, 17. Asst. physicist, Bur. Standards, 17-19; *instr. physics*, Minnesota, 20- Physical Soc; Optical Soc. Electricity; pyrometry; piezo-electricity.
- Valiant, W (illiam) S (eymour)**, 49 Easton Ave, New Brunswick, N. J. *Mineralogy, Paleontology*. Rome, N. Y., Nov. 13, 45. Pub. and

- private schools. Teacher geol. Free Acad. Rome, N. Y., many years; asst. *geol. museum, Rutgers*, 93-14, *curator*, 13- N. J. Micros. Soc.; Rome (N. Y.) Audubon Soc. (past sec'y). The antennae and swimming appendages of trilobites; occurrence and associations of minerals.
- Valleau, Prof. W(illiam) D(orney)**, Kentucky Experiment Sta., Lexington, Ky. *Agronomy*. Minneapolis, Minn., Feb. 17, 91. B.S.A., Minnesota, 13, Ph.D., 17. Asst. fruit breeding, Minn. Exp. Sta., 15-17, instr., Minnesota, 17-19; *asst. prof. plant path, Kentucky, and pathologist, Exp. Sta.*, 19- A.A.; Bot. Soc.; Phytopath. Soc.; Ecol. Soc.; Soc. Hort. Sci. Varietal resistance of plums to brown rot; sterility in *Fragaria*; inheritance of sex in grape; sterility in the strawberry; seed corn infection with *Fusarium moniliforme*.
- Van Arsdale, G(eorge) D(awes)**, 99 John St., New York, N. Y. *Metallurgy*. Newark, N. J., April 28, 74. B.S., Princeton, 96. *Metallurgist*, Parke, Davis and Co., 96; S. S. White Mfg. Co., 96-99; *Phelps, Dodge Corp.*, 99- Chem. Soc.; Electrochem. Soc.; Min. and Metal. Soc. Non-ferrous metallurgy; hydro-metallurgy; flotation.
- Van Benschoten, Prof. Anna L(avina)**, Wells College, Aurora, N. Y. *Mathematics*. Elmira, N. Y., Aug. 12, 66. B.S., Cornell, 94; M.S., Chicago, 00; Göttingen, 00-01; Ph.D., Cornell, 08. Teacher math, high sch., Binghamton, N. Y., 94-98; prof., Wells, 01-20. Prof. math, Arizona, 18. Math. Soc. Birationals transformations.
- Van Biesbroeck, Prof. G(eorge)**, Yerkes Observatory, Williams Bay, Wis. *Astronomy*. Ghent, Belgium, 80. D.Eng., Ghent, 02; Lauréat du Concours Universitaire, 02-03. Engineer, dept. bridges and roads, Brussels, 02-08; asst., Heidelberg Observatory, 05-06; Potsdam Observatory, 06-07; adj. astronomer, Royal Observatory, Brussels, 08-15; visiting prof. *practical astron.*, Yerkes Observatory, 15-16, *asst. prof.*, 17- Astron. Soc.; Astron. Gesell. Double stars; comets; stellar parallaxes.
- Vance, Dr. B(enjamin) M(organ)**, Bellevue Hospital, New York, N. Y. *Pathology*. Louisville, Ky., Dec. 6, 86. A.B., Harvard, 08; M.D., Pennsylvania, 12. *Pathologist, Bellevue Hosp.*, 12-15, *second div.*, 15- Lieut. and capt., M.C., A.E.F., 17-19. Ass. Path. and Bact. Bacteriology.
- Vance, Dr. Thomas F(ranklin)**, 2323 Knapp St., Ames, Iowa. *Psychology*. Shenandoah, Iowa. A.B., Coe, 09; A.M., Iowa, 11, Ph.D., 13. Asst. *psychol.*, Illinois, 13-14; asst. prof., *Iowa State*, 14-15, *assoc. prof.*, 15- Psychol. Ass. Lower limit of tonality; pitch discrimination; mental tests.
- Van Cleave, Prof. H(arley) J(ones)**, University of Illinois, Urbana, Ill. *Zoology*. Knoxville, Ill., Oct. 5, 86. B.S., Knox, 09; fellow, Illinois, 10, M.S., 10, Ph.D., 13. Instr. *zool.*, *Illinois*, 13-16, *assoc.*, 16-19, *asst. prof.*, 19- Mem. staff, Ill. State Nor. Univ., summers, 13-15; instr., Puget Sound Marine Sta., summer, 16. A.A.; Soc. Zool.; Micros. Soc. (treas., 15-18); Fisheries Soc.; Cent. Ass. Sci. and Math.; Ill. Acad. Parasitology; cell constancy; morphology and classification of Acanthocephala; teaching of zoology.
- Van Denburgh, Dr. J(ohn)**, California Academy of Sciences, San Francisco, Calif. *Zoology*. San Francisco, Aug. 23, 72. A.B., Stanford, 94, A.M., 95, Ph.D., 97; M.D., Hopkins, 02. *Curator, dept. herpetol., Calif. Acad. Sciences*, 94- Calif. Acad. Herpetology of western United States and Mexico; reptile poison; ornithology of California; zoogeography; lizards, snakes and gigantic land tortoises of the Galapagos Islands; herpetology of the Philippine Islands, Formosa, Japan and eastern Asia.
- VanderHoof, Dr. Douglas**, Professional Building, Richmond, Va. *Medicine*. Brooklyn, N. Y., Dec. 31, 79. B.L., Dartmouth, 01, A.M., 07; M.D., Hopkins, 05. Asst. *med. Med. Col. of Va.*, 06-14, *prof.*, 14- A.A.; Am. Med. Ass. Internal medicine.
- Vanderkleed, Prof. Charles E(dwin)**, 200 Harvard Ave., Collingswood, N. J. *Chemistry*. La Fayette, Ind., April 24, 78. Ph.G., Purdue, 95, Ph.C., 96, B.S., 99, A.C., 01; hon. *Phar.D.*, Phila. Medico-Chirurg. Col., 08. Instr. chem., Purdue, 96-01; anal. chemist, Sharp and Dohme, Baltimore, Md., 01-02; director, chem. laboratories, H. K. Mulford Co., Phila., 02-17; lecturer drug chem., Phila. Medico-Chirurg. Col., 07-08, *prof. pharmaceut. chem.*, 08-16; chemist, Hercules Powder Co., 18-19; *lecturer chem. control, Phila. Col. Pharmacy*, 16- Treas. and director, Henry C. Blair Co., 08-; sec'y., Cellulose Silk Co., 20- Pharmaceut. Ass. (chairman, sci. sect., 08); Chem. Soc. (pres, Phila. sect.); Pa. Pharmaceut. Ass. Analytical and pharmaceutical chemistry; artificial silk.
- Vanderpoel, Dr. Frank**, 175 Park Ave., Orange, N. J. *Chemistry*. Newark, N. J., Nov. 20, 53. E.M., Columbia, 75, Ph.D., 94. With E. B. Benjamin, N. Y. City, 75-78; The Celluloid Co., 78-03. A.A.; Chem. Soc.; Soc. Chem. Indust. Nitrogen compounds of cellulose; sulphur and nitrogen acids; physics.
- Vander Veer, Dr. Albert**, 28 Eagle St., Albany, N. Y. *Surgery*. Root, N. Y., July 10, 41. M.D., George Washington, 62, LL.D., 04; hon. M.D., Albany Med. Col., 69; A.M., Williams, 82; Ph.D., Hamilton, 83; Union, 83. Asst. and surgeon, N. Y. Vols., 62-65; prof. anat., Albany Med. Col., 69-74, surg., 76-14, dean, 96-04. Attending surgeon, Albany Hosp., 69-04, surgeon-in-chief, 04-19, senior consulting surgeon, 19-; attending surgeon, St. Peter's Hosp., 73-03; consulting surgeon, Hosp. Crippled and Deformed, West Haverstraw; regent and v. chancellor, Univ. State of N. Y., 95-; *assoc. ed.*, 'Albany Med. Annals.' A.A.; Surg. Ass. (past pres); Ass. Obstet. and Gynec. (past pres); Am. Med. Ass. (pres, 16); S. Surg. and Gynec. Ass.; N. Y. State Med. Soc. (past pres); Albany Co. Med. Ass. (past pres). Abdominal, gynecological and clinical surgery.
- Vander Veer, Dr. J(ames) N(ewell)**, 28 Eagle St., Albany, N. Y. *Surgery*. Albany, Dec. 12, 77. A.B., Union, 99, A.M., 03; M.D., Albany Med. Col., 03. *Clin. prof. genito-urinary surg.*, Albany Med. Col.; attending urologist, Albany Hosp. Major, M.C., A.E.F. Urol. Ass.; Col. Surg.; Am. Med. Ass.; Ass. Mil. Surg.
- Van der Vries, Dr. John N(icholas)**, Otis Building, Chicago, Ill. *Mathematics*. Kalamazoo, Mich., May 23, 76. A.B., Hope, 96, A.M., 99; fellow, Clark, 98-01, Ph.D., 01. Asst. prof.

- math, Kansas, 01-07, assoc. prof, 07-12, prof, 12-19; *sec'y, cent. district, U. S. Chamber of Commerce*, 18- A.A.; Math. Soc.; Math. Ass. Theory of twisted curves and surfaces; monoids; Steinerian and quartic surfaces.
- Van Dine, D(elos) L(ewis)**, U. S. Department of Agriculture, Washington, D. C. *Entomology*. Tompkins Co, N. Y., Feb. 2, 78. Stanford, 99-00; B.S.A. Cornell, 01. Lab. asst, dept. entom, Cornell, 01; entomologist, Hawaii Exp. Sta, 02-09; special field agent, bur. entom, U. S. Dept. Agr, 09-10; entomologist, exp. sta, Sugar Producers' Ass, Rio Pedras, P. R, 10-13; entom. asst, bur. entom, U. S. Dept. Agr, 13-17, *entomologist*, 19- Capt, Sanit. C, 18-19. A.A.; Entom. Soc.; Ass. Econ. Entom.; Pub. Health Ass; Wash. Entom. Soc.; Hawaiian Entom. Soc. Insects of tropical crops and of live stock; insects affecting health of man; insects affecting troops in war; malaria mosquitoes.
- Vandiver, H(arry) S(hultz)**, 117 Stewart Ave, Ithaca, N. Y. *Mathematics*. Philadelphia, Pa, Oct. 21, 82. Pennsylvania, 04-05. *Instr. math, Cornell*, 19- Math. Soc.; Math. Ass. Theory of numbers; algebra.
- Van Doren, Dr. Lloyd**, 52 Sandford Ave, Plainfield, N. J. *Chemistry*. Oldwick, N. J., Dec. 11, 89. B.S, Pennsylvania Col, 09, M.S, 13; Ph.D, Hopkins, 12. *Instr. chem*, Lowell Textile Sch, 12-13; asst. prof, Akron, 13-14; prof. and head of dept, Earlham, 14-19; chem. adviser, Emery, Varney, Blair and Hoguet, 19-20; *consulting chemist and patent solicitor*, Chem. Foundation Co, Inc, 20- Lieut. C.W.S. Chem. Soc. Osmotic pressure; color lakes.
- Van Duzee, Edward P(ayson)**, California Academy of Sciences, San Francisco, Calif. *Entomology*. New York, N. Y., April 6, 61. Pub. schools. Librarian, Grosvenor Library, Buffalo, N. Y., 85-12; Scripps Inst, California, 13-14, *instr. entom*, California, 14-16; *curator, dept. entom, Calif. Acad. Sciences*, 16- A.A.; Entom. Soc.; Ecol. Soc.; Pacific Coast Entom. Soc.; Calif. Acad.; San Diego Nat. Hist. Soc.; Buffalo Soc. Nat. Sci. Hemiptera.
- Van Dyck, Prof. F(rancis) C(uyler)**, 25 Grant Ave, Highland Park, New Brunswick, N. J. *Experimental physics*. Coxsackie, N. Y., June 3, 44. A.M, Rutgers, 08, hon. Sc.D, 10, LL.D, 15; Ph.D, Union, 88. Tutor, Rutgers, 67-70, prof. anal. chem, 70-80, physics and exp. mech, 80-17, retired, 17, dean, 01-12. A.A.; N. J. Micros. Soc.; Brooklyn Inst.
- Van Dyke, Prof. Edwin C(oooper)**, University of California, Berkeley, Calif. *Entomology*. Oakland, Calif, April 7, 69. B.S, California, 93; M.D, Cooper Med. Col, 95. *Curator entom, Calif. Acad. Sciences*, 04-; *asst. prof, California*, 15- A.A.; Entom. Soc.; Calif. Acad. Systematic, forest and ecological entomology; Coleoptera.
- Van Epps, Dr. G(eorge) D(udley)**, 347 Jefferson St, Muskegon, Mich. *Chemistry*. Atlanta, Ga, May 20, 92. B.S, Ga. Tech, 13; Ph.D, Hopkins, 16. *Chemist*, Tex. Co, 16-18; Barrett Co, 18-19; *Continental Motors Corp*, 19- Chem. Soc. Preparation of nitrils.
- Van Es, Prof. L(eunis)**, University Farm, Lincoln, Nebr. *Veterinary medicine*. Melissant, Netherlands, Oct. 3, 68. V.S, Toronto, 93; M.D, Alabama, 98. Demonstrator histol. and bacter, Alabama, 98-02; *prof. vet. science*, N. Dak. Col. and veterinarian, Exp. Sta, 03-18; *animal path. and hygiene, Nebraska*, 18- Chief state veterinarian, N. Dak, 03-07; director, State Serum Inst, N. Dak, 07-18; bacteriologist and consulting veterinarian, N. Dak. State Live Stock Sanit. Board, 07-18. U. S. delegate, Cong. Vet. Med, The Hague, 09. A.A.; Soc. Bact.; Pub. Health Ass; Vet. Med. Ass; Ass. Tuber; U. S. Live Stock Sanit. Ass. Tetanus; bovine avian tuberculosis; glands; hog-cholera; swamp fever.
- Van Eseltine, G(len) P(arker)**, U. S. Department of Agriculture, Washington, D. C. *Botany*. Syracuse, N. Y., Oct. 21, 88. A.B, Syracuse, 13. Aid, U. S. Nat. Herbarium, 13-15; asst. *office foreign seed and plant introd, bur. plant indust, U. S. Dept. Agr*, 15-19, *asst. botanist*, 19- A.A.; Bot. Soc.; Ecol. Soc.; Wash. Bot. Soc.; Wash. Biol. Soc.
- Van Gundy, C(harles) P(hilip)**, Baltimore and Ohio R. R, Mt. Clare, Baltimore, Md. *Chemistry*. Springfield, Ill, Jan. 5, 67. B.S, Illinois, 88. Asst. chemist, B. and O. R. R, 88-90; chemist, Laughlin and Co, Pittsburgh, 90-92; chief chemist, B. and O. R. R, 92-20, *water engineer*, 20- Chem. Soc.; Soc. Chem. Indust; Soc. Test. Mat. Water treatment.
- Van Hook, Prof. J(ames) M**, Bloomington, Ind. *Plant pathology*. Washington Co, Ind, Dec. 19, 70. A.B, Indiana, 99, A.M, 00; Cornell, 01-04. Asst. bot. Cornell, 01-02, plant path. Exp. Sta, 02-04; Ohio State, 04-07; *asst. prof. bot, Indiana*, 07- A.A.; Phytopath. Soc.; Bot. Soc.; fel. Ind. Acad. Mycology.
- Van Horn, F(rank) B(enjamin)**, 1636 Baltimore St, Tulsa, Okla. *Geology*. Maquoketa, Iowa, March 20, 77. Wisconsin, 00-06. Asst. geologist, Mo. Geol. Surv, 03-05; Ill. Geol. Surv, 06-07; asst. to chief geologist, U. S. Geol. Surv, 07; *consulting engineer*. Wash. Geol. Soc. Phosphate rock.
- Van Horn, Prof. Frank R(obertson)**, Case School of Applied Science, Cleveland, Ohio. *Geology*. Johnsonburg, N. J., Feb. 7, 72. B.S, Rutgers, 92, M.S, 93, Sc.D, 19; Ph.D, Heidelberg, 97. Asst. miner, Rutgers, 92-93; *instr. geol. and miner, Case*, 97-99, asst. prof, 99-02, *prof*, 02- A.A.; Geol. Soc. (librarian, 13-18); Min. and Metal. Eng; Seismol. Soc; Miner. Soc. Petrographical and economic geology; mineralogy; clay, shale and stone industry of northeastern Ohio.
- Van Ingen, Prof. Gilbert**, Princeton University, Princeton, N. J. *Geology, Paleontology*. Poughkeepsie, N. Y., July 30, 69. Cornell, 86-88; Yale, 92-93. Asst. geologist, U. S. Geol. Surv, 89-91; asst. paleont, Cornell, 91-92; Columbia, 93-95, curator geol, 95-01; special asst. to N. Y. state paleontologist, 01-03; asst. geol. and curator invert. paleont, Princeton, 03-08, *asst. prof. geol*, 03- Ed, departments of geol. and paleont, 'New Int. Encyclopedia,' 01-02; pres. acad. board, U. S. Sch. Mil. Aeronautics, Princeton, 17-19. Geol. Soc; Paleont. Soc; fel. N. Y. Acad. (ed, 97-01); Phila. Acad. Paleontology and stratigraphy of Appalachian paleozoics and of eastern Newfoundland; geology of the Rose-

dale cement region, Ulster County, N. Y.; stratigraphy of the Potsdam sandstone; stratigraphy and tectonics at Rondout, N. Y.; organic origin of metalliferous deposits in non-metamorphosed limestones; Algae of the Wabana Ordovician iron ores; petrology of sedimentary rocks; Shawangunk grit and its facial relationships.

Van Name, Prof. Ralph G(ibbs), 121 High St., New Haven, Conn. *Chemistry*. New Haven, Oct. 22, 77. A.B., Yale, 99, Ph.D., 02; Leipzig, 02-03; Göttingen, 03-04. Instr. chem., Yale, 04-09, *asst. prof.*, 09- A.A.; Chem. Soc.; Conn. Acad. Rates of solution of metals in certain oxidizing agents; temperature coefficient of a heterogeneous reaction; triiodid equilibria; properties of hypophosphoric acid.

Van Name, Dr. Willard G(ibbs), American Museum of Natural History, New York, N. Y. *Biology*. New Haven, Conn., April 18, 72. A.B., Yale, 94, Ph.D., 98; Berlin, 99-00. Lab. asst. physiol. chem., Yale, 94-95; asst. biol., 97-99, histol. and embryol., 02-03; specialist and asst. ed., zool. and gen. biol., 'Webster's Int. Dictionaries,' 03-09; zoologist, N. Y. State Museum, Albany, 10-16; *asst. invert. zool.*, *Am. Museum Nat. Hist.*, 16- A.A.; Soc. Nat.; assoc. Ornith. Union. Zoology; chemical composition of gelatin; embryology of the planarians; ascidians of the Bermuda Islands, the New England coast, the Philippines and the West Indies; isopod Crustacea of the Congo region.

Van Ornum, Prof. J(ohn) L(ane), Washington University, St. Louis, Mo. *Civil engineering*. Hartford, Vt., May 14, 64. B.S., Wisconsin, 88, C.E., 91. Chief topographer, Mex. Boundary Surv., 92-94; major, Third U. S. Vol. Engineers, 98-99; *prof. civil eng.*, *Washington (St. Louis)*, 99- On munic. railway and govt. eng. works about six years. A.A.; Civil Eng.; Eng. Educ.; Soc. Test. Mat.; St. Louis Eng. Club (past pres); St. Louis Acad.; Int. Ass. Test. Mat. Improved field methods of surveying; cements; concrete and reinforced concrete constructions; water and sewage purification; principles of river regulation and harbor improvement.

Van Orstrand, C(harles) E(dwinn), 1607 31st St., N. W., Washington, D. C. *Geophysics*. Near Pekin, Ill., Feb. 8, 70. B.S.(C.E.), Illinois, 96, B.S., 97; M.S., Michigan, 98. Computer, 'Nautical Almanac' Office, U. S. Naval Observatory, 98-99, asst., 99-00; asst. physical geologist, *U. S. Geol. Surv.*, 01-13, assoc. physical geologist, 13-15, *physical geologist*, 15- Lecturer math. physics, George Washington; mem. Am. sect. Int. Geophys. Union. A.A.; Physical Soc.; Math. Soc.; Astron. Soc.; Meteorol. Soc.; Am. Geog. Soc.; Wash. Geol. Soc.; Wash. Philos. Soc.; Wash. Acad.; Soc. de Physique. Applied mathematics; elasticity and diffusivity of metals at high temperatures; mathematical tables; deep-earth temperatures.

Van Slyke, Dr. D(onald) D(exter), 11 Fletcher Ave., Mt. Vernon, N. Y. **Chemistry*. Pike, N. Y., March 29, 83. A.B., Michigan, 05, Ph.D., 07. Research chemist, N. Y. Exp. Sta., Geneva, 06; fellow *physiol. chem.*, *Rockefeller Inst.*, 07-08, asst., 08-10, assoc., 10-12, assoc. mem., 12-20, *member*, 20- Soc. Exp. Biol.; Soc. Biol. Chem;

Chem. Soc. Chemistry and physiology of proteins and amino acids; derivatives of triphenylmethane; laws of enzyme action; methods for blood analysis; acidosis; respiratory and renal functions.

Van Slyke, Dr. L(ucius) L(incoln), Geneva, N. Y. **Chemistry*. Centerville, N. Y., Jan. 6, 59. A.B., Michigan, 79, A.M., 81, Ph.D., 82; fellow by courtesy, Hopkins, 89-90. Instr. anal. chem., Michigan, 82-85; *prof. chem.*, Oahu Col. and govt. chemist, Honolulu, 85-88; lecturer gen. chem., Michigan, 88-89; *chemist*, *N. Y. Exp. Sta.*, Geneva, 90- A.A.; Chem. Soc.; Soc. Biol. Chem.; Agr. Chem. Chemistry of milk; chemistry of cheese-making and of cheese-ripening; methods of separation of nitrogen compounds of milk and cheese; isolation and study of proteins formed during the ripening of cheese; casein and paracasein; the chemistry of cider vinegar and the behavior of malic acid in apple juice during alcoholic and acetic formation; the proteins of butter; chemistry of the souring and curdling of milk; methods for determination of casein in milk; calcium polysulphid solutions; the hydrogen ion concentration of milk; carbonic acid and carbonates in fresh milk; carbon dioxide in milk as a means of distinguishing heated from unheated milk.

Van Stone, Dr. N(athan) E(dward), 6831 Harper Ave., Chicago, Ill. *Organic chemistry*. Bridgeport, Conn., May 18, 90. B.S., Michigan, 14, M.S., 15, fellow, 15-16, Ph.D., 16. Research chemist, West. Elec. Co., 16-17; *chem. director*, *dye and intermediate dept.*, *Sherwin Williams Co.*, 17- A.A.; Chem. Soc. Triphenylmethyl; organic insulation products.

Van Tuyl, Prof. Francis M(aurice), School of Mines, Golden, Colo. *Geology*. Denmark, Iowa, Oct. 15, 87. A.B., Iowa, 11, M.S., 12; fellow, Columbia, 12-13, Ph.D., 15; Chicago, 14-15. Asst. geol., Iowa, 11-12; paleont., Columbia, 13-14; asst. geologist, Ill. Geol. Surv., 14-15; instr. geol., Illinois, 15-17; assoc. *prof. geol. and miner.*, *Colo. Sch. Mines*, 17-19, *prof. and head of dept.*, 19- Geologist, Iowa Geol. Surv., 12-; asst. geologist, Mo. Bur. Geol. and Mines, 14-15; geologist, Illinois Hudson Bar Exped., 16; Texas Co., 19; Midwest Ref. Co., 20. A.A.; fel. Geol. Soc.; Min. and Metal. Eng.; Paleont. Soc.; fel. Iowa Acad.; N. Y. Acad. Origin of dolomite, geodes, oolite and chert; stratigraphy and paleontology of the Mississippian formation of Iowa; petroleum geology.

Van Velzer, Prof. C(harles) A(mbrose), Carthage, Ill. *Mathematics*. Baldwinville, N. Y., Sept. 2, 51. B.S., Cornell, 76; fellow, Hopkins, 78-81; Ph.D., Hillsdale, 83. Instr. math., Cornell, 76-77; Wisconsin, 81-83, asst. prof., 83-85, *prof.*, 85-06; *Carthage*, 20- London Math. Soc. Compound determinants.

Van Vleck, Prof. E(dward) B(urr), University of Wisconsin, Madison, Wis. **Mathematics*. Middletown, Conn., June 7, 63. A.B., Wesleyan, 84; Hopkins, 85-87, fellow, 86-87; Göttingen, 90-93, Ph.D., 93; LL.D., Clark, 09; Dr. Math. and Physics, Groningen, 14; Sc.D., Chicago, 16. Instr. math., Wesleyan, 87-90; Wisconsin, 93-95; asst. prof., Wesleyan, 95-98, *prof.*, 98-06; *Wisconsin*, 06- Officier de l'Instruction Pub,

20. Nat. Acad; A.A. (v. pres, A, 12); Math. Soc. (v. pres, 09, ed, 'Trans,' pres, 13, 14); Math. Verein; Soc. math. de France; Circolo Mat. di Palermo. Theory of functions and differential equations.
- Van Vleet, Prof. Albert Heald**, 516 Chautauqua Ave., Norman, Okla. *Zoology*, Botany. Page Co, Iowa, 61. B.S., Wisconsin, 95; Ph.D., Leipzig, 97. Instr. chem. and physics, Nebr. State Nor. Sch, 86-93; *prof. bot. and dean, grad. sch., Oklahoma*, 98- Director, Okla. Geol. and Nat. Hist. Surv., 00-08. Nebr. Acad. (sec'y, 91). Ferns and flowering plants of Oklahoma.
- Van Wagenen, Prof. M(arvin) J(ames)**, 627 Sixth St, S. E., Minneapolis, Minn. *Psychology*. Ohioville, N. Y., Nov. 18, 84. B.S., Columbia, 11, A.M., 12, Ph.D., 18. Instr. psychol., Ohio State, 14-15; *asst. prof. educ. psychol., Minnesota*, 17- A.A. Educational scales and tests.
- Van Wart, Prof. Roy M(cLean)**, 450 Audubon St, New Orleans, La. *Pathology*. Fredericton, Can., Oct. 5, 77. A.B., New Brunswick, 98; M.D., C.M., McGill, 02; fellow, Hopkins, 03. Lecturer diseases of nervous system, *Tulane*, 04-15, *prof. psychiat.*, 15-; *neurologist, Touro Infirmary*, 04-; *psychiatrist, Charity Hosp.*, 15- Major, M.R.C. A.A.; Psychiat. Ass.; Medico-Psychol. Ass.; Ass. Path. and Bact.; Soc. Trop. Med.; Psychopath. Ass.; Royal Soc. Med. Nervous and mental diseases.
- Van Winkle, Edward**, 37 Wall St, New York, N. Y. *Mechanical engineering*. Jersey City, N. J., 78. Stevens, 96; E.E., Columbia, 00. Pl. M. Nat. Coincounting Co, 99-00; Otis Elevator Co, 00-02; Marine Engine and Machine Co, 02-03; *consulting engineer*, 03- Major, E.C., A.E.F.; design and construction engineer, Is-sur-Tielle, France. Mech. Eng.; Civil Eng.; Can. Soc. Civil Eng. Methods of production, mill construction and operation.
- Van Winkle, Miss Katherine E. H(ilton)**, 126 Kelvin Place, Ithaca, N. Y. *Paleontology*. Oakville, Wash., Feb. 4, 95. B.S., Washington (Seattle), 18; fellow, Cornell, 18-20. Asst. geol., Oregon, 18. Paleont. Soc.; Calif. Acad. Tertiary of Washington and Oregon; Veneridae.
- Van Zandt, Dr. J(ohn) Parker**, 2932 First St, San Diego, Calif. *Physics*. Chicago, Ill., Jan. 16, 94. B.S., California, 14, Ph.D., 17. Dept. physics, California, 14-17; *with tech. sect., Air Service, U.S.A.*, 17- Elec. Eng. Physics and mathematics applied to electrical engineering and aerodynamics.
- Vauclain, S(amuel) M(atthews)**, 500 N. Broad St, Philadelphia, Pa. *Mechanical engineering*. Philadelphia, May 18, 56. Hon. Sc.D., Pennsylvania, 06. Gen. supt. and later *pres., Baldwin Locomotive Works*, 11- Award as collaborator, Paris Expos, 00; Pan-Am. Expos, 01; La. Purchase Expos, 04; Lewis and Clark Expos, 08; Panama-Pacific Expos, 15. Mech. Eng. (manager); London Inst. Civil Eng. Railroad engineering; locomotives; railroad appliances.
- Vaughan, Prof. George Tully**, 1718 I St, Washington, D. C. *Surgery*. Arrington, Va., June 27, 59. M.D., Virginia, 79; Univ. and Bellevue Hosp. Med. Col, 80; N. Y. Polyclinic, 85; Jefferson Med. Col; Berlin, Paris, Vienna and London, 94-95. Asst. surgeon, U. S. Pub. Health and Marine Hosp. Service, 88-92, past asst. surgeon, 92-00, surgeon, 00-02, asst. surgeon-gen., 02; *prof. surg., Georgetown*, 97- Chief surgeon, Georgetown Univ. Hosp.; surgeon, Cent. Dispensary and Emergency Hosp.; consulting surgeon, St. Elizabeth's Hosp., Washington. Surg. Ass.; Am. Med. Ass.; Ass. Mil. Surg. (pres, 07); D. C. Med. Soc. (v. pres); hon. mem. Va. Med. Soc.; hon. mem. Vanderbilt Co. (Ind) Med. Soc.; Wash. Acad.; cor. mem. Ass. French Mil. Surg.
- Vaughan, R(ichard) E(nglish)**, University of Wisconsin, Madison, Wis. *Plant pathology*. Woodstock, Vt. B.S.A., Vermont, 07; M.S., Wisconsin, 12. Asst. hort. Vt. Exp. Sta., 07-08; instr. hort. and agron., Boys' Sch., Mt. Hermon, Mass., 09-11; asst. *plant path. Wisconsin*, 11-14, instr., 14-15, asst. prof., 15-19, *assoc. prof.*, 19- A.A.; Phytopath. Soc.; Bot. Soc. Diseases of canning and truck crops.
- Vaughan, Dr. (Thomas) Wayland**, U. S. Geological Survey, Washington, D. C. **Geology*. Jonesville, Tex., Sept. 20, 70. B.S., Tulane, 89; A.B., Harvard, 93, A.M., 94, Ph.D., 03. Instr. chem. and physics, Mt. Lebanon Col, La., 89-92; asst., La. Geol. Surv., 92; asst. geologist, *U. S. Geol. Surv.*, 94-02, geologist, 02-03, paleontologist, 03-07, *geologist, in charge coastal plain investigations*, 07-; *custodian Madreporaria, U. S. Nat. Museum*, 03- Research assoc., Carnegie Institution, 13; chairman, committee on sedimentation, div. geol. and geog., Nat. Research Council. A.A.; Geol. Soc. (mem. council, 20-); Ass. Geog.; Paleont. Soc.; Am. Acad.; Wash. Geol. Soc. (pres, 15); Wash. Biol. Soc.; cor. mem. Phila. Acad. Stratigraphy and paleontology of the Tertiary formations of the southern and eastern United States, West Indies and Central America; geologic history of the Floridian plateau; post-Paleozoic fossil and recent corals of northern and tropical America; recent corals of the Hawaiian, Cocos-Keeling, Murray and Fanning Islands and of the east coast of Africa; deep sea corals of the Pacific Ocean; coral reefs; ecology of corals; marine sediments.
- Vaughan, Dr. Victor C(larence)**, 221 S. State St, Ann Arbor, Mich. **Bacteriology*. Randolph Co, Mo., Oct. 27, 51. B.S., Mt. Pleasant, 72; M.S., Michigan, 75, Ph.D., 76, M.D., 78, LL.D., 00; Central, 10; Jefferson Med. Col, 15; hon. Sc.D., Pittsburgh; M.D., Illinois. Prof. Latin, Mt. Pleasant, 72-74; instr. physiol. chem., *Michigan*, 76-80, lecturer, 80-84, *prof. hygiene and physiol. chem.*, 84-, *dean, med. sch.*, 91- Mem. Mich. State Board Health, 83-94, 01-19; major and surgeon, U. S. Vols., and mem. Typhoid Commission, 98-99; col. M.C. in charge, sect. on communicable diseases, 17-19; mem. advisory board, hygienic lab, U. S. Pub. Health Service, 02-; board nat. med. examiners, 15- D. S. medal, 19. Nat. Acad; A.A.; Am. Med. Ass. (pres, 14); Soc. Pharmacol.; Ass. Path. and Bact.; Soc. Bact.; Physiol. Soc.; Am. Physicians (pres, 09); Soc. Exp. Biol.; Philos. Soc.; N. Y. Acad.; hon. mem. French and Hungarian Societies of Hygiene. The bacterial toxins; food poisoning; the nucleins; tuberculosis; medico-legal subjects.
- Vaux, George, Jr.**, Bryn Mawr, Pa. *Geology*. Philadelphia, Pa., Dec. 18, 63. B.S., Haverford,

- 84; LL.B, Pennsylvania, 87. A.A; Philos. Soc; Phila. Acad. (treas). Glacial studies in British Columbia.
- Vawter, C(harles) E(rastus), Jr**, 6700 Cresheim Road, Philadelphia, Pa. *Physics*. Emory, Va, Feb. 6, 77. B.S, Virginia, 98; Central Tech. Col, London, 01. Prof. physics and head of dept, Va. Polytech, 98-17; *with eng. dept*, Queen-Gray Co, 17-18; *Thompson-Levering Co*, 18-A.A; assoc. Physical Soc; assoc. mem. Elec. Eng. Development of physical apparatus; recording instrument; power meter; effect of current of electricity on coefficient of expansion; indicating ohmmeter.
- Veasey, Dr. C(larence) A(rchibald)**, Paulsen Building, Spokane, Wash. *Medicine*. Pocomoke City, Md, Aug. 9, 69. Western Md. Col, 85-87, A.M, 96; M.D, Jefferson Med. Col, 90. Asst. demonstrator surg, Jefferson Med. Col, 91-92. demonstrator diseases of the eye, 97-03, asst. prof. ophthal, 05-08; *practising physician*, 08- Consulting ophthalmologist, Phila. Lying-in Charity Hosp, 92-08; clin. asst. ophthal, Jefferson Med. Col. Hosp, 92-94, chief clin. asst. and asst. ophthal. surgeon, 94-05, asst. ophthalmologist, 05-08. Am. Med. Ass. (sec'y, sect. ophthal, 01); fel. Am. Acad. Med; Col. Surg; Ophthal. Soc; Acad. Ophthal. and Oto-Laryngol; fel. Phila. Col. Physicians (sec'y, sect. ophthal, 05). Ophthalmology; ophthalmic operations on animals.
- Veatch, A(rthur) C(lifford)**, Cosmos Club, Washington, D. C. *Geology*. Evansville, Ind, Oct. 26, 78. Indiana, 96, 98; Cornell, 98, 00-01; Wisconsin, 05. Teacher math. and physical geog, high sch, Rockport, Ind, 96-97; asst. state geologist, La, 98-00; asst. in charge stratig. and areal geol, summer sch, Cornell, 00-01; geologist, Houston Oil Co, 01-02; prof. geol, Louisiana, and geologist, La. Geol. Surv, 02; asst. geologist, U. S. Geol. Surv, 02-06, geologist, 06-10; chief geologist, Gen. Asphalt Co, 10-11; scientific adviser, U. S. Dept. Justice, 12; *in charge*, petrol. development, foreign dept, S. Pearson and Son, 12-19; *exploration dept*, *Sinclair Cons. Oil Co*, 19- Special commissioner to investigate operation of mining laws in Australia and New Zealand, 07-08; organizer and first chairman, Land Classification Board, U. S. Geol. Surv, 08-10. Bronze medal, Charleston Expos. A.A; fel. Geol. Soc; Am. Geog. Soc; Soc. Econ. Geol; Ass. Petrol. Geol; Wash. Geol. Soc; Wash. Acad; Royal Geog. Soc; London Geol. Soc. Petroleum exploration and development.
- Veatch, J(ethro) O(tto)**, U. S. Department of Agriculture, Washington, D. C. *Geology*. Marionville, Mo, Aug. 21, 83. A.B, Missouri, 04; Wisconsin, 05. Asst. state geologist, Ga, 05-11; *scientist, bur. soils*, U. S. Dept. Agr, 12- With U. S. Geol. Surv, 04. Clays; stratigraphic geology of the Atlantic coastal plain; underground waters; tale and asbestos; soils.
- Veblen, Prof. A(ndrew) A(nderson)**, East San Diego, Calif. *Physics*. Ozauckee Co, Wis, Sept. 24, 48. A.B, Carleton, 77, A.M, 80; Hopkins, 81-83. Instr. English and math, Luther, 77-81; instr. and asst. prof. math, Iowa, 83-86, asst. prof. physics, 86-89, prof, 89-05. A.A; Iowa Acad. (pres, 01). Elasticity of certain solids; viscosity of liquids; mechanics of wave motion.
- Veblen, Dr. Oswald**, Princeton University, Princeton, N. J. **Mathematics*. Decorah, Iowa, June 24, 80. A.B, Iowa, 98; Harvard, 00; Ph.D, Chicago, 03. Lab. asst. physics, Iowa, 98-99; assoc. math, Chicago, 03-05; preceptor, *Princeton*, 05-10, *prof*, 10- Nat. Acad; A.A; Math. Soc; Math. Ass; Physical Soc; Philos. Soc; Soc. math. de France; Circolo Mat. di Palermo. Foundations of geometry; projective geometry; analysis situs.
- Vedder, Lieut. Col. Edward B(right)**, U. S. A, Care Surgeon General, U. S. Army, Washington, D. C. *Medicine*. New York, N. Y, June 28, 78. Ph.B, Rochester, 98; M.D, Pennsylvania, 02. Scott fellow, 02-03, A.M, 03. Research student, Rockefeller Inst, 01; first lieut. asst. surgeon, U.S.A, Philippine Islands, 03-08, capt, M.C, 08-16, major, 16-17, *lieut. col*, 17-, temporary col, 18-19. Mem. board for study trop. diseases, U.S.A, 10-13; asst. prof. bacter. and path, Army Med. Sch, 13-19. A.A; Am. Med. Ass; Ass. Mil. Surgeons; Col. Surg. Bacteriology; pathology; beriberi; sanitation for medical officers; syphilis and public health.
- Vedder, Prof. John N**, Union College, Schenectady, N. Y. *Thermodynamics*. Schenectady, Nov. 28, 73. A.B, Union, 95, A.M, 97; Columbia, 02-04. Investigator, eng. exp. sta, Illinois, 10-14; *prof. thermodynamics*, Union, 14-A.A; Math. Soc; Mech. Eng. Expansive use of reheated compressed air.
- Veeder, Dr. Borden S(mith)**, Humboldt Building, St. Louis, Mo. *Medicine*. Fonda, N. Y, Aug. 21, 83. M.D, Pennsylvania, 07. Instr. path, Pennsylvania, 09-11; instr. assoc. and later *prof. clin. pediat*, Washington (St. Louis), 11- Lieut. col, M.C, 17-19. A.A; Pediat. Soc; Child Hygiene Ass. Nutrition; diseases of infancy.
- Veitch, Dr. F(letcher) P(earre)**, U. S. Department of Agriculture, Washington, D. C. *Chemistry*. Baltimore, Md, May 22, 68. B.S, Md. Col, 91. hon. Sc.D, 13; M.S, George Washington, 99. Asst. Md. Exp. Sta, 91-92; chemist, W. S. Powell and Co, 92-93; asst. chemist, Md. Col, 94-99, asst. soil physicist, Exp. Sta, 99-01; asst. chemist, bur. soils, U. S. Dept. Agr, 01-02, *bur. chem*, 02-04, *chief and chemist in charge, leather and paper lab*, 04- Mem. and chairman, congressional committee on paper specifications, 11-; chairman, committee on distinctive papers, Treas. Dept, 10-; representative, various committees of federal departments; lecturer, Md. Col, 10-14; consultant, War Dept, 17-18. A.A; Chem. Soc; Agr. Chem. (referee, 01, 07-09); Soc. Test. Mat. (chairman, committee on turpentine specifications); Leather Chem. Ass. (pres, 11); Soc. Agron; Int. Leather Trades Chem. Ass. Soils; fertilizers; tanning materials; leathers; turpentine; wood products; paper making materials; wool scouring wastes; lime.
- Venable, Dr. Charles S(cott)**, Massachusetts Institute of Technology, Cambridge, Mass. *Chemistry*. Chapel Hill, N. C, Sept. 3, 91. A.B, North Carolina, 10, A.M, 11; Ph.D, Mass. Inst. Tech, 17. Instr. chem, North Carolina, 12-13; adj. prof. org. chem, Virginia, 17-18; research assoc, *applied chem*, Mass. Inst. Tech, 19-20,

- asst. director, research lab, 20- Capt. C.W.S., 18. Chem. Soc. Uric acid; rubber; cellulose.
- Venable, Dr. F(rancis) P(reston)**, Chapel Hill, N. C. **Chemistry*. Prince Edward Co, Va, Nov. 17, 56. Virginia, 74-78; Bonn, 79-80; Ph.D, Göttingen, 81; Berlin, 89; hon. Sc.D, Lafayette, 04; LL.D, Jefferson Med. Col, 13. Prof. chem, North Carolina, 81-00, pres, 00-14, prof. chem, 14- A.A. (sec'y, 96, v. pres, 99); Chem. Soc. (pres, 05); Philos. Soc; fel. London Chem. Soc; Elisha Mitchell Sci. Soc. (sec'y, 16). Zirconium and its compounds; heptane and its derivatives; qualitative analysis; inorganic chemistry; history of chemistry; development of periodic law; the atom; radioactivity.
- Verhoeff, Dr. F(rederick) H(erman)**, 233 Charles St, Boston, Mass. *Ophthalmology*. Louisville, Ky, July 9, 74. Ph.B, Yale, 95; M.D, Hopkins, 99; A.M, Harvard, 02. Asst. surgeon, Baltimore Eye, Ear and Throat Charity Hosp, 99-00; asst. path, Harvard, 00-02, instr. *ophthal. path*, 07-16, asst. prof, 16-; pathologist, Mass. Charitable Eye and Ear Infirmary, 00-, asst. ophthal. surgeon, 06-13, *ophthal. surgeon*, 18- A.A; Col. Surg; Ophthal. Soc; Am. Acad. Pathological anatomy of the eye; physiological optics; diseases of the eye.
- Verrill, Prof. A(ddison) E(mery)**, 582 Central Ave, Westville, Conn. **Zoology*. Greenwood, Maine, Feb. 9, 39. B.S, Harvard, 62; A.M, Yale, 67. Asst. museum comp. zool, Harvard, 60-64; prof. zool, Yale, 64-07, emer. prof, 07-, curator, zool. dept, Peabody Museum, 64-10. Prof. entom. and comp. anat, Wisconsin, 67-70; assoc. ed, 'Am. Jour. Science,' 69-; instr. geol, Yale, 70-94; asst. in charge marine invert. zool, U. S. Fish Commission, 71-87. Nat. Acad; A.A; Soc. Nat; Soc. Zool; Am. Acad; Conn. Acad. (pres); Wis. Acad; Phila. Acad; Boston Soc. Nat. Hist. (curator, 64-74); Essex Inst; Soc. zool. de France. Marine invertebrate zoology, especially Anthozoa, echinoderms, annelids, nemerteans, planarians, Mollusca, tunicates and Bryozoa; deep-sea zoology in general; invertebrates of southern New England; the natural history, productions, geology, early history, zoology, etc, of the Bermuda Islands; West Indian, tropical American and Brazilian corals and echinoderms; echinoderms of the western Atlantic and of Alaska to California; Aleocharia of the Blake Expedition; Mollusca of the northeast American coast; deep-sea Mollusca; decapod Crustacea of New England, Bermuda and West Indies; Crustacea of Connecticut; Anthozoa of the Canadian arctic expedition.
- Verrill, A(lpheus) Hyatt**, E. P. Dutton and Co, New York, N. Y. *Entomology, Ornithology*. New Haven, Conn, July 23, 71. Yale, 91. *Ed. popular science dept, 'American Boy,'* 07- Nat. hist. exped, West Indies, 89-90; Central America, 92; Bermuda, 02; Santo Domingo, 06-07. Entomology; additions to avifauna of Bermuda; ornithology of Dominican Islands and Santo Domingo; new species of Dynastes; Soleodon paradoxus; invertebrates of Bermuda; Lepidoptera larvae and Crustacea of the West Indies; scientific drawing and photography.
- Ver Wiebe, Dr. Walter A(ugust)**, 193 12th Ave, Columbus, Ohio. *Geology*. Schenectady, N. Y, Aug. 26, 87. A.B, Cornell, 11, Ph.D, 18. Asst. geol, Cornell, 10-12, instr, 12-13; agr. geol, Ohio State, 13-18; field geologist, Roxana Petrol. Co, 18-19; Sinclair Oil Co, 19-20; chief geologist, Mexican-Sinclair Co, 20- Alliance française medal. A.A; Ass. Petrol. Geol. Stratigraphy of Devonian and Mississippian of New York, Ohio and Pennsylvania.
- Very, Prof. F(rank) W(ashington)**, Westwood, Mass. **Astrophysics*. Salem, Mass, Feb. 12, 52. B.S, Mass. Inst. Tech, 73. Astronomer, Allegheny Observatory, 78-95; adj. prof. astron. and instr. geol, Pittsburgh, 90-95; acting director, Ladd Observatory, and prof. astron, (pro tem), Brown, 96-97; special agent, U. S. Weather Bur, 00; Smithsonian Inst, 02; director, Westwood Astrophys. Observatory, 06- Prize, Utrecht Soc. of Arts and Sciences. A.A; Astron. Soc. Radiation; aurora; solar constant; photometry; hail storms; new stars; parallax of Nova Persei; cause of nebulousity of Nova Persei; microchemical analysis; migration of birds; phosphorescence; sun-spots; ancient river terraces; the terminal moraine in New York; temperature of sun and moon; greenhouse theory; viscosity in aeroplane support; stellar evolution; radium; Röntgen rays; water vapor on Mars; terrestrial and lunar albedoes; spiral nebulae; limitation of gravitation; moon's motion; luminiferous ether; atoms.
- Vestal, Prof. Arthur G(ibson)**, Stanford University, Calif. *Biology*. La Grange, Ill, Sept. 10, 88. A.B, Illinois, 11; A.M, Colorado, 13; fellow, Chicago, 14-15, Ph.D, 15. Instr. biol, Colorado, 11-14; prof. bot, East. Ill. State Nor. Sch, 15-20; acting asst. prof. biol, Stanford, 20- A.A; Bot. Soc; Ecol. Soc; Am. Geog. Soc; Bot. Cent. States; Ill. Acad. Botany; zoology; plant and animal ecology and geography; vegetation of eastern prairie, sand prairie, Great Plains and Rocky Mountains; forests of Illinois.
- Vestal, Mrs. A. G. (Dr. Wanda (May) Pfeiffer)**, Stanford University, Calif. *Botany*. Red Oak, Iowa, March 11, 82. B.S, Chicago, 04, Ph.D, 08. Asst. bot, Chicago, 09-14, instr. plant path, 14-16. A.A; Bot. Soc. Morphology of Azolla and Leitneria; development of peach fruit.
- Vibrans, Dr. Frank C(harles)**, 226 Loraine Ave, Cincinnati, Ohio. *Chemistry*. Cokeville, Wyo, March 15, 90. A.B, Wabash, 13; Harvard, 13-14; Ph.D, Michigan, 17. Asst. chem, Michigan, 14-17; chemist, Detroit Org. Chem. Co, 17; Procter and Gamble Co, 19- Lieut. C.W.S., 18. A.A; Chem. Soc. Dicyanodiamid.
- Vickery, Dr. Herman F(rank)**, 26 Chestnut St, Brookline, Mass. *Medicine*. Rochester, N. Y, Aug. 20, 56. A.B, Harvard, 78, M.D, 82; Leipzig and Vienna, 82-83. Asst. clin. med, Harvard, 84-90, instr, 90-16; visiting physician, Mass. Gen. Hosp, 98-17; consulting physician, 17- Emer. mem. Am. Physicians; Am. Med. Ass; Boston Soc. Med. Sci; Boston Soc. Med. Improv. (pres, 15); Boylston Med. Soc. (pres, 87); Suffolk District Med. Soc. (pres, 16). Internal medicine.
- Vickery, R(oy) A(lbion)**, Bureau of Entomology, San Antonio, Tex. *Entomology*. Mora, Minn, March 15, 83. A.B, Minnesota, 06, A.M, 07.

- Asst. entom. Minn. Exp. Sta. 07-08; *asst. bur. entom.*, U. S. Dept. Agr. 08- A.A.; Ass. Econ. Entom.; Entom. Soc.; Wash. Entom. Soc. Economic entomology; cereal and forage plant insects; army worm parasites; wingless May beetles; Aphididae.
- Viereck, H(enry) L(orenz)**, U. S. Biological Survey, Washington, D. C. *Entomology*. Philadelphia, Pa, March 28, 81. Jesup student, Phila. Acad. Nat. Sciences, 00-02; Jefferson Med. Col. 02-03; Medico-Chirurg. Col, Phila, 05-07. With mosquito surv. N. J., summer, 03; asst. entomologist, Conn. Exp. Sta. 03-05; asst. path. lab, Medico-Chirurg. Col, Phila, 05-07; in charge, zool. lab, State of Pa, 07-08; research entomologist, Parke, Davis and Co, 08-09; agent and expert, bur. entom. U. S. Dept. Agr. 09-13, *asst. biologist, biol. surv.*, 16- In charge, mosquito surv, Pa, summer, 06; asst. curator, Snow collections, Kansas, 13-14; entom. explorer and asst. supt, state insectary, Calif. State Commission Hort, 14-16. A.A.; Entom. Soc.; Ass. Econ. Entom.; assoc. mem. Ornith. Union; Wash. Biol. Soc.; Wash. Biol. Field Club; Wash. Entom. Soc. Economic entomology; hymenopterology; pan-American species of *Andrena*; classification of the Hymenoptera of the Canadian, Alleghanian and Carolinian faunal areas; Ichneumonidea of the world.
- Vinal, George Wood**, 3810 Jenifer St, Washington, D. C. *Physics*. Ellington, Conn, Dec. 17, 82. A.B, Wesleyan, 06, A.M, 09; Hopkins, 06-07. Asst. physics, Wesleyan, 08; *Bur. Standards, Washington*, 08-18, *chief, electrochem. sect.*, 18- Physical Soc.; Elec. Eng.; Wash. Philos. Soc. Electric arc between metallic electrodes; the silver voltameter; primary and secondary batteries; electrical properties of silver sulphid.
- Vincent, Mrs. Helen Cook**, 36 Russell Terrace, Pittsfield, Mass. *Psychology*. Montclair, N. J., Aug. 15, 83. A.B, Wellesley, 05, A.M, 07, Palmer fellow, 07-08; Ph.D, Würzburg, 09. Instr. psychol, Wellesley, 09-13; psychol. and hist. of educ, State Nor. Sch, Montclair, N. J, 13-16. Psychol. Ass. Sense psychology.
- Vincent, J(esse) G(urney)**, Packard Motor Car Co, Detroit, Mich. *Mechanical engineering*. Charleston, Arkansas, Feb. 10, 80. Int. Correspondence Schools. Supt. of Invention, Burroughs Adding Machine Co, 03-10; chief engineer, Hudson Motor Car Co, 10-12; *v. pres. of eng, Packard Motor Car Co*, 12- Major, S.C, 17-18; lieut. col, Air Service, 18. Mech. Eng.; Soc. Test. Mat.; Automotive Eng. (pres, 20); British Inst. Automobile Eng. Automotive engineering.
- Vincent, Prof. Swale**, Middlesex Hospital, University of London, London, England. *Physiology*. Staffordshire, England, May 24, 68. Birmingham, 89; M.R.C.S, L.R.C.P, 89; Heidelberg, 01; Sc.D, Edinburgh, 04; M.D, London, 07; LL.D, Manchester, 20. Sharpey scholar, Univ. Col, London, 90; asst. prof. *physiol.*, Univ. Col, London, 90-06; *prof, Manitoba*, 06-20; *London*, 20- Chief demonstrator *physiol.*, Univ. Col, London; lecturer *histol.*, Univ. Wales; examiner arts and med, Manitoba. A.A.; *Physiol. Soc.*; fel. Royal Soc. Can; British Ass. (past sect. sec'y, local sec'y, 09); British Med. Ass.; London *Physiol. Soc.*; fel. Royal Soc. Edinburgh. Ductless glands; chemistry of muscle; swim-bladder of fishes; hemolymph glands; vagus action; vaso-motor reflexes; respiratory reflexes.
- Vinson, Dr. A(lbert) E(arl)**, Tucson, Ariz. *Chemistry*. Dayton, Ohio, Oct. 30, 73. B.S, Ohio State, 01; Ph.D, Göttingen, 04. Asst. agr. chem, Ohio State, 96-99, instr, 99-02; assoc. chemist, *Arizona*, 05-08, *chemist*, 08- A.A.; Chem. Soc. Agricultural chemistry; animal nutrition; soils and irrigation water; ripening and processing of the date.
- Viol, Dr. Charles H(erman)**, Box 22, Oakland Station, Pittsburgh, Pa. *Chemistry*. La Fayette, Ind, May 21, 86. B.S, Purdue, 07; fellow, Chicago, 09-10, Ph.D, 12. Instr. chem, S. Dak. Col, 07-09; asst. Chicago, 10-12; radiochemist, *Standard Chem. Co*, 12-13, *director, radium research lab*, 13- Lecturer radiochem, Mellon Inst, 16-17. A.A.; Chem. Soc. (v. chairman, Pittsburgh sect, 16, councilor, 18, 19). Electrochem. Soc.; Assoc. Radium Soc. Radiochemistry; commercial production of radium; radium technology and therapy.
- Visher, Prof. Stephen S(argent)**, Bloomington, Ind. *Geography*. Chicago, Ill, Dec. 15, 87. B.S, Chicago, 09, M.S, 10; A.M, South Dakota, 12; fellow, Chicago, 13-14, Ph.D, 14. Instr. geol, South Dakota, 10-13; asst. prof, 13-14; prof. *geog.*, State Nor. Sch, Moorhead, Minn, 15-18; *asst. prof, Indiana*, 19- Field asst, Univ. Chicago geol. exped. to Alaska, summer, 07; asst. geologist, S. Dak. Geol. Surv, summers, 08-10, geologist, 10-14; scientific asst, desert lab, Carnegie Institution, 09; land classifier, U. S. Geol. Surv, 18. A.A.; fel. Am. Geog. Soc.; Ass. Geog.; Ecol. Soc.; Meteor. Soc.; Ass. Prof.; Wash. Geol. Soc.; Ind. Acad. Biogeography; regional geography of South Dakota, Jamaica, Red River Valley, Wyoming, Indiana, and Spain; climate.
- Vivian, Prof. Alfred**, 1778 N. High St, Columbus, Ohio. *Chemistry*. Mineral Point, Wis, March 14, 67. Ph.G, Wisconsin, 94. Instr. *agr. chem*, Wisconsin, 94-02; assoc. prof, *Ohio State*, 02-05, *prof*, 05-, *dean, col. agr.*, 15- A.A. (mem. council, 16); Chem. Soc.; Soc. Prom. Agr. Sci. Agricultural chemistry; ripening of cheese; substitutes in cheesemaking; plant food in soils; phosphorus requirements of soils.
- Vivian, Prof. Roxana H(ayward)**, Wellesley College, Wellesley, Mass. *Mathematics*. Boston, Mass, Dec. 9, 71. A.B, Wellesley, 94; Ph.D, Pennsylvania, 01. Instr. and later *prof. math, Wellesley*, 01-, *director, dept. hygiene*, 18- Acting pres. and prof. math, Constantinople Col, 06-09; financial sec'y, Women's Educ. and Indust. Union, Boston, 13-15. A.A.; Math. Soc.; Statist. Ass.; Ass. Math. Teachers; Ass. Prof.; Ass. Col. Alumnae. Statistics; administration.
- Voegtlin, Dr. C(arl)**, Hygienic Laboratory, Washington, D. C. *Pharmacology*. Bâle, Switzerland, July 28, 79. Ph.D, Freiburg, 02; Manchester, 03-04. Instr. chem, Wisconsin, 04; asst. med, Hopkins, 04-06, assoc. prof, *pharmacol.*, 06-13; *prof, U. S. Pub. Health Service*, 13- Co-editor, 'Jour. Pharmacol. and Exp. Therapeut.' A.A.; Soc. Pharmacol.; *Physiol. Soc.*; Soc. Biol.

- Chem; Am. Med. Ass; Wash. Acad. Metabolism; function of parathyroid; calcium treatment of tetany; anaphylaxis; action of digitalis on coronary artery; dietary theory of pellagra; vitamins and deficiency diseases; chemotherapy of arsenicals and antimonials; serum preservatives.
- Vogdes, Gen. A(nthony) W(ayne)**, U. S. A, 2425 First St, San Diego, Calif. *Geology, Military geography*. West Point, N. Y., April 23, 43. Grad. Artillery Sch, Ft. Monroe, Va, 82. From lieut. to brig. gen, 63-64, retired, 64. A.A.; Geol. Soc; Paleont. Soc; Calif. Acad; Phila. Acad; Ga. Acad; Chicago Acad. Fossil Crustacea; bibliography relating to geology, paleontology and mineral resources of California, including the maps of the state.
- Vogel, Dr. K(arl) M**, 680 Madison Ave, New York, N. Y. *Medicine*. New Orleans, La, Feb. 14, 77. M.D. Columbia, 00; Munich, 08. Intern, *St. Luke's Hosp*, 00-03, asst. attending physician, 00-15, *assoc. attending physician*, 15-, asst. pathologist, 08-10, *clinical pathologist*, 10-; asst. path. *Columbia*, 03-07, instr. 07-09, *asst. prof. clin. path.*, 09- Ass. Path. and Bact; Soc. Clin. Invest; Harvey Soc. (sec'y, 18-); N. Y. Path. Soc. (sec'y, 07-10). Clinical pathology; metabolism; laboratory diagnosis.
- Vogt, Dr. C(larence) C(harles)**, Mellon Institute, Pittsburgh, Pa. *Chemistry*. Zanesville, Ohio, April 29, 83. A.B., Wooster, 04; fellow, Ohio State, 04-05, A.M., 06, Ph.D., 09. Asst. chem, Ohio State, 05-06, instr. 06-09; asst. prof. inorg. and physical chem, *Pittsburgh*, 09-12, *prof. chem. and fellow, Mellon Inst.*, 12- Chemist, U. S. Bur. Mines, and capt, C.W.S., 18. A.A.; Chem. Soc; Ceramic Soc. Cerium compounds; dental and silicate cements.
- Volwiler, Dr. E(rnest) H(enry)**, 4753 Ravenswood Ave, Chicago, Ill. *Chemistry*. Hamilton, Ohio, Aug. 22, 93. A.B., Miami, 14; A.M., Illinois, 16, Ph.D., 18. Instr. chem, Miami, 14; asst. Illinois, 14-17; *research director, Abbott Laboratories*, 18- Chem. Soc. Pharmaceutical chemistry; reactions of acid chlorids with aldehydes and ketones.
- von Ende, Dr. Carl L(eopold)**, University of Idaho, Moscow, Idaho. *Chemistry*. Burlington, Iowa, July 2, 70. B.S., Iowa, 93, M.S., 94; Ph.D., Göttingen, 99. Demonstrator chem, med. col, Iowa, 94-95; teacher science, high sch, Burlington, 95-96; instr. chem, Iowa, 96-97, 99-05, asst. prof. 05-07; research staff, Mass. Inst. Tech, 07-08; *prof. chem, Idaho*, 08- A.A.; Chem. Soc; Iowa Acad. (v. pres, 07). Physical and inorganic chemistry; applied physical chemistry.
- von Engeln, Prof. O(scar) D(iedrich)**, Ithaca, N. Y. *Geography*. Dayton, Ohio, July 3, 80. A.B., Cornell, 08, Ph.D., 11. Asst. geol, *Cornell*, 05-07, instr. *physical geog*, 07-12, *asst. prof.*, 12-; acting head, dept. physical geog, 09-10. Scientific asst, U. S. Geol. Surv. exped. to Yakutat Bay, Alaska, 06; Nat. Geog. Soc. research exped. to Alaska, 09; instr. in charge geog, Missouri, summer, 11. Am. Geog. Soc; Ass. Geog. Geology; physical geography; glaciology; experimental physiography; regional geography of the West Indies.
- von Nardroff, Dr. E(rnest) R(obert)**, 397 Madison St, Brooklyn, N. Y. *Physics*. Brooklyn, May 12, 64. E.M., Columbia, 86; hon. Sc.D., St. Lawrence, 03. Instr. physics, Barnard, Columbia, 91-97; head, science dept, Erasmus Hall High Sch, Brooklyn, 97-98; *principal, Stuyvesant High Sch, N. Y. City*, 08- Lecturer physics, Evening High Schools, Brooklyn, 87-98; Pub. Lecture System, N. Y. City, 92- Physical Soc; N. Y. Acad. Diffraction of light; color apparatus; inaudible sound waves; new interferometer method for measuring refractive index of thin parallel plates singly and doubly refracting.
- von Schlichten, Prof. Otto Charles**, University of Cincinnati, Cincinnati, Ohio. *Geology*. Cincinnati, July 19, 86. A.B., Cincinnati, 11; Wisconsin, 12-13. Instr. geol. and German, Cincinnati, 11-12; geologist, Mo. Bur. Geol. and Mines, 13-15; instr. geol, Cincinnati, 15-16; Lehigh, 16-17; *asst. prof. geol. and miner, Cincinnati*, 17- Abstractor, 'Jour. Miner. Soc'; 'Jour. Chem. Soc.' Mineralogy; nickel; cobalt.
- von Sholly, B(enjamin) R(udolph)**, 118 Madison Ave, Flushing, N. Y. *Chemistry*. Flushing, Nov. 27, 81. A.B., Columbia, 03, A.M., 05. Chemist, Consolidated Gas Co, N. Y., 05-06; Power and Min. Machinery Co, 06-08; research lab, Gen. Elec. Co, 08-10; U. S. Dept. Agr, 10-13; Vulcan Detinning Co, 13-14; state chemist, Tenn, 14-15; chemist, Compañía Oriental des Minas, 16-19; *indust. chemist*, 19- Chem. Soc; N. Y. Chemists Club. Pine oil; composition of special steels; high melting alloys; separation of rare metals.
- Voorhees, Prof. E(dward) B(urnett)**, New Brunswick, N. J. *Agriculture*. Mine Brook, N. J., June 22, 56. A.B., Rutgers, 81, A.M., 84; Sc.D., Vermont, 00. Asst. chemist, Wesleyan, 81-82; N. J. Exp. Sta, 82-88, chemist, 88-92, director, 92-11; prof. agr, Rutgers, 90-11. V. pres, N. J. State Board of Agr, 93-01, pres, 01-11; N. J. State Forestry Commission, 06-10; N. J. Conservation Commission, 08-10. Nichols medal, Chem. Soc, 03. A.A.; Soc. Prom. Agr. Sci; Chem. Soc; Agr. Chem. (pres, 94); Ass. Agr. Col. (sec'y and treas, 97-04, pres, 04); Forestry Ass; N. J. Micros. Soc; N. J. Hist. Soc. Agricultural chemistry; agronomy; fertilizers.
- Voorhees, L(ouis) A(ugustus)**, 111 Carroll Place, New Brunswick, N. J. *Chemistry*. New Brunswick, March 6, 65. A.B., Rutgers, 85, A.M., 88. Asst. chemist, N. J. Exp. Sta, 86-95, chief chemist, 95-05; *chemist, dept. health, New Brunswick, N. J.*, 18- A.A.; Chem. Soc; Electrochem. Soc; Soc. Chem. Indust. Agricultural and food chemistry.
- Voorhees, S(amuel) S(tockton)**, 3456 Newark St, Washington, D. C. *Chemistry*. Springfield, Ohio, Jan. 15, 67. Lehigh; Columbian. Asst. chemist, Cambria Iron Co, 87-89; Pa. R. R., 89-96; chemist, South. Ry, 96-99; engineer of tests, N. Y. Cent. and H. R. R. R., 99-01; U. S. Supervising Architect's Office, 01-08; U. S. Geol. Surv, 08-10; *engineer and chemist, Bur. Standards*, 10- A.A.; Chem. Soc. (past pres, Wash. sect); Soc. Test. Mat. (mem. exec. committee and v. pres, 12-16); Soc. Chem. Indust; Wash. Acad; Int. Ass. Test. Mat. Structural material.

Vorhies, Prof. Charles T(aylor), University of Arizona, Tucson, Ariz. *Entomology*. Mt. Pleasant, Iowa, Sept. 7, 79. B.S., Iowa Wesleyan, 02; Ph.D., Wisconsin, 08. Instr. biol., Iowa Wesleyan, 02-04; asst. zool., Wisconsin, 04-08; prof., Utah, 08-15; asst. prof., biol., *Arizona*, 15-16, *prof. zool.*, 16-18, *entom.*, 18- Instr. entom., Cornell, summer, 15. A.A.; Entom. Soc.; mem. Ornith. Union; Soc. Mammal.; Ecol. Soc.; Cooper Ornith. Club; Wis. Acad.; Utah Acad. Wisconsin Trichoptera; fauna of Great Salt Lake; economic insects of Arizona; grazing range rodents; ecology of desert animals.

Voris, Prof. Floyd T(homas), Y. M. C. A., Seattle, Wash. *Physics*. Arcadia, Iowa, May 8, 72. B.S., Highland Park, 92; McCormick Theol. Sem., 93-96; A.M., Columbia, 02. Pastor, Buffalo, Minn., 96; instr. nor. dept., Buena Vista, 98, *prof. physics and chem.*, 99-04; instr. geol., Macalaster, 04-05; *prof. physics and geol.*, Whitworth, 06-12; instr. physics, Washington (Seattle), 12-15; in book business, 15-20; *instr. physics*, Y. M. C. A. schools, Seattle, 20- A.A. Absorption of light by metallic surfaces; passivity of iron.

Vosburgh, Dr. Warren C(hase), Columbia University, New York, N. Y. *Chemistry*. Voorheesville, N. Y., June 14, 94. B.S., Union, 14, M.S., 16; Ph.D., Columbia, 19. Asst. chem., Union, 13-16; Columbia, 16; chemist, Celluloid Co., 17-18; Bur. Aircraft Production, 18; asst. to Prof. Alexander Smith, Columbia, 19, *Nat. Research fellow*, 19- Chem. Soc. Invertase action; potential difference between solutions; determination of antimony; hydrolysis of sucrose.

Voter, Prof. P(erley) Conant, Middlebury, Vt. *Chemistry*. Farmington, Maine, April 30, 89. A.B., Bowdoin, 09; A.M., Harvard, 11, Austin scholar, 19-20. Austin teaching fellow, Harvard, 10-12; instr. chem., Middlebury, 12-13, asst. prof., 13-19, *prof.*, 19- A.A.; Chem. Soc. (v. chairman, Vt. sect., 16, chairman, 18-20); Ass. Harvard Chemists; Chem. Gesell. Analytical chemistry; toxicology; atomic weight of arsenic.

Votey, Prof. J(osiah) W(illiam), University of Vermont, Burlington, Vt. *Civil engineering*. Ovid, N. Y., July 23, 60. C.E., Vermont, 84, hon. Sc.D., 11. Instr. civil eng., Vermont, 84-89, asst. prof., 89-90, assoc. prof., 90-93, *prof.*, 93-, *dean, col. eng.*, 01- City engineer, Burlington, 87; mem. and engineer, Vt. Highway Commission, 92-96; sanit. engineer, Vt. Board of Health, 08- A.A.; Eng. Educ.; R. R. Eng.; Pub. Health Ass.; Vt. Eng. Soc. (pres., 20).

Vreeland, Frederick K(ing), 90 West St., New York, N. Y. *Physics*. Bergen, N. J., March 4, 74. M.E., Stevens, 95; A.M., Columbia, 09. Asst. engineer, Crocker-Wheeler Elec. Co., 98-00; *research work*, 00-; *pres.*, *Vreeland Apparatus Co.*, 05- Non-res. lecturer, Stevens, 07-09; Columbia, 09. A.A.; Physical Soc.; fel. Elec. Eng.; Radio Eng.; N. Y. Acad. Electrical oscillations and their applications; multiplex telegraphy and telephony by alternating currents; radio-telegraphy; electrical analgesia.

W

Waddell, Dr. J(ames) A(lexander), University, Va. *Pharmacology*. Near Charlottesville, Va., May 20, 78. A.B., Virginia, 01, M.D., 11; Western Reserve; Harvard. Principal, high sch., Abilene, Va., 01-02; blind dept., Va. Sch. for Deaf and Blind, 02-07; instr. anat., Virginia, 09-11, adj. prof. *pharmacol.*, 11-17, *prof.*, 17- Epidemiologist, Va. State Dept. of Health, summer, 09, 12-15. A.A.; Soc. Pharmacol.; Ass. Study Int. Secretions. Public health; hookworm; development of mammalian sternum.

Waddell, Prof. John, Queen's University, Kingston, Can. *Chemistry*. Pictou, N. S., Sept. 19, 58. B.A., Dalhousie, 77; B.Sc., London, 82; Ph.D., Heidelberg, 84; D.Sc., Edinburgh, 86. Asst. chem., Edinburgh, 84-86; *prof. science*, Royal Mil. Col. Can., 86-97; asst. *prof. chem.*, Queen's (Can.), 99-20, *assoc. prof.*, 20- A.A.; Chem. Soc.; Soc. Chem. Indust.; fel. Can. Inst. Chem.; Faraday Soc.; Chem. Gesell.; Chem. Verein. Physical, analytical and inorganic chemistry; atomic weight of tungsten.

Waddell, Dr. (John) A(lexander) (Low), 2708 Forest Ave., Kansas City, Mo., and 35 Nassau St., New York, N. Y. *Civil engineering*. Port Hope, Ont., Jan. 15, 54. C.E., Rensselaer, 75; B.A.Sc., Ma.E., McGill, 82, D.Sc., 04; LL.D., Missouri, 04; hon. D.Eng., Nebraska, 11; Kokukuhakushi (Japan), 15. Draftsman, marine dept., Dominion Govt; Can. Pac. Railway, 75-78; asst. *prof. mech.*, Rensselaer, 78-80; chief engineer, Raymond and Campbell, bridge builders, Council Bluffs, Iowa, 81-82; *prof. civil eng.*, Tokyo, 82-86; *consulting engineer*, 87- Cor. de l'Inst. de France dans l'Acad. des Sciences, 18; Knight Commander, Japanese Order of the Rising Sun, 88; decorated by Grand Duchess Olga of Russia, 07; Norman medal, Am. Soc. Civil Eng., 09, 15. A.A.; Civil Eng.; Eng. Educ.; Soc. Test. Mat.; R. R. Eng.; Nat. Conserv. Ass.; Econ. League; Franklin Inst.; West. Soc. Eng.; Phila. Eng. Club; Int. Soc. Test. Mat.; Soc. Int. d'Etudes de Correspondance et d'Echanges; Can. Inst. Eng.; hon. mem. Eng. Soc. Peru; British Inst. Civil Eng.; Soc. des Ing. civils de France; Soc. géog. de France; hon. mem. Japanese Eng. Soc. Railroad engineering; bridges; engineering education; foundations; nickel steel, purified carbon steel and high alloy steel for bridges; establishment of an American academy of engineers; economics of engineering; creeping of railroad rails.

Wade, Dr. Bruce, Trenton, Tenn. *Geology*. Trenton, Nov. 11, 89. B.S., Vanderbilt, 13, M.S., 14; Ph.D., Hopkins, 17. *Asst. state geologist*, Tenn., 17- Second lieutenant, F. A. A.A.; Geol. Soc.; Min. Eng. Stratigraphy and paleontology of the upper Cretaceous.

Wade, E. Marion, University of Minnesota, Minneapolis, Minn. *Public health*. Bristol, England, May 22, 83. B.A., Trinity (Can.), 04; M.A., Toronto, 13. Asst. to Mrs. Ellen H. Richards, Mass. Inst. Tech., 07-08; research chemist, Gen. Elec. Co., Schenectady, N. Y., 08; bacteriologist and asst. director, lab., Boston Board of Health, 08-13; chief, main laboratories, div. prev. diseases, Minn. State Board of Health, 13- A.A.; Ass. Path. and Bact.; Soc.

Bact; Pub. Health Ass; Ass. Tuber. Bacteriology; encephalitis.

Wade, Prof. H(erbert) Windsor, College of Medicine, University of the Philippines, Manila, P. I. *Bacteriology*. Haddonfield, N. J, Nov. 23, 86. M.D, Tulane, 12. Instr. path. and bact, Tulane, 12-15; pathologist and bacteriologist, Bur. Science, P. I, 16-18; *prof. path. and bacter*, and *director, grad. sch. trop. med. and pub. health, Univ. Philippines*, 18- Chief, dept. path, Philippine Gen. Hosp. Ass. Path. and Bact; Am. Med. Ass; Int. Ass. Med. Mus. Fungus infections; Bacillus influenzae.

Wade, Joe S(anford), U. S. Department of Agriculture, Washington, D. C. *Entomology*. Marrowbone, Ky, July 20, 80. Fairmount. *Scientific asst, bur. entom, U. S. Dept. Agr*, 13-Entom. expd. in west. states, 14-16. A.A; Entom. Soc; Ass. Econ. Entom; Wash. Entom. Soc. Cicindelidae, Scarabaeidae and Tenebrionidae.

Wadsworth, Dr. Augustus (B), New Scotland Ave, Albany, N. Y. *Bacteriology*. Brooklyn, N. Y, Oct. 25, 72. B.S, Mass. Inst. Tech, 93; M.D, Columbia, 96, alumni fellow, 99-05, Alonzo Clark scholar, 05-10; St. Luke's Hosp, 97-99. Asst. and later instr. bacter. and hygiene, Columbia, 99-08, assoc. bacter, 08-09, asst. prof, 09-13; *director, div. laboratories and research, N. Y. State Dept. of Health*, 14- Asst. physician, out-patient dept, Roosevelt Hosp, 05-08, consulting bacteriologist, 09-14. Ass. Path. and Bact; Am. Physicians; Am. Med. Ass; Soc. Clin. Invest; Soc. Bact; Ass. Immunol; Pub. Health Ass. (chairman, lab. sect, 20); Soc. Exp. Biol; Harvey Soc. (sec'y, 12); N. Y. Path. Soc. (pres, 13); N. Y. Acad. Med. Infection and immunity; puerperal infection; agglutination of pneumococcus; etiology of pneumonia; pneumococcus infection; antipneumococcus serum; action of immune serum on pneumococcus infection; standardization of serums.

Wadsworth, F(rank) L(awton) O(lcott), E. Liberty Station, Pittsburgh, Pa. **Physics, Astronomy, Engineering*. Wellington, Ohio, Oct. 21, 67. E.M, Ohio State, 88, B.S, M.E, 89; Clark, 89-90. Asst. physics, Ohio State, 89; Clark, 90-92; senior asst. in charge, astrophys. observatory, Smithsonian Inst, 92-94; asst. prof. physics, Chicago, 94-96; astrophys, Yerkes Observatory, 96-97, assoc. prof, 97-98; director, Allegheny Observatory, 00-04; gen. manager, Pressed Prism Plate Glass Co, 04-05; chief engineer, Am. Window Glass Co, 05-07; *consulting engineer*, 08-; *pres, Miller Non-Corrosive Metal Co*, 09- Asst. ed, 'Astrophys. Jour'; assoc. ed, 'Harper's Scientific Memoirs.' Consulting engineer, John A. Brashear Co, 00-04; mem. eng. committee, Pittsburgh chamber of commerce, 10; pres. board of visitors, Ohio State, 11-16; chief engineer, Severin commission, Germany-Holland, 13. Delegate from Smithsonian Inst. to Int. Bur. of Weights and Measures, Paris, 92. A.A; Astron. Soc; Physical Soc; Mech. Eng; Electrochem. Soc; Inventors Guild (chairman, prof. committee, 10-12); Eng. Educ; Franklin Inst; West. Pa. Eng. Soc; hon. mem. Soc. Astron. de Mex; for. mem. Soc. Ital. di Spettro-

scop; assoc. Wash. Acad. Theory of the spectroscope; astronomical photography; velocity of light; Newtonian constant of gravitation; solar structure; ruling of large grating plates (up to 15 inches); photography with curved plate camera; reduction of eclipse-observations; measurement of star diameters and double stars; optical apparatus; telemeters and engineering instruments; manufacture of glass, steel, copper, electric lights, etc; industrial machinery; aeroplanes.

Wadsworth, Dr. M(arshman) E(dward), University of Pittsburgh, Pittsburgh, Pa. **Geology*. Livermore Falls, Maine, May 6, 47. A.B, Bowdoin, 69, A.M, 72; Harvard, 74, Ph.D, 79; Heidelberg, 84-85; M.D, Nat. Med. Col, 94; E.M, Pa. State, 17; Sc.D, Pittsburgh, 19. Principal and supt. of schools, 63-73; prof. chem, Boston Dental Col, 73-74; instr. math. and miner, Harvard, 74-77, asst. geol. museum comp. zool, 77-87; prof. miner. and geol, Colby, 85-87; pres. and prof. miner, petrog. and geol, Mich. Col. Mines, 87-99; dean, sch. mines and metal. and prof. mining and geol, Pa. State, 01-08; prof. mining geol. and dean, *Sch. Mines, Pittsburgh*, 07-12, *emer. dean*, 12- Asst, N. H. Geol. Surv, 74; asst. geologist, Minn. Geol. Surv, 86-87; state geologist, Mich, 88-93; geologist and mining expert, Keweenaw Ass, 98-02; geologist, Pa. State Board of Agr, 02-05; asst. ed, 'Am. Geologist,' 94-99. A.A; Geol. Soc; Coal Min. Inst; Eng. Educ. Min. and Metal. Soc; fel. London Geol. Soc. Physical mineralogy; petrography; general and mining geology; origin, alteration and classification of minerals and rocks; meteorites; prehistoric man in the United States.

Waggoner, Prof. C(hauncey) W(illiam), Morgantown, W. Va. *Physics*. Rock Bridge, Ohio, Feb. 23, 81. B.S.(E.E), Ohio (Athens), 04; A.M, Cornell, 05, Ph.D, 09. Instr. *physics*, Cornell, 05-09; *prof, West Virginia*, 09- Research engineer, Western Elec. Co, summer, 07. A.A; Physical Soc; Radio Eng. The physical properties of a series of iron-carbon alloys; the preparation and decay of phosphorescence in certain salts of cadmium and zinc; hysteresis loss in iron at varying frequencies; non-corrosive glasses.

Waggoner, Prof. Harry Dwight, 320 Sherman Ave, Macomb, Ill. *Biology*. Godfrey, Ill, Feb. 1, 77. A.B, Illinois, 09, A.M, 14, Ph.D, 16. Asst. bot, Illinois, 13-16; *prof. biol*, Macalester, 16-17; *West. Ill. State Nor. Sch*, 17- Bot. Soc. Plant physiology and pathology; agronomy.

Wagner, Prof. Frank C(aspar), 1111 S. Sixth St, Terre Haute, Ind. *Engineering*. Ann Arbor, Mich, Oct. 5, 64. A.M, Michigan, 84, B.S, 85. Asst. physics, Michigan, 84-85; with Thomson-Houston Elec. Co, 86-89; asst. prof. mech. eng, Michigan, 90-96; assoc. prof. steam and elec. eng, *Rose*, 96-04, *prof, steam eng*, 04-09, *mech. and elec. eng*, 09- A.A; Mech. Eng; Elec. Eng; Eng. Educ; Ind. Eng. Soc. Dynamo and electromagnet design; steam-engine testing; steam turbines; gas turbines; pyrometer measurements in furnaces.

Wagner, Prof. George, 1901 Jefferson St, Madison, Wis. *Zoology*. New Ulm, Minn, Feb. 4,

73. Ph.C, Michigan, 93, A.M, 03; A.B, Kansas, 99. Instr. bot. and pharmacog, Northwestern, 93-95; pharmacy, Kansas, 95-07, asst. prof, 97-99, assoc. prof, 99; asst. zool, Michigan, 99-03; instr, *Wisconsin*, 03-10, asst. prof, 10-19, *assoc. prof*, 19- A.A.; Soc. Nat; Soc. Zool; Soc. Ichthyol. and Herp; Soc. Mammal; hon. mem. Kans. Acad. Vertebrate zoology; fauna of Wisconsin.
- Wagner, Samuel Tobias**, School House Lane, Germantown, Philadelphia, Pa. *Civil engineering*. Philadelphia, Aug. 30, 61. B.S, Pennsylvania, 81, C.E, 83. With Phoenix Iron Co, 81-93; asst. engineer, Pa. Ave. Subway and Tunnel, City of Phila, 93-00, improvement and filtration of water supply, 00-02; *Phila. and Reading Ry. Co*, 02-15, *chief engineer*, 15- Trustee, prof. eng. and pres. of faculty, Wagner Free Inst; Laurie prize, Soc. Civil Eng, 14. A.A; Civil Eng. (director); Soc. Test. Mat; Eng. Educ; R.R. Eng; Franklin Inst; Phila. Eng. Club; Int. Ass. Test. Mat.
- Wagner, Dr. Theodore B**(rentano), 56 Pine Street, New York, N. Y. *Chemistry*. Chicago, Ill, Oct. 12, 67. Ph.D, Würzburg, 91. Gen. supt, Corn Products Co, 00-06, mem. exec. board, 06-19; v. pres, *U. S. Food Products Co*, 19- Chem. Soc. (chairman, N. Y. sect. 16); Chem. Eng. (pres, 13); London Soc. Chem. Indust. (v. pres, 08); Soc. de Chim. indust; Chem. Gesell. Foods.
- Wahl, Dr. H**(arry) Roswell, University of Kansas Medical School, Rosedale, Kans. *Pathology*. Minnesota City, Minn, 86. A.B, Wisconsin, 08, A.M, 10; M.D, Hopkins, 12; fellow, Western Reserve, 12-13. Asst. anat, Wisconsin, 08-10; instr, path. Western Reserve, 13-15, assoc, 15-19; *prof. path. and bacter. med. sch.*, Kansas, 19- Assoc. visiting pathologist Lakeside Hosp, Cleveland; director, laboratories, Mt. Sinai Hosp. A.A; Ass. Path. and Bact. Neuroblastomata; Gaucher's disease; toxin titrations in nephrectomized animals; transmission of influenza.
- Wahl, Dr. Robert**, 4046 Sheridan Road, Edgewater Station, Chicago, Ill. *Chemistry*. Milwaukee, Wis, May 20, 58. Hanover Polytech, 78; Ph.D, Marburg, 80. *Pres. and director*, *Wahl-Henius Inst. Fermentology*, 86- A.A; Chem. Soc; Chicago Acad; London Soc. Chem. Indust. American barleys; importance of albumenoids in beer production.
- Wahlin, Prof. G**(ustaf) E(ric), University of Illinois, Urbana, Ill. *Mathematics*. Cannon Falls, Minn, Dec. 3, 80. A.B, Bethany, 03; Ph.D, Yale, 06; Marburg, 12-13. Instr. math, Iowa, 06-08; *Illinois*, 08-12, assoc. and later *asst. prof*, 13- A.A; Math. Soc; Math. Ass. Algebraic numbers.
- Waidner, Dr. Cha**(rles) W(illiam), Bureau of Standards, Washington, D. C. **Physios*. Baltimore, Md, March 6, 73. E.E, Hopkins, 92, A.B, 96, fellow, 97-98, Ph.D, 98. Asst. physios, Hopkins, 98-99; instr, Williams, 99-01; lab. *asst*, *Bur. Standards*, 01-04, assoc. physicist, 04-10, *physicist*, 10- Draftsman, mech. eng. dept, Columbia Expos, 93. A.A; Physical Soc; Wash. Acad; Wash. Philos. Soc; Franklin Inst; Soc. de Physique; Int. Com. on Oil Test. Rowland's thermometric scale and recalculation of the mechanical equivalent of heat; sensitive galvanometers especially adapted to bolometric work; optical pyrometry.
- Wait, Dr. Cha**(rles) E(dmund), University of Tennessee, Knoxville, Tenn. *Chemistry*. Little Rock, Ark, Nov. 3, 49. C.E, M.E, B.S, Virginia, 74; Ph.D, Missouri, 88. Prof. math, St. John's (Ark), 75; mining engineer, Ark. Antimony Co, 76; prof. eng, Arkansas, 77; director, Mo. Sch. Mines, 79-88; *prof. chem*, *Tennessee*, 89- Chemist, Sacramento Smelting and Refining Co; first asst. chemist, U. S. Dept. Agr, 88. A.A; Min. Eng; Chem. Soc; fel. British Ass; fel. London Chem. Soc. Nutrition.
- Wait, Henry H**(eilman), Hill Pump Works, Anderson, Ind. *Electrical engineering*. Chicago, Ill, Oct. 27, 69. B.S, Mass. Inst. Tech, 91. With West. Elec. Co, 92-05; *consulting engineer*, *Hill Pump Wks.* Elec. Eng; Mech. Eng; London Inst. Elec. Eng; Soc. Int. des Elec; Verein Ing. Mechanical engineering; Wait steam turbines and dynamos; motion of telephone diaphragms; air currents of fans.
- Waite, Prof. Frederick C**(layton), Western Reserve University, Cleveland, Ohio. *Anatomy, Zoology*. Hudson, Ohio, May 24, 70. B.Litt, Adelbert, 92, A.M, Western Reserve, 94; Harvard, 96, Ph.D, 98. Instr. biol, N. Y. City high schools, 98-00; N. Y. Univ, 99; asst. anat, Chicago, 00-01; asst. prof. *histol. and embryol*, *Western Reserve*, 01-04, assoc. prof, 04-06, *prof*, 06- A.A; Soc. Nat; Ass. Anat; Soc. Zool; Micros. Soc; Am. Med. Ass; Ohio Acad. (v. pres, 08); Boston Soc. Nat. Hist; Cleveland Acad. Med. Embryology and morphology of Crustacea; anatomy of Amphibia.
- Waite, Dr. H**(erbert) H(arold), 2144 B St, Lincoln, Nebr. *Bacteriology, Pathology*. Leverett, Mass, July 4, 68. A.B, Amherst, 92, A.M, 03; M.D, Michigan, 01. Instr. bacter, Michigan, 96-01; asst. prof. *bacter. and path*, *Nebraska*, 02-05, assoc. prof, 05-07, *prof*, 07- State pathologist, Nebr, 04- A.A; Pub. Health Ass; Am. Med. Ass; Nebr. Acad. Disinfection of rooms; pyocyaneus infections; acute infectious diseases of bone; typhoid fever; milk-borne epidemic of diphtheria.
- Waite, M**(erton) B(enway), U. S. Department of Agriculture, Washington, D. C. **Plant pathology*. Oregon, Ill, Jan. 23, 65. B.S, Illinois, 87. Asst. bot, Illinois, 87-88; asst. pathologist, *U. S. Dept. Agr*, 88-01, *pathologist in charge* diseases of orchard fruits, 01-03, *fruit disease investigations*, 03- Phytopath. Soc; Wash. Biol. Soc; Wash. Bot. Soc. Pear blight; pollination of pomaceous fruits; diseases of orchard fruits; little peach and other peach diseases; pecan and nut diseases; fungicides and methods of treating plant diseases.
- Waite, Dr. Willis W**(illard), Crouse Laboratories, El Paso, Tex. *Bacteriology*. Milford, Wis, 76. B.S, Wisconsin, 02; M.D, Hopkins, 06. Path. intern, City Hosp, N. Y. City, 06-07; bacteriologist, Dept. Health, N. Y. City, 07; city bacteriologist, Syracuse, 07-11; *director*, *Crouse Laboratories*, *El Paso*, 11- A.A; Soc. Bact; Pub. Health Ass.

- Wakeman, Dr. Alfred J(ohn)**, 181 Edwards St, New Haven, Conn. *Chemistry*. Green's Farms, Conn., Feb. 8, 65. Ph.B, Yale, 87; Ph.D, Leipzig, 94. Instr. chem, Mass. Inst. Tech, 87-89; Sheffield Sci. Sch, Yale, 92-95; physiol. chem. research, Herter Lab, N. Y. City, 95-12; *protein chem. research*, Conn. *Exp. Sta.*, 12-A.A; Physiol. Soc; Chem. Soc; Soc. Biol. Chem. Physiological chemistry.
- Waksman, Dr. S(elman) A(braham)**, New Jersey Agricultural Experiment Station, New Brunswick, N. J. *Bacteriology*. Priluka, Russia, July 29, 88. B.S, Rutgers, 15, M.S, 16; fellow, California, 16-17, Ph.D, 17. Asst. soil microbiol, N. J. *Exp. Sta.*, 15-16, *microbiologist*, 18- Research biochemist, Cutter Laboratories, 17-18; bacteriologist, Takamine Lab, 19- Soc. Baet; Soc. Exp. Biol. Soil fungi; metabolism of micro-organisms; actinomyces; bacteria; protozoa.
- Walcott, Dr. Charles D(oolittle)**, Smithsonian Institution, Washington, D. C. **Geology*. New York Mills, N. Y., March 31, 50. Pub. schools; LL.D, Hamilton, 97; Chicago, 01; Hopkins, 02; Pennsylvania, 03; Sc.D, Cambridge, 09; LL.D, Yale, 10; St. Andrews, 11; Ph.D, Royal Frederiks Univ, Christiania, 11; Sc.D, Harvard, 13. Asst, N. Y. State Surv, 76; asst. geologist, U. S. Geol. Surv, 79, paleontologist, 88-93, geologist, 93-94, director, 94-07; U. S. Reclamation Service, 02-07; *sec'y*, Carnegie Institution, 02-05; *Smithsonian Inst.*, 07- Hon. curator, U. S. Nat. Museum, 92-97, 98-08; acting asst. *sec'y*, Smithsonian Inst, in charge U. S. Nat. Museum, 97-98; mem. Nat. Research Council; chairman, Nat. Adv. Committee Aeronautics. Bigsby and Wollaston medals, London Geol. Soc; Gaudry medal, Soc. géol. de France, 17. Nat. Acad. (pres, 17-); A.A. (v. pres, 93); Soc. Nat; Geol. Soc. (past pres); Paleont. Soc; hon. mem. Min. Eng; Philos. Soc; assoc. Am. Acad; Wash. Acad. (pres, 99-10); cor. mem. Phila. Acad; cor. mem. London Geol. Soc; Royal Geog. Soc; for. assoc. French Acad. Sci; for. mem. Accad. dei Lincei; Bologna Acad; fel. Christiania Sci. Soc; for. assoc. Stockholm Royal Acad. Sci; Moscow Imp. Soc. Nat; etc. Stratigraphy and paleontology of the lower Paleozoic formations; sedimentation, stratigraphy and contained faunas of the Cambrian formations; Cambrian Brachiopoda and trilobites; Cambrian faunas of China; pre-Cambrian Algonkian algal flora; discovery of Algonkian bacteria; appendages of trilobites; middle Cambrian algae and Spongiae.
- Walcott, Dr. H(enry) P(ickering)**, 11 Waterhouse St, Cambridge, Mass. *Sanitary science*. Hopkinton, Mass., Dec. 23, 38. A.B, Harvard, 58; M.D, Bowdoin, 61; Vienna and Berlin, 62; LL.D, Yale, 07. Practising physician, Cambridge, 67-81; *chairman*, Mass. *State Board of Health*, 86- Mem. board of pres. and fellows, Harvard, acting pres, 00-01; mem. Carnegie Institution. Boylston med. prize, 71. Int. Cong. Hygiene and Demography, 02 (pres). Emer. mem. Am. Physicians (v. pres); Am. Acad. (v. pres, pres); hon. fel. Royal Sanit. Inst. Purification of municipal water supplies; the disposal of sewage; the extension of malaria in Massachusetts.
- Waldbott, Dr. Sigmund**, Court and Plum Sts, Cincinnati, Ohio. *Chemistry*. Münchweiler, Bavaria, April 19, 65. Grad. Polytech, Munich, 86; Ph.D, Bern, 89. Instr, Dr. Ustrich's Pädagogium; Munich, 86-89; chemist, Rheinstrom Brothers, 90-93; Lloyd Brothers, and librarian, Lloyd Library, 93-02; head, dept. chem, Ohio Mech. Inst, 01-18; *research chemist*, Lloyd Chem. Research Lab, 18- Denatured alcohol chemist, U. S. Internal Revenue, Ohio, 07- A.A; Chem. Soc. (sec'y, Cincinnati sect, 97-99, pres, 05, abstractor, 'Abstracts,' 12-). Pharmacy; alcohol; Lloyd's alkaloidal reagent; nicotin.
- Walden, Prof. P(ercy) T(albot)**, 910 St. Roman St, New Haven, Conn. *Chemistry*. Brooklyn, N. Y., June 29, 69. Ph.B, Yale, 92, Ph.D, 96; Leipzig and Munich, 99-00. Asst. chem, *Sheffield Sci. Sch*, Yale, 92-94, instr, 94-99, asst. prof, 00-19, prof, 19- Chem. Gesell. The double salts of iron and the alkali metals; the structure of the amidins; the double bromids of caesium and lead; the double halides of caesium and cadmium; the acid ammonium oxalates.
- Waldo, Prof. C(larence) A(biathar)**, 435 W. 119th St, New York, N. Y. *Mathematics*. Hammond, N. Y., Jan. 21, 52. A.B, Wesleyan, 75, A.M, 78; Leipzig and Munich, 82-83; Ph.D, Syracuse, 93. Instr. math, Wesleyan, 77-81; prof, Rose, 83-91; DePauw, 91-95; Purdue, 95-08; *Washington (St. Louis)*, 08-17, emer. prof, 17- Acting pres, Rose, 85-86, 88-89, 17-18; office *sec'y*, M. E. Board of Educ; col. visitor, Carnegie Foundation, 18. A.A. (sec'y, A, 93, D, 02, v. pres, 03, gen. sec'y, 05); Math. Soc; Eng. Educ. (sec'y, 02-04); Ind. Acad. (ed, 93, 95-97, pres, 98). Descriptive geometry; warped surfaces; volcanic activity; technical education.
- Waldo, Prof. Edward H(ardenbergh)**, University of Illinois, Urbana, Ill. *Electrical engineering*. Hornell, N. Y., March 5, 66. A.B, Amherst, 88; M.E, Cornell, 90, M.S, 14, E.E, 17. With Gen. Elec. Co, 90-94; instr. elec. eng, Pennsylvania, 94-04; with eng. dept, Crocker-Wheeler Co, 04-07; *asst. prof. elec. eng*, Illinois, 07- A.A; Elec. Eng.
- Waldo, Dr. Leonard**, 49 Wall St, New York, N. Y. *Metallurgy*, *Physics*. Cincinnati, Ohio, May 4, 53. A.B, Marietta, 72, A.M; sch. of mines, Columbia; Sc.D, Harvard, 79; A.M, Yale, 80. Asst, Cincinnati Observatory; asst. astronomer, U. S. transit of Venus exped, 74; Harvard Col. Observatory; astronomer, Yale Observatory; *consulting metal. and elec. engineer*. Medal, London Royal Soc. Arts. Elec. Eng; Min. Eng; Mech. Eng; N. Y. Acad; Conn. Acad. (sec'y); British Hort. Inst. Solar and stellar parallaxes; double stars and satellites of Mars; solar eclipses; aluminum, copper and special steels; permeability and hysteresis of certain steels; resistance metals; so-called aluminum bronzes.
- Waldron, Prof. C(lare) B(ailley)**, Agricultural College, N. Dak. *Horticulture*, *Forestry*. Kent, Ohio, Dec. 6, 65. B.S, Mich. Agr. Col, 87. Instr. bot, Mich. Agr. Col, 88-89; prof. hort. and forestry, N. Dak. Col, 90-15, *dean agr*, 15-; *development expert*, War Dept, 20- Mem. jury of awards, La. Purchase Expos, 04; chairman,

- jury of awards, Lewis and Clark Expos, 05; mem. N. Dak. Conservation Commission. A.A.; N. Dak. Acad. (pres, 10). Cultural methods in forestry and horticulture in the northwestern prairies.
- Waldron, Dr. R(alph) A(ugustus)**, North Marshfield, Mass. *Botany*. North Rochester, Mass, April 28, 88. B.S. Mass. Col, 10; M.S. Pa. State, 12; Ph.D. Pennsylvania, 18. Asst. entom. Mass. Col, 10; instr. bot. Pa. State, 10-14; Pennsylvania, 17-18; *horticulturist*. A.A; Phytopath. Soc. Plant pathology.
- Wales, Prof. Royal Linfield**, Kingston, R. I. *Mechanical engineering*. Groveland, Mass, 78. B.S. Mass. Inst. Tech, 02. Asst. gas, oil and fuel anal, Mass. Inst. Tech, 02-04; instr. mech. eng. N. C. Col, 04-05; asst. prof. exp. eng. Tennessee, 05-08; *prof. mech. eng. and dean, eng. dept, R. I. Col, 08-* Gas and power engineering.
- Walker, Prof. Arthur L(ucian)**, Columbia University, New York, N. Y. *Metallurgy*. New York, Jan. 14, 63. E.M. Columbia, 83. Engineer, Old Dominion Copper Co, Globe, Ariz, 83-88, gen. supt, 88-94; manager, Baltimore Electrolytic Refining Co, 94-99; Am. Smelting and Refining Co, Perth Amboy plant, 99-07, director, 07-08; *prof. metal, Columbia, 08-* Min. Eng; Min. and Metal. Eng; Soc. Test. Mat; Electrochem. Soc. Copper-casting apparatus; electrolytic copper refining.
- Walker, Arthur William**, 2421 S. Dearborn St, Chicago, Ill. *Bacteriology*. Freeport, Maine, Nov. 12, 77. B.A.S. Harvard, 09, Harvard Med. Sch, 09-12. Asst. chemist, Mass. Board of Health, 00-03; bacteriologist, Water Commission, N. Y. City, 03; biologist, Metropolitan Water and Sewerage Board, Boston, 05-12; *instr. and assoc. bacter, Northwestern, 12-* Soc. Bact. Bacterial metabolism; acid-fast bacteria.
- Walker, Dr. Bryant**, 45 Alfred St, Detroit, Mich. *Zoology*. Detroit, July 3, 56. A.B. Michigan, 76, LL.B, 79, hon. Sc.D, 12. *Hon. curator of Mollusca, museum of zool, Michigan, 09-*; *mem. Non-Game License Commission, 11-*; *mem. board of scientific advisers, Mich. Geol. and Biol. Surv, 11-* A.A; Ecol. Soc; Mich. Acad. (pres, 95); N. Y. Zool. Soc; Detroit Zool. Soc. (pres, 12); Conchol. Soc. Gt. Britain and Ireland; London Malacol. Soc; Malacol. Gesell. Systematic conchology; distribution of land and fresh water Mollusca of North America.
- Walker, Prof. B(uz) M**, Agricultural College, Starkville, Miss. *Mathematics*. Starkville, Aug. 20, 63. B.S. Miss. Agr. Col, 83, M.S, 86; Virginia, summers, 85, 86, 87; Göttingen, 88-89; Berlin, 89; Ph.D. Chicago, 06. *Instr. math, Miss. Agr. Col, 83-84*, asst. prof, 84-88, *prof, 88-*, *director, sch. eng, 02-*, *v. pres, 13-* A.A; Math. Soc; London Math. Soc; Math. Verein; Circolo Mat. di Palermo. Quadratic one to two and one to three transformation between two planes; the resolution of higher singularities of algebraic curves into ordinary nodes.
- Walker, Prof. E(dmund) M(urton)**, University of Toronto, Toronto, Can. *Zoology*. Windsor, Ont, Oct. 5, 77. A.B. Toronto, 00, M.B, 03. Lecturer zool, Toronto, 06-13, asst. prof, 13-17, *assoc. prof, 18-* House surgeon, Toronto Gen. Hosp, 03-04; in charge, Dominion Fresh Water Biol. Sta, Georgian Bay, summer, 07; ed, 'Can. Entomologist,' 10-; asst. director, Royal Ont. Museum Zool, 15- A.A; Entom. Soc. (v. pres, 17); fel. Royal Soc. Can; Can. Inst; Ont. Entom. Soc. (pres, 11); Ottawa Field Nat. Club. Entomology; insect morphology; Orthoptera and Odonata of Canada; American Somatochlora; genitalia of insects.
- Walker, Prof. Elda R(ema)**, University of Nebraska, Lincoln, Nebr. *Botany*. Forest Grove, Oregon, Oct. 2, 77. A.B. Pacific, 01, A.M, 04; fellow, Nebraska, 04-06, Ph.D, 07. *Instr. bot, Nebraska, 06-07*, adj. prof, 07-10, asst. prof, 10-13, *assoc. prof, 13-* Asst. pathologist, U. S. Dept. Agr, 17-18. A.A; Bot. Soc; Phytopath. Soc; Forestry Ass; Micros. Soc; Nebr. Acad. (pres, 20). Plant morphology; ecology of Algae of some sandhill lakes.
- Walker, Prof. Elton D(avid)**, 215 S. Atherton St, State College, Pa. *Civil engineering*. Taunton, Mass, March 8, 69. B.S. Mass. Inst. Tech, 90. Asst. civil eng. Mass. Inst. Tech, 90-91; civil engineer, Q.M.D. U.S.A, 91-92; mem. firm, Walker and Gallagher, 92-94; instr. civil eng. Union, 94-97; asst. prof, 97-00; *Pa. State, 00-01*, *prof. hydraulic and civil eng, 01-*, *head, dept. civil eng, 06-* Res. hydrographer, U. S. Geol. Surv, 98-00; acting dean, eng. sch, Pa. State, 13-15; capt, corps engineers, 17-19. Civil Eng; Water Works Ass; Pub. Health Ass; New Eng. Water Works Ass. Hydraulic and sanitary engineering; sewage treatment.
- Walker, Dr. Ernest Linwood**, Hooper Foundation, University of California, Berkeley, Calif. *Medicine*. Freeport, Maine, June 24, 70. B.A.S. Harvard, 96, B.S, 03, Sc.D, 08. Bacteriologist, Mass. State Board of Health, 96-10; asst. med. zool, Harvard Med. Sch, 08-10; protozoologist, Bur. Science, Manila, P. I, 10-13, chief, biol. lab, 13-14; *assoc. prof. tropical med, Hooper Foundation for Med. Research, California, 14-* Soc. Trop. Med; Soc. Exp. Biol. Tropical medicine; chemotherapeutics.
- Walker, Dr. George**, 1 Centre St, Baltimore, Md. *Surgery*. Yorkville, S. C, July 27, 69. S. C. Col, 85-87; M.D. Maryland, 89; Breslau and Leipzig, 97-98; Berlin, 07. Private practise, Yorkville, S. C, 89-95; Baltimore, 98; asst. out-patient dept, Hopkins Hosp, 98-00; chief of clinic, Hopkins, 00-02, instr. surg, 02-05, *assoc, 05-*, *head, out-patient surg. dept, Hopkins Hosp, 14-* Visiting surgeon, Church Home and Infirmary and Union Protestant Infirmary; chairman, Md. State Wide Vice Commission, 13; director, Social Service Corporation of Baltimore; capt. and major, M.R.C, 17-18, lieut. col. and col, M.C, 18-19. Ass. Anat; Urol. Ass; Col. Surg. Generative organs; tuberculosis in the genito-urinary organs.
- Walker, Prof. I(saac) Chandler**, Peter Bent Brigham Hosp, Boston, Mass. *Medicine*. Lovell, Maine, 83. A.B. Hopkins, 05, M.D, 09. Asst. pharmacol, *Harvard Med. Sch, 13*, *med, 14-15*, *asst. prof, 18-* Assoc. med, Peter Bent Brigham Hosp, acting physician, 18-; lecturer, Iowa. Assoc. Am. Physicians; Soc. Clin. Invest. Wassermann reaction; bronchial asthma; hay fever; eczema.

- Walker, Prof. J(ames) Wallace**, Marine Lodge, Irvine, Scotland. *Chemistry*. Kembra, Fifeshire, Scotland, Jan. 11, 67. A.M., St. Andrews, 89; 1851 Exhibition scholar, 93-96; Ph.D., Leipzig, 96. Lecturer asst., St. Andrews, 89-91, research asst., 91-92; lecturer org. chem., Univ. Col., London, 96-98; Macdonald prof. chem., McGill, 98-12, director chem. laboratories, 08-12; *managing director, Alexander Walker and Co.* Electrochem. Soc.; fel. Chem. Soc. London; fel. Royal Soc. Can. Physico-organic chemistry; optical activity.
- Walker, Dr. John B(aldwin)**, 51 E. 50th St., New York, N. Y. *Medicine*. Lodi, N. J., Jan. 16, 60. A.B., Harvard, 84, M.D., 88. *Surgeon, Bellevue Hosp.*; prof. clin. surg., Columbia. Surgeon, N. Y. Hosp. for Ruptured and Crippled; consulting surgeon, Manhattan State Hosp.; col. M.R.C. A.A.; Surg. Ass.; Am. Med. Ass.; Col. Surg.; Hosp. Ass.; N. Y. Surg. Soc.; N. Y. Acad. Med.; Soc. Int. de Chirurg. Surgery.
- Walker, Prof. J(ohn) C(harles)**, College of Agriculture, Madison, Wis. *Plant pathology*. Racine, Wis., July 6, 93. B.S., Wisconsin, 14, M.S., 15, Ph.D., 18. Scientific asst., U. S. Dept. Agr., 17-19, *asst. pathologist, bur. plant indust.*, 19-; *asst. plant path.*, Wisconsin, 14-17, *instr.*, 19, *asst. prof.*, 19- A.A.; Bot. Soc.; Phytopath. Soc. Diseases of onion and cabbage.
- Walker, Prof. Leva B(elle)**, University of Nebraska, Lincoln, Nebr. *Botany*. Forest Grove, Oregon, Dec. 2, 78. A.B., Pacific (Oregon), 01; fellow, Nebraska, 06-08, A.M., 08. Teacher, pub. schools, Wash., 01-06; *instr. bot.*, Nebraska, 08-11, *adj. prof.*, 11-13, *asst. prof.*, 13-14, *assoc. prof.*, 14- *Asst. pathologist*, U. S. Dept. Agr., 18. A.A.; Bot. Soc.; Phytopath. Soc.; Micros. Soc.; Nebr. Acad. Morphology of fungi; rots of small fruits.
- Walker, Percy H(argraves)**, Bureau of Standards, Washington, D. C. *Chemistry*. Huntsville, Ala., July 6, 67. Virginia, 85-87, 89-90; M.S., Iowa, 95; Heidelberg, 96; Berlin, 97. Teacher chem., Miller Sch., Va., 90-92; *instr. chem. and miner.*, Iowa, 92-99; *assoc. prof. chem. and physics*, Arkansas, 00-02; *assoc. chem.*, Int. Correspondence Schools, 02-04; *assayer, bur. chem.*, U. S. Dept. Agr., 04-06, *chief, contract lab.*, 06-14; *chemist, Bur. Standards*, 14- A.A.; Chem. Soc.; Soc. Test. Mat.; Wash. Chem. Soc. (pres., 09). Paint and paint materials; oils; inks.
- Walker, Prof. P(erley) F**, 1314 Louisiana St., Lawrence, Kans. *Engineering*. North Anson, Maine, April 28, 75. B.M.E., Maine, 96, M.E., 00; M.M.E., Cornell, 01. *Instr. math. and mech. eng.*, Maine, 96-00, *prof. mech. eng.*, 02-05; Kansas, 05-15, *indust. eng.*, 15-, *dean, sch. eng.*, 12- Draftsman and calculator, ship-building companies, 01-02; in charge, building construction, 04-05; power plant design and erection, 08-09; consulting engineer, Okla., 14-16; major, lieut. col. and col., corps engineers, 17-19; *indust. engineer*, 19- A.A.; Mech. Eng.; Eng. Educ. (councilor, 14-17); Mil. Eng.; Kans. Eng. Soc. (v. pres., 20-). Gas power engineering; lubricating oils; metering natural gas; friction losses in universal joints; methane gas; industrial development.
- Walker, Prof. Seth S(tetson)**, 210 Franklin Square Building, Tampa, Fla. *Chemistry*. Orleans, Ind., Jan. 26, 86. B.S., Chicago, 07, M.S., 09. *Asst. chem.*, Purdue, 09-10; *asst. chemist*, Rubber Regenerating Co., 10-12; Fla. Exp. Sta., 12-15, *assoc. chemist*, 15-17; *chemist*, Fla. Fruit Products Co., 17-18; *soil chemist*, La. Exp. Sta., 18-20; *chemist, Fla. Citrus Exchange and Exchange Supply Co.*, 20- Chem. Soc.; Ass. S. Agr. Workers. Citrus fruit fertilizers; soils; fruit products.
- Walker, Prof. T(homas) L(eonard)**, University of Toronto, Toronto, Can. *Mineralogy*. Brampton, Ont., 67. M.A., Queen's (Can.), 90; Leipzig, 94-97, Ph.D., 96. Demonstrator chem., Sch. of Mining, Kingston, 93-95; *asst. supt.*, Geol. Surv. of India, 97-01; *prof. miner. and petrog.*, Toronto, 01- Geol. Soc.; Can. Min. Inst.; fel. London Geol. Soc. Petrography; crystallography; occurrences of tungsten and molybdenum in Canada.
- Walker, Prof. W(illiam) H(ultz)**, Massachusetts Institute of Technology, Cambridge, Mass. *Chemical engineering*. Pittsburgh, Pa., April 7, 69. B.S., Pa. State, 90; Ph.D., Göttingen, 92; Sc.D., Pittsburgh, 15. *Instr. chem.*, Pa. State, 92-94; *Mass. Inst. Tech.*, 94-99, *prof. indust. chem.*, 02-20, *director, div. indust. cooperation and research*, 20- Consulting chem. engineer, 00-; commanding officer, Edgewood Arsenal; lieut. col. col. and chief, chem. service sect., C.W.S., in charge, gas offense div. Int. Cong. Applied Chem., Berlin, 93 (v. pres). Nichols medal, N. Y. Sect., Chem. Soc., 08; D. S. medal, 19. A.A.; Chem. Soc. (pres., N. E. sect., 04); Electrochem. Soc. (pres., 10); Iron and Steel Inst.; Soc. Test. Mat.; Am. Acad.; London Soc. Chem. Indust. Production of art glass; the manufacture of sterling silver; the chemistry of cellulose and its industrial applications; corrosion of iron and steel.
- Wallace, Prof. D(aniel) L(incoln)**, 5644 Christian St., Philadelphia, Pa. *Chemistry*. Philadelphia, Nov. 12, 60. Pub. sch.; hon. Chem.D., Pennsylvania, 16. *Instr. anal. chem.*, Pennsylvania, 92-20, *asst. prof.*, 20- Chem. Soc. Electrolysis of metals.
- Wallace, Dr. Errett**, U. S. Department of Agriculture, Washington, D. C. *Plant pathology*. West Core, N. S., 77. B.S.A., Cornell, 08, fellow, 09-11, M.S.A., 09, Ph.D., 11. *Plant pathologist, bur. plant indust.*, U. S. Dept. Agr., 11- A.A.; Phytopath. Soc.; Wash. Bot. Soc.
- Wallace, Dr. George B(arclay)**, 338 E. 26th St., New York, N. Y. *Pharmacology*. Detroit, Mich., 75. Oregon; M.D., Michigan, 97; Vienna, 99, 08; Strasbourg, 04. *Instr. pharmacol.*, Michigan, 97-00; *Univ. and Bellevue Hosp. Med. Col.*, 01-03, *lecturer*, 03-05, *asst. prof.*, 05-07, *prof.*, 07- A.A.; Soc. Nat.; Physiol. Soc.; Soc. Exp. Biol. (v. pres., 19-); Soc. Physiol. Chem.; Soc. Pharmacol.; Harvey Soc. (pres., 14-16); Soc. Clin. Invest. Saline cathartics; volatile oils; metabolism under cyanides; guaiacol derivatives; intestinal secretion; carbolic acid; nitrites.
- Wallace, Dr. John Findlay**, 120 Broadway, New York, N. Y. *Civil engineering*. Fall River, Mass., Sept. 10, 52. Monmouth, LL.D., 04; C.E.,

- Wooster, 82, Sc.D, Armour. U. S. civil asst. engineer, 77-80; engineer, Peoria and Farmington R. R., 78-81; Iowa Cent. R. R., 81-86; Atchison, Topeka and Santa Fe, 86-01; chief engineer, Ill. Cent. R. R., 01-07; asst. second v. pres., 08-10; *chairman*, Westinghouse, Church, Kerr and Co, Inc, 06-16; *Terminal Commission, City of Chicago*, 13- Chief engineer, Panama Canal, 04. Civil Eng. (past pres); R. R. Eng. (past pres); West. Soc. Eng. (past pres). Railroad construction and design.
- Wallace, Prof. Louise B(aird)**, Constantinople College, Constantinople, Turkey. *Zoology*. Newville, Pa, Sept. 21, 67. Woods Hole, summers, 91-03; A.B, Mt. Holyoke, 98, hon. Sc.D, 19; Naples Zool. Sta, 01; A.M, Pennsylvania, 04, Ph.D, 08. Asst. *zool*, Mt. Holyoke, 93-96; Smith, 96-99; instr, Mt. Holyoke, 99-03, assoc. prof., 04-12; prof. biol, *Constantinople Col*, 12-20, *dean of faculty*, 13- Soc. Zool. Axillary gland of Batrachus; the germ-ring in the egg of Batrachus; spermatogenesis and oogenesis of the spider.
- Wallace, Prof. R(obert) C(harles)**, University of Manitoba, Winnipeg, Can. *Geology*. Orkney, Scotland, June 15, 81. M.A, Edinburgh, 01, B.Sc, 07, 1851 Exhibition scholar, 08-10, D.Sc, 12; Carnegie fellow, 10, St. Andrews, 09-10; Ph.D, Göttingen, 09. Science master, 01-05; demonstrator, St. Andrews, 09-10; lecturer *geol. and miner, Manitoba*, 10-12, *prof*, 12- With Can. Geol. Surv, 10-, on leave as commissioner, North Manitoba, 18-21. A.A; Miner. Soc; Can. Min. Inst; fel. London Geol. Soc. Mineralogy; crystallography; economic geology; silicates; dolomitization; rock magmas; gypsum and anhydrite; gold mineralization; petrology of pre-Cambrian; colloidal precipitation; sedimentary processes.
- Waller, Dr. A(dolph) E(dward)**, Ohio State University, Columbus, Ohio. *Botany*. Louisville, Ky, Aug. 24, 92. B.S, Kentucky, 14; M.S, Ohio State, 16, fellow, 16-18, Ph.D, 18. Asst. agron, *Ohio State*, 14-16, *instr. bot*, 18- Agr. adviser, Y. and M. V.R.R, 15; lecturer agron, Ohio State; asst. pathologist, U. S. Dept. Agr, 18; teacher bot, E. Ill. State Nor. Sch, summer, 19; assoc. ed, 'Ecol.' A.A; Bot. Soc; Ecol. Soc; Soc. Agron; Ohio Acad. (treas). Plant ecology; physiology and genetics; agronomy; crop centers; xenia.
- Wallerstein, Dr. Max**, 171 Madison Ave, New York, N. Y. *Chemistry*. Fuerth, Bavaria, 74. Ph.D, Munich, 96. *Practising chemist*. A.A; Chem. Soc; Soc. Chem. Indust; Chem. Verein. Fermentology.
- Wallin, Prof. Ivan E**, University of Colorado, Boulder, Colo. *Anatomy*. Page Co, Iowa, Jan. 22, 83. B.S, Iowa, 05; fellow, Nebraska, 07-08, A.M, 08; Sc.D, N. Y. Univ, 15. Prof. biol, Upsala, 05-07; head of dept, high sch, Oshkosh, Wis, 08-10; instr. *anat*, Univ. and Bellevue Hosp. Med. Col, 10-13; Louisville, 13-14; med. col, Cornell, 14-15; asst. prof. and later assoc. prof, Marquette, 15-18; *prof. and head of dept, Colorado*, 18- Ass. Anat. Thymus and development of blood in cyclostomes; trematodes; human embryology.
- Wallin, Dr. J(ohn) E(dward) Wallace**, 1520 S. Grand Ave, St. Louis, Mo. *Psychology*. Bethesda, Iowa, Jan. 21, 76. A.B, Augustana, 97; A.M, Yale, 99, fellow and hon. fellow, 99-01, Ph.D, 01. Fellow, Clark, 01-02, hon. fellow, and research asst. to Pres. Hall, 01-02; asst, dept. philos, Michigan, 02-03; demonstrator exp. psychol, Princeton, 03-06; head, dept. psychol. and educ, and v. principal, State Nor. Sch, E. Stroudsburg, Pa, 06-09; Nor. Training Sch, Cleveland, 09-10; director, psychol. lab, N. J. Village for Epileptics, Skillman, N. J, 10-11; asst. prof. educ. psychol. Pittsburgh, 12-13, prof. clin. psychol, 13-14, *director*, psychol. clin, 12-14; *Psycho-Educ. Clinic and special schools, St. Louis*, 14-; *lecturer, Harris Teachers Col*, 14- Psychologist, Mellon Inst, 12-13; lecturer, Iowa, summer, 17; California, summer, 18; chairman, committee on mental hygiene, Mo. Conf. for Social Welfare, 19-20. A.A; Psychol. Ass; Ass. Study Exceptional Children; Soc. Col. Teachers Educ. Clinical, experimental and educational psychology; mental defects.
- Wallis, W(illiam) F(isher)**, Carnegie Institution, Washington, D. C. *Physics*. Baltimore, Md, June 5, 74. A.B, Hopkins, 96, 96-97, 98-99; B.S, Mass. Inst. Tech, 13. Teacher, Baltimore, 97-98, 99-00; magnetic observer, U. S. Coast and Geod. Surv, 00-10; with *Carnegie Institution*, 13- A.A; Wash. Philos. Soc. Terrestrial magnetism; atmospheric electricity; seismology.
- Wallis, W(ilson) D(allam)**, Junior College, Fresno, Calif. *Anthropology*. Forest Hill, Md, March 7, 86. A.B, Dickinson, 07, A.M, 10; Rhodes scholar, Oxford, 07-10, B.Sc, 10; Harrison fellow, Pennsylvania, 10-11. Instr. anthrop, Pennsylvania, 11-15, California, 15-16. Field ethnologist, Can. Geol. Surv, summer, 14. Anthropol. Ass. (exec. committee, 14-); Ethnol. Soc. Social anthropology; the Wahpeton division of the Dakota tribe; Messiahs, Christian and pagan.
- Walsh, Prof. Ja(me)s J(oseph)**, 110 W. 74th St, New York, N. Y. *Psychology*. Archibald, Pa, April 12, 65. A.B, Fordham, 84, A.M, 85, Ph.D, 92; M.D, Pennsylvania, 95; Paris, Vienna and Berlin, 96-98; Litt.D, Georgetown, 09; Sc.D, Notre Dame, 10. Instr. med, N. Y. Polytechnic, 00-02, adj. prof, 02-05; prof. nervous diseases and dean, sch. med, Fordham, 05-12; prof. physiol. psychol, Cathedral Col, 09; med. director, sch. sociol, Fordham, 17- Trustee and lecturer biol, Catholic Summer Sch; director, Catholic Inst. for Blind. Laetare medal, 16. A.A; Am. Med. Ass; N. Y. Acad. Med; N. Y. Hist. Soc; foreign societies of history of medicine. Rheumatism; history of medicine; medical education and regulation; animal parasites of man; criminal responsibility; psychotherapy.
- Walster, Prof. H(arlow) L(eslie)**, Agricultural College, N. Dak. *Agronomy*. Troy, Wis, April 20, 83. B.S.A, Wisconsin, 08; M.S, Harvard, 13; Ph.D, Chicago, 18. Asst. prof. soils, Wisconsin, 13-18; *agronomist and director, soil surv, N. Dak. Col. and Exp. Sta*, 19- Soc. Agron; Chem. Soc. Plant physiology; influence of temperature on growth of cereals.

- Walter, Prof. H(erbert) E(uгене), Brown University, Providence, R. I. **Biology*. Burke, Vt, April 19, 67. A.B, Bates, 92; A.M, Brown, 93; Freiburg, 93-94, 03; Ph.D, Harvard, 06. Instr. *biol*, high sch, Chicago, 94-04; asst, Harvard, 04-06; asst. prof, *Brown*, 06-13, *assoc. prof*, 13- Instr. field zool, Cold Spring Harbor, 06-17, asst. director, 17- A.A; Soc. Nat; Soc. Zool; *assoc*. Ornith. Union. Animal behavior; mammary organs; heredity; ornithology; comparative anatomy.
- Walters, Dr. A(rthur) L(ouis), 317 Fall Creek Boulevard, Indianapolis, Ind. *Pharmacology*. Battleground, Ind, Jan. 20, 84. B.S, Purdue, 04; M.D, Hopkins, 12. Botanist, *Eli Lilly and Co*, 04-08, *asst. director, scientific div*, 13- *Assoc. pharmacol*, Indiana, 13-18. Chem. Soc; Am. Med. Ass. Pharmacology of alkaloids.
- Walters, Dr. Francis M(arion), Jr, 5305 Connecticut Ave, Washington, D. C. *Physics*. Monticello, Ind, April 25, 88. A.B, Missouri, 11, A.M, 14, Ph.D, 20. Asst. physics, Missouri, 14-15; in charge of dept, Montana, 15-16; instr, St. Joseph (Mo) Junior Col, 16-18; asst. physicist, *Bur. Standards*, 18-20, *assoc. physicist*, 20- *Physical Soc*; *Optical Soc*; Wash. Philos. Soc. Spectroscopy; photography; wave length measurements in red and infra-red; photographic sensitometry.
- Walton, Prof. Arthur C(alvin), 84 Wright St, Naperville, Ill. *Biology*. Meadville, Pa, Oct. 92. A.B, Northwestern, 13, A.M, 15. Asst, Northwestern, 13-15; teaching fellow, Harvard and Radcliffe, 15-17; *prof. biol*, *Northwestern Col*, 18- Cent. Ass. Sci. and Math. Biochemistry; coelenterate embryology; nematodes.
- Walton, Dr. James H(enri), University of Wisconsin, Madison, Wis. *Chemistry*. Deer Isle, Maine, Feb. 26, 78. B.S, Mass. Inst. Tech, 99, Austin traveling fellow, 01-03; Ph.D, Heidelberg, 03. Asst. *chem*, Illinois, 99-00; Mass. Inst. Tech, 00-01; instr, Illinois, 03-06, *assoc*, 06-07; asst. prof, *Wisconsin*, 07-12, *assoc. prof*, 12-19, *prof*, 19- Major, corps engineers, A.E.F. 17-19. Chem. Soc. Catalysis; growth of crystals.
- Walton, Prof. L(ee) B(arker), Gambier, Ohio. *Biology*. Bear Lake, Pa, Nov. 12, 71. Ph.B, Cornell, 97, Goldwin Smith fellow, 01-02, Ph.D, 02; Bonn, 97-99; A.M, Brown, 00. Asst. *biol*, Brown, 00-01; *prof*, *Kenyon*, 02- Asst, U. S. Fish Commission, 00; Am. Museum Nat. Hist, 01; instr, lake lab, Ohio State, 05-07, 09. A.A. (mem. council, 15-17); Soc. Nat; Soc. Zool; Ohio Acad, (see'y, 06-12, pres, 13); Boston Soc. Nat. Hist. Evolution; variation; genetics; aquatic biology; morphology of Hexapoda; land planarians of North America; dynamics as related to form and function of organisms; laboratory and museum technique.
- Walton, Prof. R(ichard) C(hambers), Arendtsville, Pa. *Plant pathology*. Toughkenamon, Pa. B.S, Pa. State, 11. Mem. Pa. Chestnut Blight Commission, 11-13; Ohio Exp. Sta, 14-18; asst. botanist, *Pa. State*, 18-19, *asst. prof. plant path*, 19- Collaborator, U. S. Dept. Agr. A.A; Phytopath. Soc. Apple diseases; chestnut blight; cedar rust.
- Wann, Frank B(urkett), Agricultural College, Ithaca, N. Y. *Plant physiology*. Warsaw, Ind, April 16, 92. A.B, Wabash, 14; Shaw Sch. of Bot, 14-15; Ph.D, Cornell, 20. Teaching fellow, Shaw Sch. of Bot, 14-15; *instr. bot*, N. Y. *State Col. Agr*, Cornell, 15- Bot. Soc. Nitrogen fixation by green Algae.
- Wanner, Atreus, York, Pa. *Geology*. Washingtonville, Ohio, Sept. 26, 52. A.B, Franklin and Marshall, 73. Principal, high sch, York, Pa, 80-90, *city supt. pub. schools*, 90- A.A; Anthropol. Ass. Local geology and archeology; mineralogy.
- Ward, Dr. A(rchibald) R(obinson), Goshen, N. Y. *Veterinary science, Bacteriology*. Ithaca, N. Y, Sept. 12, 75. B.S.A, Cornell, 98, D.V.M, 01. Asst. dairy bacter, Cornell, and dairy bacteriologist, Exp. Sta, 98-01; instr. vet. science and bacter, California, and veterinarian to Exp. Sta, 01-03, asst. prof, bacter, 03-10, director, State Hygienic Lab, 05-10; chief, Vet. Corps, P. I, 10-14; pathologist, bur. animal indust, U. S. Dept. Agr, 14-18; *lab. director*, *Goshen Laboratories, Inc.* Soc. Bact; Vet. Med. Ass. The bacterial flora of the cow's udder; slimy fermentations of milk; bacteriology of market milk; infectious diseases of fowls.
- Ward, Cha(rle)s H(owell), 1351 South Ave, Rochester, N. Y. *Osteology*. Rochester, Oct. 28, 62., Alfred, 80; special student, Rochester, 95-98. In charge, dept. human anat, Ward's Nat. Science Establishment, 91-99; *manager, Anat. Lab. of Chas. H. Ward*, 99- A.A; Soc. Nat; Ass. Anat; hon. mem. Rochester Dental Soc; fel. Rochester Acad; hon. mem. Seventh Dist. N. Y. Dental Soc. Osteology; odontology; anthropology.
- Ward, Dr. Freeman, University of South Dakota, Vermilion, S. Dak. *Geology*. Yankton, S. Dak, Aug. 9, 79. A.B, Yale, 03, Ph.D, 08. Asst. geol. and miner, Yale, 03-05, Sheffield Sci. Sch, 05-07, instr, 07-12, asst. prof, 12-15; *prof. geol*, *South Dakota*, and *state geologist*, 15- A.A; Ass. State Geol; S. Dak. Acad. (pres, 19). Oil; chalk; clay; natural resources of South Dakota.
- Ward, Prof. Henry B(aldwin), University of Illinois, Urbana, Ill. **Zoology*. Troy, N. Y, March 4, 65. A.B, Williams, 85; A.M, Ph.D, Harvard, 92; Göttingen, Freiburg, Leipzig and Naples Zool. Sta, 88-90; Sc.D, Cincinnati. Instr. science, high sch, Troy, 85-88; zool, Michigan, 93; *assoc. prof. and later prof. zool*, Nebraska, 92-06, head prof, 06-09; *prof*, *Illinois*, 09- In charge *biol. work*, Mich. Fish Commission, 94; *assoc. biol. surv.* Great Lakes, U. S. Fish Commission, 98-09; Alaska salmon investigations, 06-; dean, med. sch, Nebraska, 02-09; ed, 'Studies from Zool. Lab, Univ. of Nebr'; asst. ed, 'Am. Naturalist'; 'Wood's Ref. Hand-book Med. Science'; 'Encycl. Amer'; founder and managing ed, 'Jour. Parasitol.' A.A. (see'y, F. 01, gen. see'y, 03, v. pres, 05); Soc. Nat; Soc. Zool. (pres, 12); Ecol. Soc; Micros. Soc. (see'y, ed, 'Trans,' pres); Fisheries Soc. (v. pres, 13); *assoc. Am. Med. Ass*; Am. Med. Col. (pres, 08); Nat. Cent. States; Nebr. Acad. (pres); Ill. Acad. (pres, 19); Soc. zool. de France; for. mem. Russian Soc. Acclim. for. cor. mem. Vene-

- zuela Acad. Med. Investigations on the Great Lakes; plankton; parasites of man and the domestic animals; other worms; life history of Pacific salmon; stream pollution; parasites of man and of fish; origin of parasitic fauna.
- Ward, Henry L(evi)**, Public Museum, Milwaukee, Wis. *Zoology*. York, N. Y., Oct. 8, 63. Rochester, 84. With Ward's Nat. Science Estab, 84-87; Mex. Govt. exped. in search West Indian seal, 86; osteologist, Mex. Geog. Exploring Commission, 87-91; dept. manager and v. pres, Ward's Nat. Science Establishment, Rochester, 91-02; *director, Milwaukee Pub. Museum*, 02- Mem. Mex. Commission, Paris Expos, 89. A.A.; Mus. Ass. (v. pres, 11, pres, 12); assoc. Ornith. Union; Soc. Mammal; Wis. Research Bur. (pres, 20); Wis. Acad; Wis. Nat. Hist. Soc. (v. pres, 04-); Wis. Archeol. Soc; Gt. Britain Mus. Ass. Mammals; birds; meteorites; museum administration.
- Ward, Dr. H(iram) Lee**, 51 Colvin St, Buffalo, N. Y. *Chemistry*. Laurens, N. Y., May 18, 83. A.B, Yale, 06, Ph.D, 09. Instr. chem, Swarthmore, 09-12; Wesleyan, 12-14, assoc. prof, 14-15; instr, Maine, 15-18; *research physical chemist, Nat. Aniline and Chem. Co*, 18- A.A.; Chem. Soc; Electrochem. Soc; Inst. Metals. Oxalates in analysis; distillation of tars; physical properties of organic compounds.
- Ward, Prof. R(obert) DeC(ourcy)**, Harvard University, Cambridge, Mass. *Climatology*. Boston, Mass, Nov. 29, 67. A.B, Harvard, 89, A.M, 93. Asst. physical geog, *Harvard*, 90-94, meteorol, 94-95, instr, 95-96, *climat*, 96-00, asst. prof, 00-10, *prof*, 10- Mem. Shaler Mem. exped. to Brazil, 08. A.A.; Ass. Geog. (pres, 17); Meteorol. Soc. (pres, 20); Am. Acad; fel. Royal Meteor. Soc. Relations of climate and man; climatology of the United States.
- Ward, Dr. Willard P(arker)**, Narragansett Pier, R. I. *Metallurgy*. New York, N. Y., Oct. 12, 45. A.B, Columbia, 65, A.M; Clausthal and Berlin, 65-69; Ph.D, Univ. State of N. Y., 77. Asst. engineer, U. S. Smelting Co, 72-73. Assoc. ed, 'Eng. and Min. Jour,' 70-71. A.A; Min. Eng. (founder). Metallurgy of manganese; manufacture of blast furnace ferro-manganese.
- Wardle, Miss H(arriet) Newell**, Academy of Natural Sciences, Philadelphia, Pa. *Anthropology*. Philadelphia, Feb. 26, 75. Friends' Sch, Phila; Mt. Vernon Sem, 91; Acad. Nat. Sciences, Phila, 99-05. *Asst. to the curators, Acad. Nat. Sciences, Phila*, 05- A.A; Folk-lore Soc; Anthropol. Ass; Int. Cong. Americanists. Eskimo mythology; American basketry; American symbolism; North American archeology; Polynesian technology.
- Warfield, Dr. L(ouis) M(arshall)**, 1203 Majestic Building, Milwaukee, Wis. *Medicine*. Savannah, Ga, May 15, 76. A.B, Hopkins, 97, M.D. 01. Intern, Hopkins Hosp, 01-02; instr. med, Washington (St. Louis), 04-09; *prof. clin. med, Marquette*, 11- Ass. Path. and Bact; assoc. Am. Physicians; Am. Med. Ass. Internal medicine; blood pressure; arteriosclerosis.
- Warner, Edward P**, Massachusetts Institute of Technology, Cambridge, Mass. *Physics*. Pittsburgh, Pa, Nov. 9, 94. A.B, Harvard, 16; B.S,
- Mass. Inst. Tech, 17, M.S, 19. Instr. aero eng, Mass. Inst. Tech, 17-19; chief physicist, Nat. Advisory Committee for Aeronautics, 19-20; *assoc. prof. aero eng, Mass. Inst. Tech*, 20- Aeronautical engineer, Air Service, U.S.A, 17-18. Mech. Eng; Soc. Automotive Eng; Naval Archit. and Marine Eng; Ornith. Union. Aeronautical engineering; aerodynamics; free-flight testing; structural analysis of airplanes.
- Warner, W(orchester) R(eed)**, Tarrytown, N. Y. *Mechanics*. Cummington, Mass, May 16, 46. Hon. D.Sc.M, Pittsburgh, 97. *Pres, The Warner and Swasey Co*, 00- A.A. (sec'y, D, 89, v. pres, D, 06); Astron. Soc; Mech. Eng. (pres, 97); fel. Royal Astron. Soc; British Astron. Soc.
- Warren, Dr. Charles H(yde)**, Massachusetts Institute of Technology, Cambridge, Mass. *Geology*. Watertown, Conn, Sept. 27, 76. Sheffield Sci. Sch, 96, Ph.D, Yale, 99. Instr. miner, Sheffield Sci. Sch, Yale, 00-01; *Mass. Inst. Tech*, 01-04, asst. prof, 04-09, assoc. prof, 09-12, *prof*, 12- A.A; Geol. Soc; Am. Acad. Chemical mineralogy; various petrographical descriptions; petrography and mineralogy.
- Warren, Edward B(oyal)**, 1511 Wood Ave, Colorado Springs, Colo. *Zoology*. Waltham, Mass, Oct. 17, 60. B.S, Mass. Inst. Tech, 81. Director, museum, Colo. Col, 09-18. A.A; mem. Ornith. Union; Cooper Ornith. Club; Wilson Ornith. Club; Soc. Mammal; Wash. Biol. Soc. Colorado birds and mammals.
- Warren, Prof. G(eorge) F(rederick)**, Ithaca, N. Y. *Agriculture*. Harvard, Nebr, Feb. 16, 74. B.S, Nebraska, 97; B.S.A, Cornell, 03, M.S.A, 04, Ph.D, 05. Horticulturist, N. J. Exp. Sta, 05-06; asst. prof. agron, *Cornell*, 06-07, farm crops, 07-09; *prof. farm management*, 09-19, *agr. econ. and farm management*, 19- A.A; Statist. Ass; Farm Econ. Ass. Agricultural education; farm management.
- Warren, Prof. Howard C(rosby)**, Princeton University, Princeton, N. J. **Psychology*. Montclair, N. J, June 12, 67. A.B, Princeton, 89, fellow, 89-90, A.M, 91; Leipzig, Berlin and Munich, 91-93; Ph.D, Hopkins, 17. Instr. logic, *Princeton*, 90-91, demonstrator exp. psychol, 93-96, asst. prof, 96-02, *prof*, 02-14, *psychol*, 14- Assoc. ed, 'Am. Naturalist,' 96; 'Psychol. Rev,' 00-03, co-editor, 03-; compiler, 'Psychol. Index,' 95-08. A.A; Soc. Nat; Psychol. Ass. (pres, 13); Anthropol. Ass. Experimental psychology; bibliography; association psychology.
- Warren, Dr. J(ohn) Collins**, 58 Beacon St, Boston, Mass. **Surgery*. Boston, May 4, 42. A.B, Harvard, 63, M.D, 66, LL.D, 06; Jefferson Med. Col, 95; McGill, 11. Instr, *Harvard Med. Sch*, 71-72, *surg*, 72-82, asst. prof, 82-87, assoc. prof, 87-93, *prof*, 93-07, *emer. prof*, 07- Ed, 'Boston Med. and Surg. Jour,' 73-80; pres, Mass. Charitable Eye and Ear Infirmary, 86; overseer, Harvard, 08-14; chairman, Harvard Cancer Commission. Surg. Ass. (pres, 96); Am. Med. Ass; hon. fel. Col. Surg; Am. Acad; Phila. Col. Physicians; hon. fel. Royal Col. Surg; hon. fel. Royal Col. Surg. Edinburgh. Rodent ulcer; columnae adiposae; carbuncle; healing of arteries; diseases of mammary gland.
- Warren, L(ewis) E(ugene)**, 535 N. Dearborn St, Chicago, Ill. *Chemistry*. Hillsdale, Mich, Aug.

- 14, 76. Hillsdale, 93-99; Ph.C, Michigan, 03; fellow, 05-07, B.S., 07. Asst. chem. Hillsdale, 98-99; chemist, Merck and Co, 03-05; food and drug inspection, bur. chem, U. S. Dept. Agr, 07-09; *assoc. chemist, lab, Am. Med. Ass.*, 09-Ebert prize, Pharmaceut. Ass, 08, 11. Pharmaceut. Ass; Chem. Soc. Pharmaceutical and plant chemistry; poisonous plants; analysis of medicines.
- Warren, Prof. L(loyd) A(rthur) H(eber)**, University of Manitoba, Winnipeg, Can. *Mathematics, Astronomy*. Balderson, Ont, Nov. 18, '79. M.A., Queen's (Can), 02, fellow, 02-04; fellow, Clark, 04-07; Ph.D., Chicago, 13. Tutor *math*, Queen's (Can), 02-04; asst, Clark, 05-06; lecturer, Queen's (Can), 06-10; *Manitoba*, 10-12, *asst. prof.*, 12- Royal Astron. Soc. Can. (pres, Winnipeg branch, 15); Winnipeg Sci. Club; fel. Royal Astron. Soc; Soc. astron. de France. Celestial mechanics; the problem of three bodies.
- Warren, Dr. L(uther) F(iske)**, 200 Hicks St, Brooklyn, N. Y. *Medicine*. Waterford, Mich, Sept. 20, 85. A.B., Michigan, 07, M.D., 09. Instr. med, Michigan, 09-12; asst. prof. internal med, L. I. Col. Hosp, 12-14, *assoc. prof.*, 14-15; *practising physician*. A.A.; Am. Med. Ass; *assoc. Am. Physicians*; N. Y. Acad. Med; Brooklyn Soc. Intern. Med. (pres, 15). Internal medicine.
- Warren, Dr. Mortimer**, 690 Congress St, Portland, Maine. *Medicine*. Cumberland Mills, Maine, Dec. 17, 73. A.B., Bowdoin, 96; M.D., Hopkins, 00. Asst. clin. path, med. col, Cornell, 02-10; pathologist, Roosevelt Hosp, 10-16. A.A.; Am. Med. Ass; Ass. Study Int. Secretions.
- Warren, Dr. William H(omer)**, Somerville, N. J. *Chemistry*. Charleston, S. C, Nov. 4, 66. A.B., Harvard, 89, A.M., 91, Ph.D., 92. Chemist, E. R. Squibb and Sons, Brooklyn, N. Y, 92-96; N. Y. Quinine and Chem. Works, 96-97; consulting chemist, 97-98; prof. chem, med. dept, Washington (St. Louis), 98-11, dean, 08-11; asst. prof., Clark, 11-12; prof., Wheaton (Mass), 12-17; capt, Q.M.C. and C.W.S., 17-19; *with Peerless Color Co*, 19- Chem. Soc; St. Louis Acad; Chem. Gesell. Nitro derivatives of metabromtoluol; reactions of sodic alcoholates with tribrom-dinitro-benzol and tribrom-trinitro-benzol; turmerol; picrotonates of certain alkaloids; apparatus for absolute alcohol; ease of alcaptonuria.
- Warthin, Dr. A(ldred) S(cott)**, 1020 Ferdon Road, Ann Arbor, Mich. *Pathology, Anatomy*. Greensburg, Ind, Oct. 21, 66. A.B., Indiana, 88; A.M., Michigan, 90, M.D., 91, Ph.D., 93; Vienna and Freiburg 93, 94, 95. Asst. internal med, *Michigan*, 91, demonstrator, 92-95, *instr. path.*, 95-99, asst. prof., 99-02, junior prof., 02-03, *prof. and director, path. lab*, 03- Committee of One Hundred on Pub. Health. Ass. Path. and Bact. (v. pres, 06, pres, 08); Am. Physicians; Ass. Anat; Soc. Exp. Biol; Ass. Tuber; Am. Med. Ass; Mich. Ass. Tuber. (sec'y, 07, 10); Ann Arbor Ass. Tuber. (sec'y, 08); Int. Bur. Tuber; Int. Ass. Med. Mus. (pres, 10). Pathology of Pacinian corpuscles; histology and pathology of hemolymph glands; hemolysis; secondary and pernicious anemias; tuberculosis; pathological changes produced by Röntgen rays; leucemia; histology and pathology of human parathyroids; status lymphaticus; fatty embolism; new pathology of syphilis; staining of *Spirocheta pallida*; mustard-gas poisoning.
- Washburn, Prof. E(dward) W(ight)**, University of Illinois, Urbana, Ill. **Chemistry*. Beatrice, Nebr, May 10, 81. B.S., Mass. Inst. Tech, 05, Ph.D., 08. Research *assoc. chem*, Mass. Inst. Tech, 06-08; *assoc. Illinois*, 08-10, *asst. prof.*, 10-12, *prof. physical chem*, 12-16, *prof. ceramic chem. and head, dept. ceramic eng*, 16- Mem. Nat. Research Council (acting chairman, chem. div, 18-19); delegate, Int. Chem. Union and Int. Research Council, London and Brussels, 19; Am. commissioner, Int. Commission annual tables physical and chem. constants, 21- A.A.; Chem. Soc; Physical Soc; Ceramic Soc. (ed, 'Jour'); Soc. Glass Technol; Ill. Acad; Royal Soc. Arts. Ionic hydration; hydrates in solution; simple system of thermodynamic chemistry; the theory of solutions; refractories; glass technology; high temperature chemistry and physics of ceramic materials.
- Washburn, Prof. F(rederick) L(eonard)**, 1112 Sixth St, S. E, Minneapolis, Minn. *Zoology*. Brookline, Mass, April 12, 60. A.B., Harvard, 82, Thayer scholar, 87-88, A.M., 95; Hopkins, 85-86. Instr. zool, Michigan, 87-88; entomologist, Oregon Exp. Sta, 88-94; prof. biol, Oregon, 94-02; entom, *Minnesota*, and entomologist, Exp. Sta, 02-18, *prof. econ. vert. zool*, 18- State entomologist, Minn, 02-18. State biologist, Oregon, 98. A.A.; Soc. Nat; Ass. Econ. Entom. Bionomics of certain insects; acclimatization of eastern oyster on Oregon coast; food fishes of Oregon; sex of *Ostrea lurida*; economic zoology.
- Washburn, Prof. John Hosea**, Buckingham, Pa. *Chemistry*. Bridgewater, Mass, June 5, 59. B.S., Mass. Col, 78; Brown, 80-81; A.M., Ph.D., Göttingen, 89. Principal pub. sch. West Bridgewater, Mass, 78-79; supt. schools, Providence, R. I, 79-80; asst, agr. chem. lab, Mass. Col, 81-83; prof. agr. chem, Conn. Col, 83-87; pres, R. I. Col, 89-02; director, Nat. Farm Sch, 02-17. Chem. Soc; Ass. Agr. Col. and Exp. Sta. (sec'y-treas, 94-99). Agricultural chemistry and education.
- Washburn, Prof. Margaret F(loy)**, Vassar College, Poughkeepsie, N. Y. **Psychology*. New York, N. Y, July 25, 71. A.B., Vassar, 91, A.M., 93; Ph.D., Cornell, 94. Prof. psychol. and ethics, Wells, 94-00; warden, Sage Col, Cornell, 00-02, lecturer psychol, 01-02; asst. prof., Cincinnati, 02-03; *assoc. prof. philos. in charge psychol*, Vassar, 03-08, *prof. psychol*, 08- Psychol. Ass; Philos. Ass. Space-perception of the skin; after-images; comparative psychology; psychology of the affective processes.
- Washburne, Alva C(ourtenay)**, Pittsfield, Mass. *Mathematics*. Mt. Auburn, Ill, 66. Purdue, 84-88; U. S. Mil. Acad, 88-90. Asst. civil engineer, La Fayette, Ind, 82-84; instr. math. and mil. tactics, N. Y. Mil. Acad, Cornwall-on-Hudson, 90-91; Cheltenham Acad, Ogontz, Pa, 91-92; instr, Ogontz Sch. for Young Ladies, 91-92; Ossining Sem, 92-93; St. John's Sch, Ossining, N. Y, 92-93; asst. prof. math, Mass. Col, 93-95; with actuarial dept, Metropolitan Life Ins.

- Co, N. Y., 95-06; actuary, Hartford Life Ins. Co, 06-10; assoc. actuary, *Berkshire Life Ins. Co*, 10-11, *actuary*, 11- A.A; Math. Soc; Math. Ass; assoc. Actuarial Soc; fel. Statist. Soc. Applied mathematics; engineering; actuarial science.
- Washburne, Chester W(esley)**, 60 Liberty St, New York, N. Y. *Geology*. Eugene, Oregon, Nov. 17, 83. A.B, Oregon, 05; Harvard, 05-06; Chicago, 06-07. Field asst, *U. S. Geol. Surv.*, 00-06, junior geologist, 07, *asst. geologist*, 08- A.A; Geol. Soc; Min. Eng; Wash. Geol. Soc. Geology of petroleum; mechanics of faulting.
- Washington, Dr. Henry S(tephens)**, Geophysical Laboratory, Washington, D. C. **Petrology*. Newark, N. J, Jan. 15, 67. A.B, Yale, 86, A.M, 88; Am. Sch. of Classical Studies, Athens, 88-94; Ph.D, Leipzig, 93. Asst. physics, Yale, 86-88, miner, 95-96; work in private lab, 96-12; consulting mining engineer, 06-12; *petrologist, geophys. lab, Carnegie Institution*, 12- Research asst, Carnegie Institution. Chem. assoc. and scientific attaché, American Embassy, Rome, 19. Geol. Soc; fel. Archeol. Inst; Chem. Soc; Wash. Acad; for. cor. London Geol. Soc; for. cor. Soc. Espan. Hist. Nat; for. mem. Acad. dei Lincei; Soc. Geol. Italiana. Petrology of igneous rocks, their chemical analysis and classification; a collection of all analyses of igneous rocks since 1883; chemical mineralogy; volcanology; diamonds in Arkansas and Brazil; petrographic provinces; significance of the norm; mineral groups, especially pyroxenes and amphiboles; fumarolic salts of volcanoes; potash from leucitic lavas of Italy; rocks and isostasy; excavations in Greece.
- Wasteneys, Dr. Hardolph**, University of Toronto, Toronto, Can. *Experimental biology*. Richmond, England, April 6, 81. Ph.D, Columbia, 16. Asst. govt. chemist, Queensland, Australia, 00-03; chemist and biologist, Brisbane Board Waterworks, 03-09; asst, Rockefeller Inst, 10-13, assoc. exp. biol, 13-16; assoc. prof. pharmacol, California, 16-18; asst. prof. *biochem, Toronto*, 18-20, *assoc. prof.*, 20- A.A; Soc. Exp. Biol; Soc. Biol. Chem; London Chem. Soc. Water purification; oxidations in sea urchin eggs; antagonistic salt action; artificial parthenogenesis; heliotropism.
- Waterman, Prof. Frank A(llan)**, Smith College, Northampton, Mass. **Physics*. Oswego, N. Y., July 9, 65. A.B, Princeton, 88, Ph.D, 96. Instr. *physics*, Purdue, 91-92, prof, 92-93; instr, Princeton, 93-97; *prof, Smith*, 97- A.A; Physical Soc; Soc. de Physique. Calorimetry; specific heats of metals.
- Waterman, Prof. W(arren) G(ookin)**, 2018 Orrington Ave, Evanston, Ill. *Botany*. Southport, Conn, Sept. 3, 72. A.B, Yale, 92, A.M, 07; Ph.D, Chicago, 17. Instr. nat. science, Fisk, 96-02, prof. geol, 03-11; *asst. prof. biol*, Knox, 12-15; *bot, Northwestern*, 17- A.A; Bot. Soc; Ecol. Soc; Mich. Acad; Ill. Acad. (treas, 19). Ecology of dune flora; forests of Illinois.
- Waters, Dr. C(ampbell) E(aster)**, Bureau of Standards, Washington, D. C. *Chemistry*. Baltimore Co. Md. Sept. 14, 72. A.B, Hopkins, 95, Ph.D, 99. Prof. chem. and physics, Conn. Col, 00-01; asst. chem, Hopkins, 01-04; asst. chemist, *Bur. Standards*, 04-09, assoc. chemist, 09-17, *chemist*, 17- A.A; Chem. Soc; Fern Soc. (past pres. and sec'y); Wash. Chem. Soc. (past pres. and sec'y); Wash. Acad. Products formed by the action of heat on para-sulphamin metatoluic acid; key to ferns of the northeastern states based on the stipes; ferns; action of ozone on carbon monoxid; action of dry hydrochloric acid gas dissolved in anhydrous benzene on zinc; the effects of high temperature and of sunlight upon lubricating oils; sulphur in rubber; sulphur in petroleum oils; detection and determination of gum arabic.
- Waters, Prof. H(enry) J(ackson)**, Kansas City, Mo. *Agriculture*. Center, Mo, Nov. 23, 65. B.Agr, Missouri, 86, LL.D, 16; Leipzig, 04-05; Zürich, 05; LL.D, N. H. Col, 13. Asst. sec'y, Mo. State Board of Agr, 86-87; asst. agr, Mo. Exp. Sta, 87-91; prof. agr, Pa. State, 92-95; dean, col. agr. and mech. arts, Missouri, and director, Exp. Sta, 96-09; pres. Kansas State, 09-18; *managing ed, 'Kansas City Weekly Star'*, 18- Lecturer animal nutrition, grad. sch. agr, Ohio State, 02; grad. sch. agr, Illinois, 06; Iowa, 10; pres, Mo. State Board of Agr, 09; administrator for Kans, Food Ad, 17. Soc. Prom. Agr. Sci; Soc. Animal Nutrition. Methods of fattening and wintering cattle.
- Watkeys, Prof. C(harles) W(illiam)**, 20 Girton Place, Rochester, N. Y. *Mathematics*. Syracuse, N. Y, Sept. 30, 77. A.B, Rochester, 01; A.M, Harvard, 08. Asst. *math, Rochester*, 03-05, instr, 05-06, 08-10, asst. prof, 10-18, *prof.*, 18- A.A; Math. Soc; Math. Ass. Elementary functions and applications.
- Watkins, Howard R**, Army Medical School, Washington, D. C. *Chemistry*. Grundy Center, Iowa, May 2, 78. A.B, Coe, 02; M.S, Iowa State, 04. Asst. analyst, Iowa Exp. Sta, 02-04; asst. chem, Ohio State, 04-05; Kansas State, 05-06; *asst. chemist*, Wash. Exp. Sta, 06-08; *U. S. War Dept*, 08- Chem. Soc. Chemistry of wheat.
- Watkins, W(illard) H(askell)**, 12 St. James Place, Buffalo, N. Y. *Chemistry*. Boston, Mass, Jan. 7, 74. B.S, Mass. Inst. Tech, 95. With various dye companies, 95-99; *with Nat. Aniline and Chem. Co*, 00-, in charge dyeing and application of dyes, 05-19, *manager, Buffalo plant*, 19- Lecturer dyes and dyeing, Buffalo; mem. advisory committee, W.T.B. A.A; Chem. Soc. (chairman, west. N. Y. sect, 09, 10, counselor, 16-); Soc. Chem. Indust; British Soc. Dyers and Colorists. Application of dyestuffs.
- Watson, Prof. A(rthur) E(ugene)**, 30 Congdon St, Providence, R. I. *Electrical engineering*. Providence, March 4, 66. A.B, Brown, 88, A.M, 98, Ph.D, 05. Draftsman, Thomson-Houston Elec. Co, 88; asst. foreman, drafting and eng. dept, Thomson-Houston and Gen. Elec. Companies, 89-95; instr. physics, Brown, 95-99, asst. prof, 99-20, *assoc. prof. elec. eng.*, 20- Lecturer, univ. exten. dept, Brown, 91-92. Elec. Eng.
- Watson, Dr. E(dward) A(rthur)**, Biological Laboratory, Ottawa, Can. *Pathology*. Devon, England, Jan. 2, 79. Grad. Ont. Vet. Col, 04; Berlin; Frankfurt; Paris; Cambridge. Asst, bacter. lab, Pretoria, S. Africa, 00-01;

- asst. pathologist, biol. lab, Ottawa, 05-06; pathologist, Vet. Research Lab, 06-20; *chief animal pathologist, biol. lab, Ottawa, 20-* Capt, C.E.F., 15-19; bacteriologist, R.A.V.C., B.E.F., 17-19. Ass. Path. and Bact; Vet. Med. Ass. (v. pres, 19); Alta. Vet. Med. Ass. (pres, 12). Trypanosomes; loco disease; serums, toxins, antitoxins and immunity; swamp fever; mycoses.
- Watson, Prof. Emery Ernest**, Cedar Falls, Iowa. *Mathematics.* Fairfield, Iowa. B.S., M.S., Iowa, 05; Chicago, 07-08. Prof. math. and physics, Wheaton, 05-08; asst. prof, Wash. State, 08-10; *prof. math. and astron*, Parsons, 10-20; *math, Iowa State Teachers Col, 20-* Instr. summer sch, Iowa State Teachers Col, 13-Iowa Ass. Math. Teachers (pres, 17-19). Pedagogy of mathematics.
- Watson, Prof. F(loyd) R(owe)**, University of Illinois, Urbana, Ill. **Physics.* Lawrence, Kans, April 23, 72. B.S., California, 99, Le Conte fellow, 99, Whiting traveling fellow, 00; Pres. White fellow, Cornell, 01, Ph.D, 02. Asst. physics, California, 97-99; instr. *Illinois*, 02-04, asst. prof, 04-15, assoc. prof, 15-17, *prof. exp. physics*, 17- A.A.; Physical Soc. Acoustics; intensity, reflection and transmission of sound.
- Watson, Prof. John B(roadus)**, care J. Walter Thompson Co, 244 Madison Ave, New York, N. Y. **Psychology.* Greenville, S. C, Jan. 9, 78. A.M., Furman, 99; fellow, Chicago, 01-03, Ph.D, 03; LL.D., Furman, 18. Principal, Batesburg Inst, 99-00; asst. exp. psychol, Chicago, 03-04, instr, 04-08, asst. prof. elect, 08; prof. exp. and comp. psychol. and director, psychol. lab, Hopkins, 08-20; *consulting psychologist, J. Walter Thompson Co, Advertising*, 20- Ed, 'Jour. Exp. Psychol'; 'Behavior Monographs.' Psychol. Ass; Physiol. Soc; Am. Acad. Animal psychology; animal education; normal body growth of white rat; kinesthetic and organic sensations of the white rat; behavior of noddly and sooty terns; color vision in monkeys; imitation in monkeys; color and brightness vision in several species of mammals; conditioned motor and secretion reflexes; effect of drugs and distribution of practice on human learning; behavior of the human infant; hypnosis.
- Watson, Prof. J(ohn) W(ilbur)**, Virginia Polytechnic Institute, Blacksburg, Va. *Chemistry.* Chatham, Va, June 18, 88. A.B., A.M., Virginia, 10, Ph.D, 13. Asst. chem, Virginia, 09-10, instr, 10-13; *prof. inorg. chem, Va. Polytech*, 13- A.A.; Chem. Soc. Abstraction of potassium during sedimentation.
- Watson, Prof. J(oseph) R(alph)**, University of Florida, Gainesville, Fla. *Biology.* Berea, Ohio, Aug. 1, 74. B.S., Baldwin, 97; Western Reserve, 98-00, A.M, 99. Asst. and instr. biol, Adelbert Col, Western Reserve, 99-00; instr. bot, physics and chem, Berea, 01-02; prof. biol, physics and chem, Rochester Nor. Univ, Ind, 03-06; instr. biol, high sch, Manitowoc, Wis, 06-07; prof, New Mexico, 07-11; *entomologist, Fla. Exp. Sta*, 11- Ed, 'Fla. Entomologist.' A.A.; Ecol. Soc; Fla. Entom. Soc. (pres, 16). Common plants of Bernalillo County, New Mexico; plant societies of New Mexico; succession of animals; Thysanoptera of Florida; insects of Florida.
- Watson, Lawrence Orr**, Florence, S. C. *Plant pathology.* Ninety Six, S. C, Aug. 28, 88. B.S., Clemson, 08, Illinois. Asst. chemist, Clemson, 08-10, exp. field pathologist, S. C. Exp. Sta, 11-14; asst. pathologist, *bur. plant indust, U. S. Dept. Agr*, 14-16, *path. adviser*, 16- A.A.; Phytopath. Soc. Breeding for disease resistance in cotton and other crops.
- Watson, Thomas A(gustus)**, 67 Mt. Vernon St, Boston, Mass. *Electrical engineering.* Salem, Mass, Jan. 18, 54. Mass. Inst. Tech. With Alexander Graham Bell, 74-78; supt. and engineer, Bell Telephone Co, 78-81; mem. firm F. O. Wellington and Co, 84-00; pres, Fore River Ship and Engine Co, 00-03. A.A.; Elec. Eng; Boston Soc. Nat. Hist; Essex Inst; N. Y. Elec. Soc.
- Watson, Prof. Thomas L(eonard)**, Charlottesville, Va. **Geology.* Chatham, Va, Sept. 5, 71. Grad, Va. Agr. and Mech. Col, 90, M.S, 93; Virginia, 91; fellow, Cornell, 96-97, Ph.D, 97. Asst. chemist, Va. Exp. Sta, 90-95; instr. geol, Va. Agr. and Mech. Col, 91-95; asst. state geologist, Ga. Geol. Surv, 98-01; prof. geol, Denison, 01-04; Va. Polytech. Inst, 04-07; econ. geol, Virginia, 07-10, *head prof, schools of geol*, 10-; *director and state geologist, Va. Geol. Surv*, 08-Mem, sixth Peary arctic exped. to N. Greenland; research work, U. S. Nat. Museum, 97, 98; asst. geologist, Ind. Geol. Surv, summer, 97; Ga. Geol. Surv, 98-01, geologist, 02; N. C. Geol. Surv, 03; asst. geologist, U. S. Geol. Surv, 03-A.A. (mem. committee of one hundred, scientific research); Geol. Soc. (councilor, 15-17); Min. Eng. (mem. committee on war minerals); Mineral. Soc; Soc. Econ. Geol; Seismol. Soc; Ass. State Geol. (sec'y); Wash. Geol. Soc; Wash. Acad. Economic geology and petrography; geology of the rarer minerals; petrography of the southeastern Atlantic States.
- Watson, Prof. W(illiam) F(ranklin)**, Athens, Ga. *Chemistry, Biology.* New Brunswick, Can, May 11, 61. A.B., Colby, 87, A.M, 90; Pennsylvania, 92-93; Chicago, 98. *Prof. chem. and biol. and curator of museum, Furman*, 90- Appointed by Nat. Civic Fed. to inspect educ. institutions of Gt. Britain, 08. Medal, S. C. Interstate and W. I. Expos, 02. A.A.; Micros. Soc. (v. pres, 06); Health League; Royal Soc. Arts; fel. N. British Acad. Improved methods in photomicrography; photographing with natural lenses, using the crystalline lens of higher animals and the corneal lenses from the eye of an insect.
- Watt, Prof. James C(rawford)**, 20 Hawthorne Ave, Toronto, Can. *Anatomy.* Toronto, June 15, 86. B.A., Toronto, 08, M.B, 10, M.A., M.D, 18. Asst. anat, Toronto, 10-11, lecturer, 11-18, topog. anat, 15-18, *asst. prof. anat*, 18- Ass. Anat; Ont. Col. Physicians and Surg. Embryology; young human embryos; abnormalities.
- Watts, Arthur S(imeon)**, Ohio State University, Columbus, Ohio. *Ceramics.* Zanesville, Ohio, March 27, 76. Ohio State; Tech. Hochsch, Berlin. Private asst. to Prof. Edw. Orton, Jr, Ohio State, 98-01; ceramic engineer, Bell Pottery Co, 02-03; New Lexington High Voltage Porcelain Co, 03-04; Locke Insulator Co, 05-09; quarry technologist, U. S. Bur. Mines, 11-14;

- assoc. prof. *ceramic eng.*, *Ohio State*, 14-16, *prof. and head of dept.*, 16- Ceramic Soc. (v. pres, 09, pres, 12). Pottery construction; porcelain for electrical purposes; bone china; transmission insulators; high tension insulation in Europe; dental porcelains; micro-structure of porcelains; deformation of silicate mixtures; kaolin mining in Europe and south Appalachian regions.
- Watts, Prof. Oliver P (aterson)**, Chemical Engineering Building, Madison, Wis. *Chemistry, Metallurgy*. Thomaston, Maine. A.B, Bowdoin, 89, A.M, 92; Ph.D, Wisconsin, 05. Instr. math. and physical sciences, Franklin Acad, Malone, N. Y., 92-98; chem, high sch, Waltham, Mass, 98-03; in charge Carnegie research on electrolytic iron, *Wisconsin*, 05-06, instr. *applied electrochem*, 06-08, asst. prof, 08-17, *assoc. prof.*, 17- Electrochem. Soc; Chem. Soc. Alumino-thermic process; calcium alloys; silicides; borides; electric furnaces; electroplating, corrosion and protection of metals.
- Watts, Prof. R (alph) L (evi)**, State College, Pa. *Horticulture*. Kerrmoor, Pa, June 5, 69. B.S.A, Pa. State, 90, M.S, 99; Agr.D, Syracuse, 16. Horticulturist, Tennessee, 90-99; lecturer, farmers institutes, 99-08; prof. hort, *Pa. State*, 08-12, *dean and director sch. agr. and Exp. Sta.*, 12- Soc. Hort. Sci; Vegetable Growers Ass, (past pres). Vegetable gardening and forcing.
- Watts, Prof. Stephen H (urt)**, University of Virginia, Charlottesville, Va. *Surgery*. Lynchburg, Va, Aug. 6, 77. A.M, Randolph-Macon, 96; M.D, Hopkins, 01. House officer, asst. res. surgeon and later res. surgeon, Hopkins Hosp, 01-07; *prof. surg.*, *Virginia*, 07- A.A; Am. Med. Ass; Col. Surg; Surg. Ass; Soc. Int. de Chirurg. Suture of blood vessels; surgery of the pancreas.
- Waugh, Prof. F (rank) A (lbert)**, Amherst, Mass. *Horticulture*. Sheboygan, Wis, July 8, 69. B.S, Kansas State, 91, M.S, 93; Cornell, 97-98; Hort. Sch. Dahlem, Germany, 10. Asst. hort, Kansas State, 91; *prof.*, *Okla. Col.*, 93-95; Vermont, 95-02; *Mass. Col.*, 02- Landscape gardening; country planning; national and state forests and parks.
- Waugh, F (rederick) W (ilkerson)**, Geological Survey of Canada, Ottawa, Can. *Ethnology*. Langford, Ont, April 4, 72. *Ethnologist*, *Can. Geol. Surv.*, 11- Folk-lore Soc; Ottawa Field Nat. Club (treas, 18-). Ethnology of American Indian tribes; Iroquois and Ojibwa material culture, folk-lore and mythology.
- Waugh, Dr. Karl T (insley)**, Berea College, Berea, Ky. *Psychology*. Cawnpore, India, 79. A.B, Ohio Wesleyan, 00, A.M, 01; A.M, Harvard, 06, Ph.D, 07. Prof. philos. and math, Cladfin, 00-04; asst. philos, Harvard, 06-07; assoc. psychol, Chicago, 07-09; *prof. philos. and psychol.*, Beloit, 09-18; *dean*, *Berea*, 19- Lecturer psychol, Colorado, 09, 14; educ. research, India and China, 16-17; major, Sanit. C, and chief psychol. examiner, U.S.A, 17-19; supervisor, Fed. Board Vocational Educ, 19- A.A; Psychol. Ass. Comparative psychology.
- Wayne, Arthur T (rezevant)**, Mt. Pleasant, S. C. *Ornithology*. Blackville, S. C, Jan. 1, 63. Grad, high sch, Charleston, S. C, 80. *Hon. curator, div. birds, museum, Col. of Charleston*, 06- Mem. Ornith. Union. The birds of South Carolina.
- Wead, Prof. C (harles) K (asson)**, U. S. Patent Office, Washington, D. C. **Physics*. Malone, N. Y, Sept. 1, 48. A.B, Vermont, 71, A.M, 74; Mass. Inst. Tech, 72; Berlin, 75-76. Prof. physics, high sch, Pittsburgh, Pa, 72-75; Michigan, 77-85; elec. engineer and contractor, 87-90; *examiner*, U. S. Patent Office, 92- A.A; (sec'y, B, 83); Wash. Acad. (v. pres, 09); Wash. Philos. Soc. (pres, 09). Physical and musical acoustics; history of musical scales; the history, physical theory and laws of musical instruments; acoustics of public buildings; the graphical method.
- Wear, Dr. L (uther) E (wing)**, 48 S. Grand Oaks, Pasadena, Calif. *Mathematics*. Brownwood, Tex, July 2, 81. A.B, Cumberland, 02; Ph.D, Hopkins, 13. Prof. math, Trinity (Tex), 04-08; instr, Washington (Seattle), 13-18, *prof.*, *Calif. Inst. Tech.*, 18- A.A; Math. Soc. Geometry.
- Weatherby, C (harles) A (lfred)**, 11 Wells Ave, East Hartford, Conn. *Botany*. Hartford, Conn, Dec. 25, 75. A.B, Harvard, 97, A.M, 98. Asst. Gray Herbarium, Harvard, 08, 09, 11, 15, 17. Bot. Soc; Fern Soc. (sec'y, 14-); Torrey Bot. Club; New Eng. Bot. Club; Conn. Bot. Soc. (v. pres, 10-). Botanical taxonomy.
- Weatherby, Dr. LeRoy S (amuel)**, University of Southern California, Los Angeles, Calif. *Chemistry*. Baldwin, Kans, March 29, 80. A.B, Kansas, 06, A.M, 08; fellow, Chicago, 09-11, Ph.D, 11. Instr. chem. and physics, Baker, 06-08; asst. prof. chem, Okla. Col, 08-09; asst. prof. and later *prof.*, *Southern California*, 11- A.A; Chem. Soc. Physico-organic chemistry; synthetic organic chemistry; rubber.
- Weatherwax, Dr. Paul**, University of Georgia, Athens, Ga. *Botany*. Near Worthington, Ind, April 4, 88. A.B, Indiana, 14, A.M, 15, Ph.D, 18. Lab. asst. bot, Indiana, 13-15, instr, 15-19; *assoc. prof.*, *Georgia*, 19- A.A; Bot. Soc. Morphology of grasses.
- Weaver, Prof. C (harles) E (dwin)**, University of Washington, Seattle, Wash. *Geology*. Utica, N. Y, May 1, 80. B.S, California, 04, Ph.D, 07. Instr, asst. prof. and later *assoc. prof. geol.*, *Washington (Seattle)*, 07- Asst. U. S. Geol. Surv, Alaska, summer, 06; geologist, Wash. State Coal Surv, 09, 10. A.A; Paleont. Soc; Chem. Soc. Miocene geology and stratigraphy; Eocene paleontology and the Tertiary echinoids of California; mineralogy; the Napa folio of California; geology of Puget Sound Basin, the San Juan Islands and the Stilligumish Valley, Washington; the coal fields of Washington.
- Weaver, Prof. E (dwin) O (scar)**, 473 Park Place, Springfield, Ohio. *Physics*. Springfield, April 1, 67. A.B, Wittenberg, 89, A.M, 92; Chicago, 94; Michigan, 04-06, 15-16. Instr. math, Wittenberg Acad, 89-93, principal, 93-96; acting prof. math. and physics, *Wittenberg*, 95-96, *prof.* physics and biol, 96-04, *physics*, 01- A.A. Magnetic and expansion phenomena attending the recalescence of iron.
- Weaver, E (lmer) R (upel)**, Bureau of Standards, Washington, D. C. *Chemistry*. Longmont, Colo, May 5, 87. Asst. chemist, Standard Portland

- Cement Co, 10-12; *Bur. Standards*, 12-17, *assoc. chemist*, 17- Chem. Soc. Chemistry and physical chemistry of gases.
- Weaver, Floyd C(alvin)**, 1515 Park Road, Washington, D. C. *Physics*. La Fayette, Ind, July 24, 87. B.S, Purdue, 10. *Assoc. physicist*, *Bur. Standards*, 10- Optical Soc; Astron. Soc; Wash. Philos. Soc. Optical surfaces; design of optical systems.
- Weaver, Prof. George H(owitt)**, 629 S. Wood St, Chicago, Ill. *Pathology*. Sussex, Wis, Oct. 22, 66. Carroll, 82-85; Wooster, 85-86; M.D, Rush Med. Col, 89. Prof. *path*, Women's Med. Sch, Northwestern, 93-97; asst. prof, *Rush Med. Col*, 99-18, *prof*, 18- Physician in charge, Durand Hosp, McCormick Inst. for Infectious Diseases, Chicago, 02-; attending physician contagious diseases, Cook Co. Hosp, 05-13. A.A; Ass. Path. and Bact; Soc. Bact; Am. Physicians; Am. Med. Ass; Chicago Path. Soc. (sec'y, 94-); Chicago Soc. Med. Hist. Bacteriology and immunity in contagious diseases.
- Weaver, Dr. J(ames) H(enry)**, Hilliards, Ohio. *Mathematics*. Madison Co, Ohio, June 19, 83. A.B, Otterbein, 08; A.M, Ohio State, 11; Ph.D, Pennsylvania, 16. Teacher, high sch, Plain City, Ohio, 08-10; instr. *math*, Ohio State, 10-12; head of dept, high sch, West Chester, Pa, 12-15; *instr*, Ohio State, 17- A.A; Math. Soc; Math. Ass. History of mathematics; geometry.
- Weaver, Prof. J(ohn) E(inst)**, Station A, Lincoln, Nebr. *Botany*. Villisca, Iowa, May 5, 84. B.S, Nebraska, 09, A.M, 11; Ph.D, Minnesota, 16. Instr. bot, Wash. State, 12-13, asst. prof, 13-14; instr, Minnesota, 14-15; asst. prof, *Nebraska*, 15-17, *prof. plant ecol*, 17- A.A; Bot. Soc; Ecol. Soc; Nebr. Acad. Plant ecology, physiology and pathology.
- Webb, Prof. Hanor A**, Peabody College for Teachers, Nashville, Tenn. *Chemistry*. Nashville, April 1, 88. A.B, Nashville, 08; M.S, Chicago, 11; Ph.D, Peabody Col. Teachers, 20. Asst. *chem*, Chicago, 10-12; instr, W. Tenn. State Nor. Sch, 12-17; *Peabody Col. Teachers*, 17-19, asst. *prof*, 19- Chem. Soc. Food and agricultural chemistry; teaching of science.
- Webb, Prof. Harold W(orthington)**, Columbia University, New York, N. Y. *Physics*. Ithaca, N. Y, July 27, 84. A.B, Columbia, 05, Ph.D, 09. Instr. and later asst. *prof. physics*, Columbia, 09- Physical Soc. Short electric waves.
- Webb, J(esse) L(ee)**, U. S. Department of Agriculture, Washington, D. C. *Entomology*. Bloomington, Ill, April 9, 78. B.S, Wash. State, 00; M.S, West Virginia, 02. Special field agent, U. S. Dept. Agr, 02-09, asst. *bur. entom*, 09-19, acting in charge south. field crop insect investigations, 19- A.A; Ass. Econ. Entom; Wash. Entom. Soc. Rice and forest insects; biology of Tabanidae.
- Webb, Prof. L(ouie) W(infield)**, Northwestern University, Evanston, Ill. *Psychology*. Texarkana, Ark, Sept. 8, 83. A.B, Ouachita, 06; A.M, Chicago, 13, Ph.D, 16. Prof. philos, Ouachita, 09-11; instr. psychol. and educ, *Northwestern*, 16-18, asst. *prof. educ*, 18- Instr. psychol, Ill. State Nor. Univ, summer, 16; lecturer business psychol, sch. commerce, Northwestern, 18- Psychol. Ass. Educational psychology; transfer of training and retroaction; methods of studying.
- Webb, Walter Loring**, 31 Runnymede Ave, Lansdowne, Pa. *Civil engineering*. Rye, N. Y, June 25, 63. B.C.E, Cornell, 84, C.E, 89. Instr. civil eng, Cornell, 88-92; asst. prof, Pennsylvania, 93-01; consulting engineer, 01- Major and chief engineer, renting, requisitions and claims service, corps engineers, A.E.F, 17-20. Civil Eng; R. R. Eng; Phila. Eng. Club. Railroad engineering; reinforced concrete.
- Webber, Dr. H(erbert) J(ohn)**, Pedigreed Seed Co, Hartsville, S. C. **Plant physiology*. Lawton, Mich, Dec. 27, 65. B.S, Nebraska, 89, A.M, 90, Agr.D, 13; Ph.D, Washington (St. Louis), 01. Instr. bot, Nebraska, 89-90; Washington (St. Louis), 90-92; pathologist, U. S. Dept. Agr, 92-99, physiologist in charge, plant breeding lab, 00-07; prof. plant biol, Cornell, 07-08, exp. plant breeding, 08-12, acting director, col. agr, 09-10; dean, grad. sch. trop. agr, California, and director, Citrus Exp. Sta, 13-19, director, Calif. Exp. Sta, 19-20; gen. manager, *Pedigreed Seed Co*, 20- Rep. of U. S. Dept. Agr, Int. Conf. on Hybridization, 98. A.A; Soc. Nat; Ecol. Soc; Soc. Hort. Sci; Bot. Soc. Plant reproduction; Zamia and Ginkgo; orange diseases; plant breeding; breeding of oranges, cotton, corn, pineapples, timothy, potatoes, etc.
- Webber, Dr. W(infield) Paul**, University of Pittsburgh, Pittsburgh, Pa. *Mathematics*. 74. A.M, Defiance, 03; Cincinnati, 08, Ph.D, 11. Instr, pub. and private schools, 97-02; math. and physics, Defiance, 03-04; Lebanon, 04-06; math, Cincinnati, 06-09; Okla. Col, 09-11; Bethany, 11-13; Pittsburgh, 13- A.A. Theory of functions of complex variable; teaching of secondary mathematics.
- Webster, Prof. A(rthur) G(ordon)**, 85 William St, Worcester, Mass. **Physics*. Brookline, Mass, Nov. 28, 63. A.B, Harvard, 85, Parker fellow, (Berlin, Paris and Stockholm), 86-90; Ph.D, Berlin, 90; hon. Sc.D, Tufts, 05; LL.D, Hobart, 08. Instr. math., Harvard, 85-86; docent physics, Clark, 90-92, asst. prof, 92-00, *prof*, 00- Lecturer, Lowell Inst, Boston, 97; Harrison lecturer, Pennsylvania, 11. Elihu Thomson prize, Paris, 95. Nat. Acad; A.A; Math. Soc; Physical Soc. (mem. council, 99-01, 05-08, v. pres, 01, 02, pres, 03, 04, ed. board, 14-16); Am. Acad; Philos. Soc; Royal Inst; Math. Verein; Circolo Mat. di Palermo. Pure and applied dynamics; thermodynamics; sound vibrations; electricity; gyroscopes; ballistics; pressure gage for guns.
- Webster, Prof. David L(ocke)**, Stanford University, Calif. **Physics*. Boston, Mass, Nov. 6, 88. A.B, Harvard, 10, Ph.D, 13. Instr. math, Harvard, 09-12; asst. physics, 11-14, instr, 15-17; asst. prof, Michigan, 17, Mass. Inst. Tech, 19-20; *prof*, Stanford, 20- A.A; Physical Soc; Am. Acad. Light and electron theory; X-ray spectra.
- Webster, Prof. Ed(win) H(arrison)**, 425 Battery St, San Francisco, Calif. *Agriculture*. Yates Center, Kans, Feb. 25, 71. B.S, Kansas State, 96, M.S, 01; B.S.A, Iowa State, 01. Asst. dairying, Iowa State, 00-01; prof, Kansas

- State, 01-04; chief, dairy div, U. S. Dept. Agr, 05-09; dean, Kansas State, and director, Exp. Sta., 09-12; ed, 'Hoard's Dairymen,' 12-13; *asst. general manager, Calif. Central Creameries, 15-* Lecturer dairying, grad. sch. agr, Cornell, 08- Ass. Agr. Col; Nat. Ass. Dairy Instructors; Nat. Dry Farming Cong. Dairying.
- Webster, Prof. Hutton**, Station A, Lincoln, Nebr. *Anthropology*. Malone, N. Y., March 24, 75. A.B., Stanford, 96, A.M., 97; Harvard, 03, Ph.D., 04. Austin teaching fellow, Harvard, 02-04; asst. prof. econ, Williams, 04-07; *prof. social anthrop, Nebraska, 07-* Prof. anthrop, California, summer, 13. A.A.; Anthropol. Ass. (mem. council, 19); Sociol. Soc; Hist. Ass; Folk-lore Soc; London Folk-lore Soc. Rest days of civilized and uncivilized peoples; primitive secret associations; savage society.
- Webster, Prof. J(ohn) Clarence**, Shediac, N. B., Can. *Gynecology*. Shediac, 63. B.A., Mt. Allison, 82; M.B., C.M., Edinburgh, 88, M.D., 90. Prof. obstet. and gynec, Rush Med. Col, Chicago, 99-20. Obstetrician and gynecologist, Presb. Hosp, Chicago. Fel. Gynec. Soc; fel. Col. Surg; fel. Royal Soc. Edinburgh; fel. Royal Col. Physicians Edinburgh; cor. mem. Soc. Ital. di Ostet. e Gynec; Palermo Reale Accad. d. Sci. Med. Anatomical, pathological, embryological and therapeutic obstetrics and gynecology.
- Webster, Dr. R(alph) W(aldo)**, 5624 Dorchester Ave, Chicago, Ill. *Pathology*. Monmouth, Ill, April 16, 73. Ph.B., Chicago, 95, M.D., Rush Med. Col, 98, fellow, 98-99, fellow, Chicago, 99-01, Ph.D., 03. Asst. physiol. chem, Chicago, 01-04, *assoc. chem, Rush Med. Col, 01-06, instr, 06-*, *asst. prof. pharmacol. therapist, 08-* Path. chemist, Cook Co. Hosp, 05-11; director, Chicago clin. lab; *assoc. ed, 'Legal Med. and Toxicol.'* A.A.; Soc. Biol. Chem; Ass. Path. and Bact; Am. Med. Ass; fel. Am. Acad. Med; Chicago Path. Soc; Mil. Tract Med. Soc. Toxicology; biochemistry; experimental medicine; diagnostic methods; physical analysis of absorption of fluid by muscular tissues; diseases of metabolism; metabolism of Myositis ossificans; blood examinations; rheumatism; over-feeding and under-feeding; proteid bodies in urine of pneumonia; synthesis of glycuronic acid in the system; synthesis of polypeptid; acidosis; toxemia of pregnancy.
- Webster, R(obert) L(orenzo)**, Cornell University, Ithaca, N. Y. *Entomology*. West Lafayette, Ind, Oct. 4, 85. A.B., Illinois, 08. Asst. entomologist, Iowa Exp. Sta, 08-14, acting entomologist, 14-18; *indust. fellow entom, Cornell, 18-* A.A.; Entom. Soc; Ass. Econ. Entom; Chem. Soc; fel. Iowa Acad. Economic entomology; life histories of North America insects.
- Wedderburn, Prof. J(oseph) H(enry) M(acalagan)**, Princeton University, Princeton, N. J. **Mathematics*. Forfar, Scotland, Feb. 26, 82. M.A., Edinburgh, 03, D.Sc., 08. Asst. math, Edinburgh, 05-09; *asst. prof, Princeton, 09-* Ed, 'Annals of Math.' Math. Soc; fel. Royal Soc, Edinburgh; Edinburgh Math. Soc. Hypercomplex numbers; matrices.
- Wedge, Pres. Utley**, Ardmore, Pa. *Metallurgy*. Mayville, N. Y., Nov. 19, 63. A.B., Western Reserve, 84. With Standard Oil Co, 89-00; v. pres, Gobbler Mining and Smelting Co, 00-02; supt, Pa. Salt Mfg. Co, 02-10; v. pres, Wedge Mech. Furnace Co, 10-13; *Tenn. Copper Co, 13-15, pres, 15-* Furnace expert, C.W.S., 18. Chem. Soc; Soc. Chem. Indust. Sulphuric acid recovery from oil refining sludge; recovery of metal values by roasting and leaching.
- Weed, Clarence M(cores)**, Lowell, Mass. **Entomology*. Toledo, Ohio, Oct. 5, 64. B.S. Mich. Agr. Col, 83, M.S., 84; Se.D., Ohio State, 91. Assoc. ed, 'Prairie Farmer,' 84-85; asst. state entomologist, Ill, 85-87; entomologist, Ohio Exp. Sta, 88-90; prof. zool. and entom, N. H. Col, 91-04; *instr. nature study, State Nor. Sch, Lowell, Mass, 04-* Entomologist, N. H. Exp. Sta; ed, entom. dept, 'Am. Naturalist,' 93-96. A.A.; Ass. Econ. Entom; Soc. Prom. Agr. Sci; Cambridge Entom. Club (pres, 97). Insect life histories; relations of flowers and insects; Phalangidae of America; nature study in schools.
- Weed, Howard Evarts**, Beaverton, Oregon. *Horticulture*. Lansing, Mich, May 7, 70. B.S., Mich. Agr. Col, 89, M.S., 90; Cornell, 02. Entomologist, Miss. Agr. Exp. Sta, 90-97; *practising landscape gardener, 97-* A.A. Economic entomology; peony and iris; spraying; park cemeteries.
- Weed, Prof. Lewis H(ill)**, Johns Hopkins Medical School, Baltimore, Md. **Anatomy*. Cleveland, Ohio, Nov. 15, 86. A.B., Yale, 08, A.M., 09; M.D., Hopkins, 12. Cabot fellow in charge, lab. surg. research, Harvard, 12-14; *instr. assoc. and assoc. prof. anat, Hopkins, 14-19, prof, 19-* A.A.; Physiol. Soc; Ass. Anat; Ass. Path. and Bact; Ass. Study Int. Secretions. Nuclear masses in the medulla; decerebrate rigidity; cerebro-spinal fluid; cerebro-spinal spaces.
- Weed, Walter Harvey**, 29 Broadway, New York, N. Y. **Geology*. St. Louis, Mo, May 1, 62. E.M., Columbia, 83. Asst. geologist, U. S. Geol. Surv, 83-92, geologist, 92-06; mining geologist, Gen. Develop. Co, 06-09; *consulting mining engineer, 09-* Mem. jury of awards, La. Purchase Expos, 04, hon. special expert in copper; geologist, N. C. Geol. Surv, 04; ed, 'Mines Handbook.' A.A.; Geol. Soc; Min. Eng; Wash. Geol. Soc; Wash. Acad; British Inst. Min. Eng; British Inst. Min. and Metal. General and economic geology, especially ore deposits; geological mapping and investigation of Yellowstone Park and Montana; geology of Mexico; coal of Montana; secondary enrichment of ore deposits; Butte (Montana) copper deposits; gold mines of the Marysville district, Montana.
- Weeks, Andrew Gray**, 8 Congress St. Boston, Mass. *Entomology*. Boston, Oct. 2, 61. A.B., Harvard, 83. *Hon. assoc. entom, Harvard Univ. Museum, 05-* New Eng. Zool. Soc; Cambridge Entom. Club; Boston Soc. Nat. Hist; etc. Diurnal Lepidoptera.
- Weeks, F(red) B(oughton)**, Newhouse Building, Salt Lake City, Utah. *Geology*. Scott, N. Y., 64. Acad. Asst. geologist, U. S. Geol. Surv, 00-02, librarian, 02-08; *geologist, U. S. Smelting, Refining and Mining Co, 12-* A.A.; Geol. Soc; Wash. Geol. Soc. Bibliography and index of geology, paleontology, petrology and mineralogy; geology of Great Basin region.

- Weeks, Prof. Lester F(rank)**, 315 College Ave, Ithaca, N. Y. *Chemistry*. Alna, Maine, Oct. 17, 88. B.S. Colby, 15; A.M. Harvard, 17; Cornell, 20-21. Instr. chem. Maine, 16-17, asst. prof., 17-18; Colby, 18-20. Chem. Soc. Organic chemistry.
- Weeks, Dr. Paul T(horne)**, 42 Ravine Ave, Caldwell, N. J. *Physics*. Clarksfield, Ohio, Nov. 19, 90. A.B. Oberlin, 13; Ph.D. Cornell, 17. Asst. physicist, Bur. Standards, 17-18; *physicist, Westinghouse Lamp Co.*, 19- Lieut. Sig. C, 18-19. A.A.; Physical Soc. X-ray measurements.
- Weems, Dr. J(ulius) B(uel)**, Ashland, Va. *Chemistry*. Baltimore, Md, Aug. 27, 65. B.S. Md. Col. 88; Ph.D. Clark, 94. Instr. math. and chem. Md. Col. 89; prof. agr. chem. Iowa State, 95-04; investigator rural life, 04-15; *chief chemist, Va. Dept. Agr., Richmond, Va.*, 15- A.A.; Chem. Soc.; Soc. Prom. Agr. Sci. Chemical composition of grasses; purification of sewage; soils, paints and other agricultural subjects; soil of Iowa; chemical composition of butter; methods of water and sewage analysis; agricultural education; soils of Virginia; fertilizers.
- Weese, Prof. A(sa) O(rrin)**, University of New Mexico, Albuquerque, N. Mex. *Zoology*. Hutchinson, Minn., Nov. 7, 85. A.B. Minnesota, 09; A.M. Illinois, 17. *Prof. biol., New Mexico*, 11- A.A.; Ecol. Soc. (sec'y-treas); Entom. Soc.; Micros. Soc. Ecological relations of desert animals.
- Wegel, R(aymond) L(ester)**, 463 West St, New York, N. Y. *Physics*. Fond du Lac, Wis, July 13, 88. A.B. Ripon, 10. Asst. physics, Wisconsin, 10-12; *physicist, T. A. Edison*, 12-13; *West. Elec. Co.*, 14- Physical Soc.; Elec. Eng. Telephone transmission; telephone receivers and transmitters.
- Wegemann, Carroll H(arvey)**, P. O. Box 240, Denver, Colo. *Geology*. Lake Mills, Wis, March 26, 79. Beloit, 99-01; B.S. Wisconsin, 03, A.M. 07. Asst. Illinois, 06-07; *geologist, U. S. Geol. Surv.*, 07-17; Franco-Wyoming Oil Co. and Cactus Petrol. Co, 17-19; *West. States Oil and Land Co.*, 20- Geol. exploration, Can, summer, 04; Cuba, 16; mem. oil board, U. S. Geol. Surv, 10-17. A.A.; Geol. Soc.; Ass. Petrol. Geol.; Wash. Geol. Soc. Oil, gas, coal and stratigraphy of fuel-bearing formations in mid-continent and Rocky Mt. regions.
- Wegmann, E(dward)**, 13 Park Row, New York, N. Y. *Civil engineering*. Rio Janeiro, Brazil, Nov. 27, 50. Brooklyn Polytech, 67-68; C.E., N. Y. Univ, 71. Ry. construction, 71-84; division engineer and chief engineer New Croton Aqueduct and reservoir, New York City, 84-10, consulting engineer, dept. water supply, gas and elec, 10-14; *private practise*, 14- Civil Eng.; Water Works Ass. Design and construction of dams; water supply of the city of New York; conveyance and distribution of water for water supply.
- Weida, Frank M(ark)**, 128 E. Fairchild St, Iowa City, Iowa. *Mathematics*. Allentown, Pa, Sept. 23, 91. B.S. Kenyon, 13; Hopkins, 13-14; Chicago, 16-17. *Instr. math, Iowa*, 17- A.A.; Math. Soc.; Math. Ass. Higher plane curves.
- Weida, Prof. Geo(rge) F(rancis)**, Kenyon College, Gambier, Ohio. *Chemistry*. Allentown, Pa, Aug. 15, 70. B.S. Kansas, 90; fellow, Hopkins, 93-94, Ph.D. 94. Asst. pharmaceut. chem. Kansas, 88-90; *prof. chem.*, Blackburn, 94-96; Baker, 96-97; Kansas State, 97-03; Ripon, 03-07, *Kenyon*, 07- A.A.; Chem. Soc. Organic chemistry; diazo compounds; alkaloids.
- Weidensall, Dr. Clara Jean**, College of Medicine, University of Cincinnati, Cincinnati Ohio. *Psychology*. Omaha, Nebr, Dec. 1, 79. A.B. Vassar, 03; fellow, Chicago, 04-06, 07-08, Ph.D. 10; Cincinnati, 20-21. Acting head, departments psychol. and educ. State Nor. Sch. Winona, Minn, 05-06; demonstrator psychol. Bryn Mawr, 06-07; instr. English and psychol. State Nor. Sch. Milwaukee, Wis, 09-10; director psychol. research, Lab. Social Hygiene, Bedford Hills, N. Y., 11-15; asst. director, psychol. clinic, social service dept, Cincinnati Gen. Hosp, 16-18. Asst. anat. and histol. Cincinnati, 20- Psychol. Ass.; Ass. Clin. Criminol.; Eugenics Research Ass. (exec. committee, 13-17). Comparative psychology; visual rhythms; critique of discrimination; the criminal woman; working women and children.
- Weidlein, E(dward) R(ay)**, Mellon Institute, Pittsburgh, Pa. *Chemistry*. Augusta, Kans, July 14, 87. A.B. Kansas, 09, fellow, 09-12, A.M. 10. Senior fellow, *Mellon Inst.*, 12-16, *assoc. director*, 16- Acting director, Mellon Inst, 18; chem. expert, W.I.B., 18. Chem. Soc.; Electrochem. Soc.; West. Pa. Eng. Soc.; Kans. Acad.; Soc. de Chim. indust. Chemical and metallurgical engineering; camphor; epinephrin; hydro-metallurgy.
- Weidman, Dr. S(amuel)**, Norman, Okla. *Geology*. Reedsburg, Wis. Oct. 11, 70. B.S. Wisconsin, 94, fellow, 95-96, Ph.D. 98; fellow, Chicago, 96-97. Field asst. U. S. Geol. Surv, 94-96; asst. geologist, Wis. Geol. Surv, 97-99, geologist, 99-18; *assoc. prof. geol., Oklahoma*, 20- A.A.; Geol. Soc.; Ass. Geog.; Wis. Acad. Pre-Cambrian geology; mineralogy; glacial and physiographic geology; geology of Wisconsin.
- Weigle, Prof. O(tis) M(elvin)**, Fulton, Mo. *Chemistry*. Oil City, Pa, April 3, 80. A.B. Iowa State Teachers Col, 08; M.S. Iowa, 12. Prof. chem. and physics, Memorial, 08-10; *instr. chem.*, Lawrence, 12-14; Iowa State Teachers Col, 14-15; *prof., Westminster (Mo.)*, 15- Chem. Soc.; Iowa Acad. Velocity coefficients of reactions in alcoholic solvents.
- Weiland, Dr. H(enry) J(oseph)**, 702 Marshall St, Milwaukee, Wis. *Chemistry*. Rochester, N. Y., May 7, 90. B.S. Rochester, 13; M.S. Illinois, 15, Ph.D. 17. Tutor and asst. chem. Illinois, 13-17; *chief chemist, Newport Chem. Co.*, 17- Chem. Soc. Conductivity in dilute aqueous solutions; dye intermediates.
- Weimer, Dr. J(ames) L(e Roy)**, U. S. Department of Agriculture, Washington, D. C. *Plant pathology*. Avilla, Ind, July 12, 87. A.B. Wabash, 12; fellow, Cornell, 12-13, Ph.D. 16. Asst. plant path. Cornell, 13-14, instr. 14-16; asst. bot. Purdue Exp. Sta, 16-17; *asst. plant pathologist, bur. plant indust., U. S. Dept. Agr.*, 17- Phytopath. Soc.; Bot. Soc.; Wash. Bot. Soc. Cedar rust of apples; sweet potato diseases.

- Weingarten, Dr. Fred(eric) S(eymour)**, 28 W. 91st St, New York, N. Y. *Medicine*. Chicago, Ill, Aug. 26, 74. B.S, Chicago, 04; M.D, Columbia, 07, A.M, Ph.D, 08. A.A; Am. Med. Ass; N. Y. Acad. Med; Med. Gesell. Physiological chemistry; surgery.
- Weinrich, Dr. M(orris) F(rancis)**, 99 Claremont Ave, New York, N. Y. *Astronomy, Physics*. Vienna, Austria, March 27, 82. M.E, Columbia, 04, A.M, 07, fellow, 08-09 Ph.D, 09. Engineer, Am. Beet Sugar Co, 04; N. Y. and N. J. Telephone Co, 05; asst. drafting, Columbia, 06-08; *instr. physics*, Stevens, 09-11; *Columbia*, 11-Voluntary asst, Yerkes Observatory, summer, 07. A.A. Determination of the positions and magnitudes of stars by means of stellar photographs; radiation; conduction; photometry; spectrum analysis.
- Weinstein, Dr. Alexander**, Garrison-on-Hudson, N. Y. *Biology*. Astrakhan, Russia, Nov. 22, 93. B.S, Columbia, 13, A.M, 14, fellow, 15-16, Ph.D, 17, 19-20. Asst. zool, Columbia, 16-17; research asst, Carnegie Institution, 17-19. Genetics.
- Weintraub, Dr. E(zechiel)**, 240 Riverside Drive, New York, N. Y. *Chemistry, Electrical engineering*. Moghileff-Podolsk, Russia, July 4, 74. Sorbonne, Paris, 91; Ph.D, Zürich, 98. Research lab, Gen. Elec. Co, Schenectady, 01-08, director, Lynn, Mass, 08-15; *consulting engineer*. Asst, Polytech, Zürich; prof, tech. sch, Winterthur, Switzerland; lecturer Union. Chem. Soc; Physical Soc; Electrochem. Soc; fel. Elec. Eng; Illum. Eng. Soc; Inst. Metals (v. pres, 13). Arc and incandescent lighting; mercury arc; boron and its applications; copper casting; electric furnaces; heat insulation.
- Weinzirl, Prof. John**, 4144 Tenth Ave, N. E, Seattle, Wash. *Bacteriology*. Eau Galle, Wis, Sept. 10, 70. B.S, Wisconsin, 96, M.S, 99, Ph.D, 06; D.P.H., Harvard, 18. Asst. prof. biol, New Mexico, 98-00, prof. biol. and chem, 00-07; asst. prof. *bacter*, *Washington (Seattle)*, 07-09, assoc. prof, 09-12, *prof*, 12-, *head of dept*, 15-A.A; Public Health Ass; Soc. Bact. (v. pres, 15); Wash. Tuber. Ass. (seq'y, 11-). Bacteriology of foods; physiology of bacteria; tuberculosis; germicidal action of light; climate.
- Weir, Dr. James R(obert)**, Laboratory of Forest Pathology, Spokane, Wash. *Forestry*. Scottsburg, Ind, May 31, 82. Purdue, 04-05; Freiburg, 06; A.B, Indiana, 07; fellow, Harvard, 07-08; Ph.D, Munich, 11. Asst. forest expert, bur. forestry, U. S. Dept. Agr, 05-07; director, scientific laboratories, Culver Mil. Acad, 07-09; *forest pathologist in charge, lab. forest path, bur. plant indust*, U. S. Dept. Agr, 11- Consulting pathologist, U. S. Forest Service, 11-; lecturer forest path, Montana, 12-15. A.A; Forestry Ass; assoc. Soc. Foresters; Phytopath. Soc; Bot. Soc; Ecol. Soc; Torrey Bot. Club; Ecol. Soc; West. Phytopath. Soc; Calif. Bot. Soc; N. Y. Acad; Can. Forestry Ass; Can. Plant Path. Soc; Munich Verein für Naturkunde. Forest pathology; forest tree fungi.
- Weir, Dr. R(obert) F(ulton)**, 1155 Park Ave, New York, N. Y. *Surgery*. New York, Feb. 16, 38. A.B, Col. City of N. Y, 54, A.M, 57; M.D, Col. Physicians and Surg, N. Y, 59. Asst. surgeon, U.S.A., 61-65; surgeon, St. Luke's Hosp, 65-75; N. Y. Hosp, 76-99; Bellevue Hosp, 81-83; Roosevelt Hosp, 99-08; prof. clin. surg, *Columbia*, 83-92, *surg*, 92-07, *emer. prof*, 07- Surg. Ass. (pres, 00); N. Y. Acad. Med. (pres, 01); Greater N. Y. Med. Ass. (pres, 00-02); Phila. Col. Physicians; hon. fel. Royal Col. Surg; cor. mem. Soc. Chirurg. de Paris.
- Weis, Dr. Joseph D(utsch)**, 1448 Jackson Ave, New Orleans, La. *Medicine*. New Orleans, June 12, 72. Harvard, 91-92, M.D, 98, Austin fellow, 00-02. House officer, Mass. Gen. Hosp, 98-99; asst. histol, Harvard Med. Sch, 99-00, *bacter*, 02-03; asst. prof. clin. med, *Tulane*, 07-14, *prof. trop. med*, 14- Visiting physician, Charity Hosp, and senior visiting physician, Touro Infirmary, New Orleans; chief of clinic to chair of med, Tulane. A.A; Ass. Path. and Bact; Am. Med. Ass; Boston Soc. Med. Sci. Bacteriology; internal medicine; blood in unciniariasis; etiology of cancer blastomycosis; Hanot's disease; *Spirochaeta pallida*; cardiac and renal diseases.
- Weiser, Prof. Harry Boyer**, Rice Institute, Houston, Texas. *Chemistry*. Canal Winchester, Ohio, Sept. 5, 87. A.B, Ohio State, 11, A.M, 12; Ph.D, Cornell, 14. *Instr. chem*, Tennessee, 14-15; *Rice Inst*, 15-18, asst. prof, 18-19, *prof*, 19- Capt, C.W.S. Chem. Soc; Electrochem. Soc. Adsorption; chemical production of light.
- Weiskotten, Dr. H(erman) G(ates)**, 309 Orange St, Syracuse, N. Y. *Pathology*. Syracuse, Sept. 22, 84. A.B, Syracuse, 06, M.D, 09. Res. pathologist, Hosp. Good Shepherd, 09-10; *instr. path. and bacter*, *Syracuse*, 10-12, asst. prof. *path*, 12-13, assoc. prof, 13-17, *prof*, 17- Ass. Path. and Bact; Am. Med. Ass. Action of benzol; diphasic leucopenia; superficial burns.
- Weiss, Prof. A(lbert) P(aul)**, Ohio State University, Columbus, Ohio. *Psychology*. Silesia, Germany, Sept. 15, 79. A.B, Missouri, 10, A.M, 12, Ph.D, 16. Asst. *psychol*, Missouri, 09-12; *instr*, *Ohio State*, 12-18, *prof*, 18- A.A; Psychol. Ass. Experimental and theoretical psychology.
- Weiss, Freeman A(lbert)**, University Farm, St. Paul, Minn. *Botany*. Minneapolis, Minn, Nov. 30, 92. B.S, Minnesota, 15. Research asst, Minnesota, 16-17; asst. bot, Cornell, 18-19; *instr. plant path*, *Minnesota*, and asst. pathologist, *U. S. Dept. Agr*, 19- A.A; Bot. Soc; Phytopath. Soc. Plant physiology and pathology; inheritance and hardness in the plum; disease resistance in cereal rusts.
- Weiss, Dr. Harry**, Harvard Medical School, Boston, Mass. *Bacteriology*. New York, N. Y., July 28, 91. C.E, Columbia, 13, A.M, 15, Ph.D, 17. With Board of Water Supply, N. Y. City, 14; asst. prev. med. and hygiene, *Harvard Med. Sch*, 19- Research worker, Harriman Foundation; capt, Sanit. C, 17-19. Soc. Bact. Serology; typhoid; paratyphoid; infectious diarrhea; meningitis; Botulinus.
- Weiss, H(arry) B(ischoff)**, 19 N. Seventh Ave, Highland Park, New Brunswick, N. J. *Entomology*. Philadelphia, Pa, Oct. 31, 83. Pennsylvania. Asst. biologist and chemist, Scientific Preservation Co, 06-08; field asst, Pa. Bur. Zool, 08-10; asst. to state entomologist, N. J. 11-16; chief inspector, N. J. Dept. Agr, 16-20, *chief*,

- bur. statistics and inspection*, 20- Lecturer entom., N. J. Col. winters, 11-16. A.A.; Entom. Soc.; Ass. Econ. Entom.; N. Y. Entom. Soc.; hon. mem. N. J. Beekeepers' Ass.; Newark Entom. Soc. (sec'y, 15, 16); Wash. Biol. Soc.
- Weiss, John Morris**, 210 W. 110th St, New York, N. Y. *Chemistry*. Philadelphia, Pa, March 11, 85. A.B., Cent. High Sch., Phila., 01; B.S., Pennsylvania, 05. Research chemist, in charge chem. dept. laboratories, *The Barrett Co*, Frankford, Pa, 05-11, chief chemist, *New York*, 11-17, *manager, research dept*, 17- A.A.; Chem. Soc.; Soc. Chem. Indust.; Soc. Test. Mat.; Franklin Inst.; Pub. Health Ass.; Chem. Eng.; N. Y. Chemists Club; Soc. Chim. Indust. Industrial chemistry; coal tar products; catalytic oxidation of benzene.
- Welch, Prof. Paul S(mith)**, University of Michigan, Ann Arbor, Mich. *Zoology*. Oconee, Ill, Jan. 28, 82. A.B., James Millikin, 10; A.M., Illinois, 11, Ph.D., 13. Instr. entom., Kansas State, 13-14, asst. prof., 14-17, assoc. prof., 17-18; *asst. prof. zool*, Michigan, 18- Soc. Zool.; Entom. Soc.; Ecol. Soc.; Micros. Soc. (sec'y-ed, 19-). Hydrobiology; annelids; aquatic Lepidoptera and Diptera.
- Welch, Dr. William H(enry)**, 807 St. Paul St, Baltimore, Md. **Pathology, Hygiene*. Norfolk, Conn, April 8, 50. A.B., Yale, 70, LL.D., 96; M.D., Columbia, 75, LL.D., 04; Strasbourg, Leipzig, Breslau, Berlin, Vienna, Munich and Göttingen, 76-78, 84-85; hon. M.D., Pennsylvania, 94; LL.D., Western Reserve, 94; Harvard, 00; Toronto, 03; Jefferson Med. Col., 07; Princeton, 10; Washington (St. Louis), 15; Chicago, 16. Prof. path. anat. and gen. path. Univ. and Bellevue Hosp. Med. Col., 79-84; path, *Hopkins*, 84-16, pathologist, *Hopkins Hosp*, 89-16, *director, sch. of hygiene and public health and head, dept. bacter. and immunol*, 16- Dean, med. faculty, *Hopkins*, 93-98; pres. Cong. Am. Physicians and Surg., 97; Md. State Board Health, 98-; board of trustees, *Rockefeller Inst*, 01-; Carnegie Institution, 06-; ed, 'Jour. Exp. Med.', 96-04; major, lieut. col. and col. M.R.C., 17-18; col. med. sect. O.R.C., 19. D. S. medal. Nat. Acad. (pres, 13-17); A.A. (v. pres, 02, 03, pres, 06); Soc. Nat.; Ass. Path. and Bact. (pres, 06); Soc. Exp. Path.; Soc. Bact.; Physiol. Soc.; Am. Physicians (pres, 01); Soc. Exp. Biol.; Am. Med. Ass. (pres, 10); Philos. Soc.; Am. Acad.; Phila. Col. Physicians; Md. Med. and Chirurg. Faculty (pres, 91); hon. fel. Royal Societies Med. London and Edinburgh; for. mem. Vienna Imp. Med. Soc. Pulmonary edema; organic diseases of the stomach; fever; thrombosis; embolism; diphtheria; *Micrococcus lancetolatus*; a new gas-producing bacillus; hog cholera; surgical infections; glomerulo-nephritis.
- Weld, Prof. Harry P(orter)**, Cornell University, Ithaca, N. Y. *Psychology*. La Grange, Ark, Sept. 22, 77. Ph.B., Ohio State, 00; fellow, Clark, 09-10, Ph.D., 11. Prof. music, Peabody Col. Teachers, 00-10; asst. *exp. psychol*, Clark, 10-11, instr., 11-12; asst. prof., *Cornell*, 12-19, *prof*, 19- A.A.; Psychol. Ass. Experimental psychology.
- Weld, Prof. LeRoy D(ougherty)**, 1531 B Ave, Cedar Rapids, Iowa. *Physics*. Cresco, Iowa, March 6, 80. B.S., Iowa, 99, M.S., 02. Instr. high schools, 99-02; *prof*, math. and physics, *Coe*, 02-18, *physics*, 18- Exchange lecturer physics, Columbia, 12; Iowa, 15. A.A.; Physical Soc.; Kelvin Soc. (pres); Iowa Acad. The sense of hearing in ants; the effects of temperature inequalities on the equal arm balance; minimum volume in solution; errors of observation; precise methods of focusing lenses; stereoscopic drawings; the crystalliptometer.
- Weld, Lewis H(art)**, U. S. National Museum, Washington, D. C. *Zoology*. Ridgeway, N. Y., Dec. 30, 75. A.B., Rochester, 00; A.M., Michigan, 02; Cornell, 03-04. Asst. zool., Michigan, 00-02; Syracuse, 03; instr. biol., Evanston Acad., 04-17, zool., Northwestern, 18-19; *specialist in Hymenoptera*, U. S. Nat. Museum, 19- A.A.; Entom. Soc. Cynipidae.
- Welin, Prof. J(ohn) E(ric)**, Bethany College, Lindsborg, Kans. *Chemistry*. Stockholm, Sweden, June 11, 65. A.B., Augustana, 88, hon. A.M., 00; fellow, Kansas, 03-04, M.S., 04; hon. Sc.D., Bethany, 12. Instr. pub. schools, Clay Co., Kans., 88-90; principal, Lindsborg, 90-91; *prof. chem*, *Bethany (Kans)*, 91- A.A.; Chem. Soc.; Kans. Acad. Analytical and educational chemistry; soils and waters of McPherson County, Kansas; food analysis.
- Welker, Prof. William H(enry)**, University of Illinois College of Medicine, Chicago, Ill. *Biological chemistry*. Red Hill, Pa, Aug. 20, 79. A.C., Lehigh, 04; Ph.D., Columbia, 08. Instr. chem. and physics, Lehigh, 02-04; asst. biol. chem., Columbia, 04-07, path. asst. obstet. and research chemist, Sloane Maternity Hosp., 06-07; demonstrator physiol. chem., Pennsylvania, 07-10; assoc. physiol. chem., Columbia, 10-11, asst. prof. biol. chem., 11-12; *physiol. chem, med. dept, Illinois*, 13-19, *assoc. prof*, 19- Prize, N. Y. Acad. Ed. board, 'Jour. Dental Research.' A.A.; Soc. Biol. Chem.; Soc. Exp. Biol.; assoc. fel. Am. Med. Ass.; Pub. Health Ass.; Radium Inst.; Harvey Soc.; Ill. Acad.; fel. Chicago Inst. Med.; Columbia Biochem. Ass. Colloid chemistry; metabolism; chemistry of blood; laboratory methods and apparatus.
- Weller, Prof. Carl V(ernon)**, 1130 Fair Oaks Parkway, Ann Arbor, Mich. *Pathology*. St. Johns, Mich, Feb. 17, 87. A.B., Albion, 08; M.D., Michigan, 13, M.S., 16. Instr. *path. Michigan*, 11-17, *asst. prof*, 17- Ass. Path. and Bact.; Soc. Exp. Biol.; Int. Ass. Med. Mus. Neoplasia; tuberculosis; blastophthoria; mustard-gas poisoning.
- Weller, Prof. Stuart**, Walker Museum, University of Chicago, Chicago, Ill. **Geology*. Maine, N. Y., Dec. 26, 70. B.S., Cornell, 94; Ph.D., Yale, 01. Asst. *paleont. geol, Chicago*, 95-97, assoc., 97-00, instr., 00-01, asst. prof., 01-08, assoc. prof., 08-15, *prof*, 15- Paleontologist, N. J. Geol. Surv., 99-07; asst. geologist, U. S. Geol. Surv., 01-06, geologist, 06-; geologist, Ill. Geol. Surv., 06- A.A.; Geol. Soc.; Paleont. Soc. (v. pres, 11); cor. mem. N. Y. Acad.; Chicago Acad. (v. pres, 16). Paleozoic paleontology, especially in its relation to geologic problems; Paleozoic faunas of the Mississippi Valley; the Chester series in Illinois, Missouri, and Kentucky.
- Wellington, Prof. Charles**, Amherst, Mass. *Chemistry*. Limerick, Maine, May 4, 53. B.S., Mass.

- Col, 73; Virginia, 77; Ph.D, Göttingen, 85. Asst. chemist, U. S. Dept. Agr, 77-82; assoc. prof. chem, *Mass. Col.*, 85-07; *prof. gen. and agr. chem.*, 07- Chem. Soc; Chem. Gesell. Organic chemistry; carbohydrates.
- Wellington, Prof. Richard**, Agricultural Experiment Station, Geneva, N. Y. *Horticulture*. Waltham, Mass, Oct. 10, 84. B.S., Mass. Col, 06, M.S., Harvard, 11. Asst. horticulturist, N. Y. Exp. Sta, Geneva, 06-11, assoc. horticulturist, 12-13; asst. horticulturist, Minnesota, and pomologist, Exp. Sta, 13-19; prof. veg. gardening, Maryland, and veg. breeder, Exp. Sta, 19-20. A.A.; Soc. Hort. Sci. Ringing herbaceous plants; grapes of New York.
- Wellisch, Prof. E(dward) M(ontagu)**, University of Sydney, Sydney, Australia. *Physics*. Sydney, April 14, 82. B.A., Sydney, 06, M.A., 07; B.A., Cambridge, 09. Lecturer math, Sydney, 07; asst. prof. physics, Yale, 11. Physical Soc. Mobilities of ions produced by Röntgen rays; radioactive material in electric fields; columnar ionization.
- Wells, Prof. B(ertram) W(hittier)**, State College, Raleigh, N. C. *Botany*. Troy, Ohio, March 5, 84. A.B., Ohio State, 11, A.M., 16; Ph.D, Chicago, 17. Instr. biol, Knox, 11-12; substitute in charge, bot. dept, Conn. Col, 12-13; instr. bot, Kansas State, 13-15; *prof.*, Arkansas, 18-19; *N. C. Col.*, 19- A.A.; Bot. Soc. Plant pathological anatomy.
- Wells, Dr. F(rederic) L(yman)**, Psychopathic Hospital, Boston, Mass. *Psychology*. Boston, Mass, April 22, 84. A.B., Columbia, 03, A.M., 04, Ph.D, 06. Asst. psychol, Columbia, 05-06, lecturer, Barnard, 06-07; asst. path. psychol, McLean Hosp, 07-21; *chief, psychol. lab, Psychopath. Hosp.*, 21- A.A.; Psychol. Ass; Psychopath. Ass; Psychoanal. Ass; New Eng. Soc. Psychiatry. Experimental psychopathology; mental adaptation.
- Wells, Prof. George R(oss Maurice)**, 11 Church St, Wethersfield, Conn. *Psychology*. Moose Jaw, Sask, June 16, 84. B.A., McMaster, 06; A.M., Harvard, 09; Ph.D, Hopkins, 12. Instr. *psychol.*, Oberlin, 12-13, assoc. prof, 13-17; *prof.*, Ohio Wesleyan, 17-20; *Hartford Sch. Rel. Pedagogy*, 20- A.A.; Psychol. Ass; Ohio Acad. Reaction time; control movement.
- Wells, Prof. H(arry) E(dward)**, Smith College, Northampton, Mass. *Chemistry*. Hudson Falls, N. Y. B.S., Middlebury, 94, A.M., 95; Ph.D, Leipzig, 97. With Prof. W. O. Atwater, food investigations, 98-00; instr. chem, Wesleyan, 99-01; prof, Allegheny, 02-07; Washington and Jefferson, 07-18; capt, C.W.S., 18-19; *instr. chem.*, Harvard, 19-20; *prof, Smith*, 20- A.A.; Chem. Soc. Nutrition; inorganic chemistry; water analysis; atomic weight.
- Wells, Prof. H(arry) Gideon**, University of Chicago, Chicago, Ill. *Pathology*. New Haven, Conn, July 21, 75. Ph.B., Yale, 95, hon. A.M., 12; A.M., Lake Forest, 98; M.D., Rush Med. Col, 98, fellow, 99-00; Ph.D, Chicago, 03. Intern, Cook Co. Hosp, 98-99; asst. *path.*, Rush Med. Col, 01, assoc, *Chicago*, 01-02, instr, 02-04, asst. prof, 04-09, assoc. prof, 09-13, *prof.*, 13-, *director, Sprague Mem. Inst.*, 11- Pathologist, Cook Co. Hosp, 06-; commissioner to Rumania, Red Cross, 18-19. A.A.; Ass. Path. and Bact. (pres, 19); Am. Physicians; Soc. Exp. Biol; Soc. Exp. Path; Soc. Bact; Soc. Biol. Chem; Am. Med. Ass. (chairman, sect. path. and physiol, 09-10); Ass. Cancer Research (pres, 15, 19); Chicago Path. Soc. Chemical and general pathology.
- Wells, Prof. H(orace) L(emuel)**, 239 Edwards St, New Haven, Conn. *Chemistry*. New Britain, Conn, Oct. 5, 55. Ph.B., Yale, 77, A.M., 94; Sc.D., Pennsylvania, 07. Asst. chemist, Conn. Exp. Sta, 78-80; chemist, Colo. Coal and Iron Co, 80-84; instr. chem, Yale, 84-89, asst. prof, 89-94, *prof. anal. chem. and metal.*, 94- Nat. Acad; Chem. Soc; Conn. Acad. Inorganic chemistry, especially double halogen salts; double and triple salts, especially those containing caesium.
- Wells, Dr. James S(impson) Chester**, Fifth Avenue Bank, New York, N. Y. *Chemistry, Metallurgy*. Brooklyn, N. Y, Sept. 13, 51. Ph.B., Columbia, 75, Ph.D, 77. Asst. anal. chem, Columbia, 75-79, instr, 79-05, adj. prof, 05-09; *consulting metallurgist and mining engineer*, 09- Manager, Empire Syndicate, Marysville, Mont; supt, Silver Fissure Mining Co, Polaris, Mont; capt, C.E.F., 15-18. Electrochemistry.
- Wells, M(orris) M(iller)**, 1177 E. 55th St, Chicago, Ill. *Zoology*. Woodston, Kans, Nov. 3, 85. B.S., Chicago, 12; Ph.D, Illinois, 15. Instr. zool, Chicago, 15-19; *with Gen. Biol. Supply House*, 19- A.A.; Soc. Zool; Ecol. Soc; Entom. Soc; British Ecol. Soc. Animal behavior; ecology; physiology of the invertebrates and the lower vertebrates.
- Wells, Dr. P(hilip) V(arnum)**, U. S. Bureau of Standards, Washington, D. C. *Physics*. Boston, Mass, Oct. 28, 89. B.S., Mass. Inst. Tech, 11; D.Sc., Paris, 20. Asst. physics, Mass. Inst. Tech, 11-13; *assoc. physicist, Bur. Standards*, 13- Int. Ice Control Ice exped, 15; representative, Bur. Standards, Paris, 19-20. Physical Soc; Chem. Soc; Optical Soc; Wash. Philos. Soc. Physical chemistry; molecular physics; optics.
- Wells, Dr. Roger C(lark)**, U. S. Geological Survey, Washington, D. C. *Chemistry*. Peterboro, N. Y, Oct. 24, 77. A.B., Harvard, 01, Ph.D, 04. Instr. chem, Harvard, 04-05; physical chem, Pennsylvania, 05-07; chemist, Gen. Elec. Co, 07-08; *physical chemist, U. S. Geol. Surv.*, 08- Chemist potash exploration in Chile, Cameron Syndicate, 15; mineral resource specialist sodium compounds, U. S. Geol. Surv. and special agent U. S. Census. First Pan-Pacific Sci. Congress, Honolulu, 20. A.A.; Chem. Soc; Wash. Geol. Soc; Wash. Acad. Harvard Chemists. Inorganic and physical chemistry; atomic weights of sodium and chlorine; the analysis of minerals; the chemistry of ore deposition and natural waters; pure and applied geochemistry.
- Wells, Dr. Volney H(unter)**, 303 Maple Ave, Northfield, Minn. *Mathematics*. Dowagiac, Mich, June 18, 89. A.B., Olivet, 09; Ph.D, Michigan, 16. Instr. math, Hastings, 09-11, prof, 11-13; instr, Michigan, 13-16; prof. math. and statist, Pittsburgh, 16-17; statistician, Bur. War Risk Ins, 19-20; *prof. math, Carleton*, 20- Lieut, A.S.A.P., 17-19. Math. Soc; Statist. Ass. Sta-

- tistics; geometry; polar fields; military and naval insurance.
- Welo, Dr. L(ars) A(lvin)**, 2102 Como Ave, S. E, Minneapolis, Minn. *Physics*. Church's Ferry, N. Dak. Jan. 29, 88. B.S. N. Dak. Col, 11; M.S. Illinois, 15; fellow, California, 16-17, Ph.D. 18. Asst. astron. Illinois, 15-16; physics, California, 17-18; engineer in forest products, Forests Prod. Lab, 18-19; *asst. prof. physics, Minnesota*, 19- A.A.; Physical Soc. Wehnelt cathode rays; photoelectric effect; effect of kiln drying on strength of airplane woods.
- Welsh, William W(elsh)**, U. S. Bureau of Fisheries, Washington, D. C. *Ichthyology*. Philadelphia, Pa, Aug. 10, 78. Pennsylvania, 99. *Scientific asst, U. S. Bur. Fisheries*, 11- In charge fisheries research, Atlantic and Gulf waters, U. S., 18-19. Soc. Ichthyol. and Herp.; Fisheries Soc.; Wash. Biol. Soc. Economic ichthyology; oceanography; marine fishes.
- Wembridge, Mrs. Eleanor Rowland**, 2012 Chesterland Ave, Cleveland, Ohio. *Psychology*. Lee, Mass, Dec. 9, 83. A.B. Radcliffe, 03, A.M. 04, Ph.D. 05. Asst. prof. psychol. Mt. Holyoke, 06-12; prof. Reed, 12-17; *supervisor, reconstruction aides, S.G.O. W.D.*, 18- Mem. archeol. exped. to Crete, 12. A.A.; Psychol. Ass. Psychology of religion and esthetics; mental tests.
- Wende, Dr. Grover W(illiam)**, 471 Delaware Ave, Buffalo, N. Y. *Dermatology*. Mill Grove, N. Y., April 6, 67. M.D. Buffalo, 89; Pennsylvania, 90; Prague and Paris, 98. Lecturer and later *prof. dermat. and syphilol, Buffalo*, 92- Dermatologist, Erie Co. Sisters of Charity, German, Buffalo General, Children's, Municipal, U. S. Marine and Buffalo City Hospitals and Dispensaries. Dermat. Ass. (past pres); Am. Med. Ass. (past chairman, dermat. sect); Ass. Path. and Bact.; Ass. Cancer Research; N. Y. Med. Soc. (past pres). Dermatology in relation to internal medicine; diagnosis, prevention and treatment of syphilis; pellagra.
- Wendell, Prof. George V(incent)**, Columbia University, New York, N. Y. *Physics*. Plainfield, N. J., Aug. 16, 71. B.S. Mass. Inst. Tech, 92; A.M. Ph.D. Leipzig, 98; Berlin, 98-99. Asst. physics, Mass. Inst. Tech; 92-93, instr. 93-00, asst. prof. 00-04, assoc. prof. 04-07; head, dept. physics, Stevens, 07-10; *prof. physics, Columbia*, 10- In charge, dept. physics, Simmons (Mass), 02-04; Boston, 05-06. Physical Soc.; Eng. Educ. Optics and heat; rotatory polarization; heat conduction in gases.
- Wendt, Prof. Gerald L(ouis)**, University of Chicago, Chicago, Ill. **Chemistry*. Davenport, Iowa, March 3, 91. A.B. Harvard, 13, A.M. 14, Ph.D. 16. Austin teaching fellow, Harvard, 12-16; junior chemist in radioactivity, U. S. Bur. Mines, 16; instr. chem. Rice Inst, 16-17; quant. anal. and radioactivity, *Chicago*, 17-18, *asst. prof. chem.*, 18- Capt. C.W.S. 18; assoc. ed. 'Jour. Radiol.' 20- A.A.; Chem. Soc.; Electrochem. Soc.; Physical Soc. Radioactivity; photochemistry; electronics; sub-atomic phenomena.
- Weniger, Dr. Wanda**, Agricultural College, N. Dak. *Botany*. Milwaukee, Wis, Dec. 5, 95. B.S. Oregon Col, 15; M.S. Wisconsin, 16; fellow, Chicago, 16-18, Ph.D. 18. Instr. bot. William and Vashti, 18; *asst. botanist and plant pathologist, N. Dak. Exp. Sta.*, 18- A.A.; Bot. Soc.; Phytopath. Soc. Cytology of fertilization in plants; cytology of rusts.
- Weniger, Prof. W(illibald)**, Oregon Agricultural College, Corvallis, Oregon. *Physics*. Milwaukee, Wis, June 20, 84. A.B. Wisconsin, 05, A.M. 06, fellow, 06-08, Ph.D. 08. Asst. physics, Wisconsin, 05-06; instr. Oregon Col, 08-09, asst. prof. 09-10, prof. 10-14; physicist, Nela Research Lab, 14-20; *prof. physics, Oregon Col*, 20- Mem. Nat. Research Council. A.A.; Physical Soc.; Illum. Eng. Soc. Infra-red absorption spectra; reflection factors of tungsten; monocular and binocular field glasses; astatic galvanometers; infra-red vacuum spectrometer.
- Wenner, Dr. Frank**, Bureau of Standards, Washington, D. C. **Physics*. Benton Co, Iowa, Jan. 18, 73. B.S. Knox, 99; Ph.D. Pennsylvania, 09. Instr. physics, Iowa State, 02-05; Pennsylvania, 05-07; asst. physicist, *Bur. Standards*, 07-13, assoc. physicist, 13-20, *physicist*, 20- A.A.; Physical Soc.; Elec. Eng. Wash. Acad.; Wash. Philos. Soc.; Soc. de Physique. Galvanometers; resistance apparatus and measurements; submarine detection; airplane armament.
- Wenner, Dr. John J(eremiah)**, 938 S. 58th St, Philadelphia, Pa. *Bacteriology*. Allentown, Pa, 85. B.S. Muhlenberg, 13; A.M. Yale, 15, Ph.D. 18. Asst. to Prof. Rettger, Storrs Exp. Sta, 16-18; *bacteriologist, Pa. State Health Dept.*, 18- Pub. Health Ass. Hygiene; public health; animal diseases.
- Wenrich, Prof. D(avid) H(enry)**, University of Pennsylvania, Philadelphia, Pa. *Zoology*. LeCompton, Kans, June 29, 85. A.B. Kansas, 11, A.M. 12; Ph.D. Harvard, 15. Teaching fellow *zool.*, Kansas, 11-12; Austin teaching fellow, Harvard, 12-13, 14-15; instr. *Pennsylvania*, 15-19, *asst. prof.*, 19- A.A.; Soc. Nat.; Soc. Zool. Chromosomes; spermatogenesis; mitosis in Protozoa.
- Wensel, H(enry) T(heodor)**, Bureau of Standards, Washington, D. C. *Physics*. St. Louis, Mo, March 5, 93. A.B. Washington (St. Louis), 17; A.M. Hopkins, 20. *Physicist, Bur. Standards*, 17-; *instr. physics, Hopkins*, 19- Physical Soc.; Optical Soc.; Wash. Philos. Soc. Optics.
- Wente, Dr. E(dward) C(hristopher)**, Western Electric Co, New York, N. Y. *Physics*. Denver, Iowa, 89. A.B. Michigan, 11; B.S. Mass. Inst. Tech, 14; Ph.D. Yale, 18. *Research physicist, Western Elec. Co.* Acoustics; infra-red radiation.
- Wentling, Prof. J(ohn) P(hilip)**, University Farm, St. Paul, Minn. *Forestry*. Knox, Pa, Feb. 2, 78. A.B. Franklin and Marshall, 02, A.M. 05. Teacher, pub. schools, Pa, 96-97; forester, U. S. Forest Service, 02-06; *prof. forestry*, Pa. Forest Acad, 06-08; asst. prof. *Minnesota*, 08-14, *assoc. prof.*, 14- Soc. Foresters; Pa. Forestry Ass; Minn. Forestry Ass. Reforestation of sand dunes; sylvics and silviculture; wood utilization; forest products.
- Wentworth, Prof. Edward N(orris)**, Armour and Co, Chicago, Ill. *Genetics*. Dover, N. H., Jan. 11, 87. B.S.A. Iowa State, 07, M.S. 09; Harvard, 12. Instr. animal husbandry, Iowa State, 07-09, asst. prof. 09-11, assoc. prof. 11-13;

- prof. zootechny, Chicago Vet. Col, 13-14; animal breeding, Kansas State, 14-17; capt. F.A., 17-19; with bur. agr. research and econ. *Armour and Co.*, 19- Assoc. ed, 'Breeder's Gazette,' 13-14; asst. director, col. agr. A.E.F. Univ. Beane. Officier du Mérite agricole. A.A.; Soc. Nat.; Soc. Zool.; Soc. Animal Production; fel. Iowa Acad.; Kans. Acad. Inheritance of color and fertility in domestic animals.
- Werkenthin, Prof. Fred C(onrad)**, Iowa State College, Ames, Iowa. *Botany*. Feb. 21, 90. A.B., A.M., Texas, 15. Asst. bot. and bacter. Texas, 12-15; asst. prof. biol. N. Mex. Col. and plant pathologist, Exp. Sta., 15-18; assoc. prof. bot. N. H. Col. and asst. botanist, Exp. Sta., 18-20; *instr. bot.*, Iowa State, 20- A.A.; Bot. Soc.; Phytopath. Soc.; N. H. Acad. Morphology; mycology.
- Werner, Dr. Louis F.**, 712 Hand Ave, Cincinnati, Ohio. *Chemistry*. Cincinnati, March 2, 89. A.B., Cincinnati, 12, A.M., 14, Ph.D., 17. Asst. chem. Cincinnati, 12-16; *chemist*, *Werner Drug and Chem. Co.*, 17- Instr. chem. Wilmington, 17-; prof. chem. and mat. med. Ohio Col. Dental Surg., 20- Chem. Soc. Organic chemistry; organic nitrogen compounds; quinolin dyes; alkaloids.
- Wesson, David**, 111 S. Mountain Ave, Montclair, N. J. **Chemistry*. Brooklyn, N. Y., Jan. 14, 61. Brooklyn Polytech., 77-78; B.S., Mass. Inst. Tech., 83. Asst. to Prof. W. R. Nichols, 83-84; chemist, N. K. Fairbanks and Co., Chicago, 84-90; head chemist, Am. Cotton Oil Co., 90-95; pres., Wesson Mfg. Co., 95-00; *tech. director*, *Southern Cotton Oil Co.*, N. Y. City, 00- A.A.; Chem. Soc.; Soc. Chem. Indust.; Chem. Eng. (pres); Am. Geog. Soc.; Soc. Cotton Products Analysts (past pres); N. Y. Chemists Club; Chicago Chem. Soc. Technology of oils; cotton oil and by-products; inventor of refining process of edible oils.
- West, Dr. Byron L(illibridge)**, P. O. Box 525, Wilmington, Del. *Chemistry*. Providence, R. I., Feb. 7, 93. Ph.B., Brown, 15; M.S., 16, Edwards fellow, 16-18, Ph.D., 18. *Org. chemist*, *E. I. duPont de Nemours and Co.*, 19- Org. chemist, Nitrogen Products Co., summer, 15; Fed. Chem. and Dye Corp., summer, 16; lieut. Sanit. C., 18-19. Nitrogen fixation; action of acetic anhydride on alpha naphthyl propionic acid.
- West, Dr. Cha(rle)s I(gnatius)**, 924 M St, N. W., Washington, D. C. *Surgery*. Washington, Oct. 23, 68. M.D., Howard, 95. Asst. anat. *Howard*, 95-96, demonstrator, 96-02, lecturer topog. anat., 98-07, *assoc. prof. anat.*, 07- Prof. anat., bacter. and urinalysis, Freedman's Hosp. Nurses' Training Sch., 95-04; intern, Freedman's Hosp., 95-96, attending physician and gynecologist, 96-02, first asst. surgeon and exec. officer, 02-04; attending physician, People's Congregational Church Free Dispensary, 09-16; dean, People's Training Sch. for Nurses, 10-16. Ass. Anat.; Am. Med. Ass.; Wash. Médico-Chirurg. Soc. Anatomy of the American negro; human adrenals in their relation to cutaneous differences; internal secretions of the human kidney; laws of mechanics applied to muscle action.
- West, Dr. Clarence J(ay)**, A. D. Little, Inc, Cambridge, Mass. *Biological chemistry*. Brighton, Mich., June 14, 86. B.S., Michigan, 00, Ph.D., 12. Research chemist, Rockefeller Inst., 12-18; *director*, information dept., *A. D. Little, Inc.*, 19- Instr. org. chem., Michigan, summers, 10-12; contributing ed., 'Paper.' Major, C.W.S., 18-19. A.A.; Chem. Soc.; Soc. Biol. Chem.; Soc. Exp. Biol.; Harvey Soc. Carbonium salts; lipoids; aliphatic fatty acids; bibliography.
- West, Dr. Frank L(orenzo)**, Utah Agricultural College, Logan, Utah. *Physics*, *Physical chemistry*. Ogden, Utah, Feb. 1, 85. B.S., Utah Col., 04; Stanford, 04-05; Chicago, 06-07, fellow, 10-11, Ph.D., 11. Prof. *physics*, Brigham Young, 05-06; asst., Chicago, 06-07; *prof.*, Utah Col., 07-, *dean*, sch. gen. science, 13- A.A.; Physical Soc.; fel. Meteorol. Soc.; Utah Acad. Organic amalgams; freezing temperatures of fruit buds; orchard heating.
- Wester, P(eter) J(ohnson)**, Lamoo Experiment Station, Lamoo via Limay, Bataan, P. I. *Agriculture*. Arbrå, Sweden, Sept. 23, 77. Grad. Gelleborgs läns Folk Högskola, 95. Horticulturist, *Bur. Agr.*, P. I., 11-17, *agr. adviser*, 17- Agr. exped. to Java, 14. A.A. Breeding of Annonas; propagation of tropical fruits.
- Westergaard, Dr. H(arald) M(alcolm)**, University of Illinois, Urbana, Ill. *Mechanics*. Copenhagen, Denmark, Oct. 9, 88. B.S., Royal Col. Eng., Denmark, 11; Göttingen and Munich, 13-14; Ph.D., Illinois, 16. Designing engineer, Copenhagen, Hamburg and London, 11-14; *instr. theoret. and applied mech.*, Illinois, 16-19, *assoc.*, 19- Concrete engineer, emergency fleet corp., U. S. Shipping Board, summer, 18. Theoretical and applied mechanics; theory of probability; reinforced concrete; structural statics.
- Westfall, Dr. John Van Etten**, 120 Broadway, New York, N. Y. *Mathematics*. Dresserville, N. Y., June 24, 72. B.S., Cornell, 95; Ph.D., Leipzig, 98. Instr. math., Iowa, 99-05; *v. pres.*, *Equitable Life Assurance Soc.*, 06-
- Westfall, Prof. W(ilhelmus) D(avid) A(llen)**, 915 University St, Columbia, Mo. *Mathematics*. Montague, N. J., Jan. 27, 79. A.B., Yale, 01; Ph.D., Göttingen, 05. Instr. math., Yale, 02-03; Missouri, 05-07, asst. prof., 07-14, *assoc. prof.*, 14- A.A.; Math. Soc.; Math. Verein; Circolo Mat. di Palermo. Applications of integral equations.
- Westgate, J(ohn) M(inton)**, U. S. Agricultural Experiment Station, Honolulu, Hawaii. *Agriculture*. Kingston, N. Y., Feb. 17, 78. B.S., Kansas State, 97, M.S., 99; Chicago, 01-03. Asst. bot., Kansas State, 97-01; sand binding investigations, U. S. Dept. Agr., 03-05, in charge alfalfa and clover investigations, 05-11, agronomist in charge clover investigations, 11-14; *in charge*, *Hawaii Exp. Sta.*, 15- Mem. Univ. Chicago bot. exped. to northwest United States, 01. A.A.; Bot. Soc.; Soc. Agron.; fel. Royal Soc. Arts. Agronomy; sand dune fixation; breeding and adaptation of alfalfa and clover; agricultural crops and industries in Hawaii.
- Westgate, Prof. Lewis G(ardner)**, Delaware, Ohio. *Geology*. Phenix, R. I., Oct. 8, 68. A.B., Wesleyan, 90; A.B., Harvard, 91, A.M., 92, Ph.D., 96. Teacher science, high sch., Evanston, Ill., 93-00; *prof. geol.*, Ohio Wesleyan, 00- Assoc. geologist, U. S. Geol. Surv. Geol. Soc.; Ass.

- Geog.; Min. Eng. Crystalline geology of New Jersey and Connecticut; areal mapping in the Rocky Mountains; economic geology.
- Westhafer, Prof. W(illiam) R.** College of Wooster, Wooster, Ohio. *Physics*. Uhrichsville, Ohio, July 8, 79. A.B., Ohio Wesleyan, 03, A.M., 07; Harvard, 09. Instr. math, Ohio Wesleyan, 06-07; *physics*, Amherst, 09-12, asst. prof., 12-14, assoc. prof., 14-18; *prof. and head of dept.*, Wooster, 18- A.A.; assoc. Physical Soc. Conductivity of molybdenite.
- Weston, Edward**, Waverly Park, Newark, N. J. **Electrical engineering*. Brynn Castle, England, May 9, 50. English schools; LL.D., McGill, 03; Sc.D., Stevens, 04; Princeton, 10. Electrician, U. S. Elec. Light Co, 81-88; v. pres. and gen. manager, *Weston Elec. Instrument Co*, 88-05, *pres*, 05- Second v. pres, trustees, Stevens. Medals and honors, various expositions. A.A.; Elec. Eng. (past pres); Physical Soc; Illum. Eng. Soc; hon. mem. Nat. Elec. Light Ass; Electrochem. Soc; Chem. Soc; Mech. Eng; Am. Geog. Soc; Royal Soc. Arts. Electrochemistry; electrometallurgy; electrical instruments; development of electrical measuring instruments of precision.
- Weston, Dr. Marion D(odge)**, Rhode Island College of Education, Providence, R. I. *Paleontology*. Atkinson, N. H., March 10, 84. A.B., Mt. Holyoke, 06, A.M., 09; Columbia, 09-10; Ph.D., Brown, 17. Asst. bot., Mt. Holyoke, 06-09; *instr. biol.*, R. I. Col. Educ., 10- Paleobotany; Carboniferous flora of Rhode Island.
- Weston, Dr. Paul G(arfield)**, Warren, Pa. *Pathology*. Pottsville, Pa., July 6, 81. M.D., Medico-Chirurg. Col., Phila., 08. Pathologist, Phila. Hosp. for Contagious Diseases, 08-10; assoc. prof. path. and bacter., Temple, 08-10; *pathologist, State Hosp.*, 10- Ass. Path. and Bact.; Medico-Psychol. Ass. Bacteriology; immunity; chemistry of blood and spinal fluid; action of snake venom.
- Weston, Robert Spurr**, 14 Beacon St., Boston, Mass. *Sanitary science*. Concord, N. H., Aug. 1, 69. B.S., Amherst, 91, A.M., 04; Mass. Inst. Tech., 94-95; Berlin, 96. Asst. in state and munic. sanit. investigations of water supplies, 95-99; asst. prof. pub. health, Mass. Inst. Tech., 12-16; *consulting sanit. engineer*, 99- Chem. Soc; Soc. Chem. Indust; Civil Eng; Pub. Health Ass; Water Works Ass; Chem. Eng; New Eng. Water Works Ass; Boston Soc. Civil Eng; Can. Inst. Eng. The character of water, sewage and industrial waste and methods for their purification.
- Weston, Dr. W(illiam) H(enry), Jr.** U. S. Department of Agriculture, Washington, D. C. *Plant pathology*. New York, N. Y., Jan. 24, 90. A.B., Dartmouth, 11; A.M., Harvard, 12, Ph.D., 15. Instr. bot., Western Reserve, 15-16; path. inspector, fed. hort. board, U. S. Dept. Agr., 16-17, *pathologist, bur. plant. indust.*, 17- Instr. bot., Summer Sch. of Science, Halifax, N. S., 12; asst., Woods Hole, summers, 14, 15. A.A.; Bot. Soc; Phytopath. Soc; Micros. Soc. Mycology; life histories of Saprolegniales; fungous diseases of crops in Guam; Oriental downy mildews of grasses.
- Wetmore, (Frank) Alexander**, U. S. Department of Agriculture, Washington, D. C. *Ornithology*. North Freedom, Wis., June 18, 86. A.B., Kansas, 12; M.S., George Washington, 16, Ph.D., 20. Asst. museum, Kansas, 05-10; agent, *biol. surv.*, U. S. Dept. Agr., 10-12, *asst. biologist*, 13- Asst., Colo. Museum Nat. Hist., 09. A.A.; fel. Ornith. Union; Cooper Ornith. Union; Wilson Ornith. Club; Wash. Biol. Soc. (councilor, 14-); Wash. Biol. Field Club (see'y, 17-). Economic and systematic ornithology; avian anatomy and osteology.
- Wetzel, Reinhard A(ugust)**, College of the City of New York, New York, N. Y. *Physics*. Germany, May 18, 73. B.S., Minnesota, 01; Chicago, summers, 02, 03; Wisconsin, 04-07; Columbia, 07-09; Aachen, Germany, summer, 14. Teacher, high sch., Detroit, Minn., 01-02; Ottumwa, Iowa, 02-03; Fargo, N. Dak., 03-04; asst. *physics*, Wisconsin, 04-07; Columbia, 07-09; tutor, *Col. City of N. Y.*, 10-15, instr., 15-16, *supervisor, Townsend Harris Hall*, 16- A.A.; Physical Soc; Optical Soc; Math. Soc. Universal constant of gravitation; radiation pressure; principle of relativity; electric resolution of the spectral lines of the elements.
- Weyer, Prof. Edward M(offat)**, College Campus, Washington, Pa. *Psychology, Philosophy*. Portsmouth, Ohio, Oct. 1, 72. Wisconsin, 91-93; A.B., Yale, 95; Ph.D., Leipzig, 98. Asst. psychol. lab. Yale, 98-99; adj. prof. *philos.*, Washington and Jefferson, 99-05, *prof.*, 05- Psychol. Ass. Time-threshold of psychophysical and mental processes; reaction time of animals; animal consciousness.
- Weymouth, Prof. F(rank) W(alter)**, Stanford University, Calif. *Physiology, Zoology*. Seattle, Wash., June 17, 84. A.B., Stanford, 09, A.M., 11. Instr. physiol., Stanford, 11-12; asst. *physiol.*, Hopkins, 12-13; *asst. prof.*, Stanford, 13- A.A.; Calif. Acad. Taxonomy and life history of Pacific coast Crustacea; blood clotting; physiology of eye and ocular muscles.
- Weyssse, Dr. Arthur W(issald)**, 688 Boylston St., Boston, Mass. *Biology*. Machias, Maine, Nov. 16, 67. A.B., Harvard, 91, A.M., 92, Ph.D., 94; Leipzig, 94-95; Berlin, 95; Ecole de Méd., Paris, 95-96; Naples Zool. Sta., 96; M.D., Bâle, 07. Asst. bot., Harvard, and zool., Radcliffe, 92-94; instr. biol., Mass. Inst. Tech., 96-07; *prof. exp. physiol. sch. med.*, Boston, 99-, *lecturer venereal diseases*, 14-, *biol.*, Boston, 04-, *acting dean. grad. sch.*, 17- Lecturer physiol., Am. Sch. for Physical Educ., 15-17. Mem. Vol. M.C., 18. A.A.; Soc. Nat; Soc. Zool; Ass. Anat; Ass. Prof; Am. Acad; Boston Med. Library Ass; Boston Soc. Nat. Hist; Boston Soc. Med. Sci. Embryology of the Mammalia and other vertebrates; blood pressure.
- Whedon, Dr. Arthur D(ewitt)**, University of Pennsylvania, Philadelphia, Pa. *Zoology*. Iowa City, Iowa, March 14, 79. A.B., Iowa State, 07, M.S., 12; Ph.D., Pennsylvania, 18. *Head*, bot. dept., Wm. McKinley High Sch., St. Louis, Mo., 09-11; biol. dept., State Nor. Sch., Mankato, Minn., 11-15; *dept. bot. and geog.*, State Nor. sch., West Chester, Pa., 15-; *instr. zool.*, Pennsylvania, 16- Exten. lecturer, Minnesota, 13-15.

- A.A.; Entom. Soc. Entomology; Odonata; bird life in the Mississippi Valley.
- Wheeler, Dr. Alvin S(awyer)**, Chapel Hill, N. C. **Chemistry*. Holyoke, Mass, Nov. 2, 66. A.B., Beloit, 90; Chicago, 95; Cornell, 97; A.M., Harvard, 97, Ph.D., 00; Berlin, 10; Swiss Federal Polytech, 11. Teacher, high sch., Tacoma, Wash, 93-96; asst. org. chem., Harvard, 97-00; assoc. prof., North Carolina, 00-12, prof., 12- Lecturer org. chem., Harvard, summer, 05. A.A.; Chem. Soc. (pres, N. C. sect, 04); Chem. Gesell. Reduction of dehydromucic acid; condensations of aldehydes with aromatic amines; anthranilic acid derivatives; cellulose; Walden inversion; tautomerism of hydroxynaphthalenes; cymene derivatives; complex ethers; hydroxynaphthoquinone dyes.
- Wheeler, E(benezzer) S(mith)**, 76 Delaware Ave., Detroit, Mich. *Engineering*. Wayne Co, Pa, Aug. 27, 39. C.E., Michigan, 67, A.M., 97. U. S. asst. engineer, 64-97; chief engineer, Nicaragua Canal Co, 97-98; U. S. asst. engineer, 98-Civil Eng; Mich. Eng. Soc.; Franklin Inst. Measurement of base lines; canal construction; physics of the Great Lakes.
- Wheeler, Prof. E(dwin) B(ennett)**, Palo Alto, Calif. *Physics*. Detroit, Mich, Sept. 20, 73. B.S., Missouri, 01; Columbia, 04-07. Instr. physics, Union, 01-03; asst., Columbia, 04-07; prof., Clarkson Col. Tech, 08-14. A.A.; Physical Soc.
- Wheeler, Prof. H(erbert) A(llen)**, 408 Locust St., St. Louis, Mo. *Mining engineering*. Brooklyn, N. Y., 59. E.M., Columbia, 80. Prof. mining, Washington (St. Louis), 83-95; consulting engineer, 95- Asst. geologist, Mo. Geol. Surv, 90-95. Min. Eng; Ceramic Soc. (pres, 99); St. Louis Acad; St. Louis Eng. Club. Clays; ore dressing; economic geology.
- Wheeler, Dr. H(omer) J(ay)**, 111 Grant Ave., Newton Center, Mass. **Agronomy*. Bolton, Mass, Sept. 2, 61. B.S., Mass. Col, 83; Ph.D., Göttingen, 89; hon. Sc.D., Brown, 11. Asst. chemist, Mass. Exp. Sta, 83-87; chemist, R. I. Exp. Sta, 89-05, agronomist, 97-12, director, 01-12, prof. geol, R. I. Col, 89-12; acting pres, 02-03, prof. agr. chem, 03-07; manager, agr. service bureau, Am. Agr. Chem. Co, 12- A.A.; Chem. Soc; Agr. Chem. (pres, 02); Soc. Prom. Agr. Sci; Soc. Agron. (pres); Am. Geog. Soc. Soils; manures; the occurrence of injurious acidity in upland soils; seaweeds; potato scab; crop rotations; grass manuring and composition of the crop; sodium salts and their functions in soils and plants; relations of lime and magnesia to plant growth.
- Wheeler, Dr. L(ynde) P(helps)**, Yale University, New Haven, Conn. *Physics*. Bridgeport, Conn, July 27, 74. Ph.B., Yale, 94, Ph.D., 02. Lab. asst. physics, Sheffield Sci. Sch., Yale, 95-97, asst. 97-01, instr., 01-06, asst. prof., 06- A.A.; Physical Soc; Eng. Educ; Conn. Acad. Physical optics; thermodynamics; electrical theory; metallic reflection in various media; radio-activity; high frequency A. C; thermionic vacuum tubes.
- Wheeler, Prof. N(athaniel) E(rnest)**, Colby College, Waterville, Me. *Physics*. Dunbarton, N. H., June 29, 81. B.S., Colby, 09; M.Sc., McGill, 11. Demonstrator physics, McGill, 09-11, senior demonstrator, 11-14, lecturer, 14-18, asst. prof., 18-20; assoc. prof. and head of dept., Colby, 20- A.A.; assoc. Physical Soc. Thermal expansion of rock at high temperatures; graphite thermo-electric couples for high temperature measurements.
- Wheeler, Prof. Raymond H(older)**, University of Oregon, Eugene, Oregon. *Psychology*. Berlin, Mass, March 9, 92. A.B., Clark, 12, A.M., 13, fellow, 14-15, Ph.D., 15. Instr. psychol., Oregon, 15-16, asst. prof., 16-18, prof., 19- Psychol. Ass. Experimental psychology; psychology of the blind; volition; learning; mental tests.
- Wheeler, Dr. Ruth**, 416 Forest Road, Baltimore, Md. *Nutrition*. Plains, Pa, Aug. 5, 77. A.B., Vassar, 99; Ph.D., Yale, 13. Teacher chem., high sch., West Pittston, Pa; Saratoga Springs, N. Y; instr. science, Pratt Inst; dietetics and nutrition, Illinois, 12-13, assoc., 13-15, asst. prof. household science, 15-16; director, home econ. dept., Goucher, 18- Mem. ed. board, 'Jour. Home Econ.' A.A.; Soc. Biol. Chem; Home Econ. Ass; Dietetics Soc. (first v. pres). Dietetics; infant and adult nutrition.
- Wheeler, Dr. Schuyler Skaats**, Ampere, N. J. *Electrical engineering*. New York, N. Y., May 17, 60. Hon. Sc.D., Hobart, 94; Columbia, 12. Asst. electrician, Jablichkoff Elec. Light Co, 81-83; with U. S. Elec. Lighting Co. and Edison Elec. Light Co, 83-86; electrician, Herzog Teleseme Co, 86; electrician and manager, C. and C. Elec. Motor Co, 86-88; elec. expert. Board Elec. Control, N. Y. City, 88-95; pres. Crocker-Wheeler Co, Ampere, N. J., 88- A.A.; Elec. Eng. (past pres); Civil Eng; Mech. Eng. Dynamos; motors; electrical machinery.
- Wheeler, Prof. W(illiam) A(chie)**, 5303 33d St., N. W., Washington, D. C. *Botany*. Stockton, Minn, June 28, 76. B.Agr., Minnesota, 00, M.S., 01. Asst. hort. and forestry, Minnesota, 97-98, bot, 98-00, instr., 00-01, sch. agr., 01-03; prof. bot. and entom., S. Dak. Col. and Exp. Sta, 03-07; sec'y, Dak. Improved Seed Co, 07-16; seed reporting service, bur. markets, U. S. Dept. Agr. 16-19, in charge, div. hay, feed and seed indust. 19-20, market information, 20- In charge herbarium work, Minn. Bot. Surv., 00-03; botanist, S. Dak. Geol. and Nat. Hist. Surv., 03- A.A.; fel. Minn. Bot. Soc. Agricultural botany; grasses and forage plants; seed and market information.
- Wheeler, Prof. W(illiam) M(orton)**, Bussey Institution, Forest Hills, Boston, Mass. **Zoology*. Milwaukee, Wis, March 19, 65. German-American Nor. Col; Ph.D., Clark, 92; Würzburg and Liège, 93-94; Smithsonian table, Naples Zool. Sta, 93-94; Sc.D., Chicago, 16. Instr. embryol., Chicago, 92-96, asst. prof., 96-99; prof. zool., Texas, 99-03; curator invert. zool., Am. Museum Nat. Hist., 03-08; prof. econ. entom., Harvard, 08- Ed., 'Jour. N. Y. Entom. Soc'; assoc. ed., 'Biol. Bul'; 'Jour. Morphol'; 'Psyche'; research assoc., Am. Museum Nat. Hist., 08- Nat. Acad; A.A.; Soc. Nat; Soc. Zool. (pres, east branch, 08); Philos. Soc; Psychol. Ass; Entom. Soc. (pres, 08); Ecol. Soc. (v. pres, 16); Am. Acad; Tex. Acad; N. Y. Acad; Wash. Acad; cor. mem. Phila. Acad. Embryology of insects; anatomy and embryology of animals, mainly in-

vertebrates; habits and taxonomy of insects; comparative psychology; ants, their structure, development and behavior; ants of the world.

Wheelon, Dr. Homer, 3643 Vista Ave, St. Louis, Mo. *Physiology*. San Jose, Calif, June 29, 88. A.B., Washington (Seattle), 11; M.S., St. Louis, 16, M.D., 18. Asst. zool., Washington (Seattle), 10-11; biol., Oregon, 11-12; physiol., St. Louis, 14-18, asst. prof., 18; *house physician, Bethesda Hosp., St. Louis*, 18- Asst. physiol., Chicago, summer, 14; lecturer, Jewish and St. Anthony's Hospitals, St. Louis. Physiol. Soc.; Ass. Study Int. Secretions; Am. Med. Ass. Clinical physiology; internal secretion of the testes; gastric motility.

Wherry, Dr. Edgar T (heodore), U. S. Department of Agriculture, Washington, D. C. *Chemistry*. Philadelphia, Pa, Sept. 10, 85. B.S., Pennsylvania, 06, Ph.D., 09. Instr. miner., Lehigh, 08-10, asst. prof., 10-13; asst. curator miner. and petrol., dept. geol., U. S. Nat. Museum, 13-17; *crystallographer, bur. chem., U. S. Dept. Agr.*, 17- Ed., 'Am. Mineralogist.' Asst. geol., Pennsylvania, summer, 08, 09-10; lecturer chem., Wagner Free Inst., 08-13. A.A.; Chem. Soc.; fel. Geol. Soc.; Miner Soc.; Ecol. Soc.; Phila. Acad.; Phila. Miner. Soc. Mineralogy; crystallography.

Wherry, Prof. W (illiam) B (uchanan), City Hospital, Cincinnati, Ohio. *Bacteriology*. Lodiana, India, Dec. 24, 75. A.B., Washington and Jefferson, 97; M.D., Rush Med. Col., 01. Asst. bacter., Chicago, 01-02, assoc., 02-03; bacteriologist, Govt. Laboratories, Manila, P. I., 03-05; prof. bacter., Oakland Col. Med. and Surg., 07; bacteriologist, Board of Health, San Francisco, and acting asst. surgeon, U. S. Pub. Health Service, 07-09; asst. prof. bacter., Ohio-Miami Med. Col., 09; assoc. prof. bacter., Cincinnati, 10-13, *prof. bacter. and hygiene*, 14- A.A.; Pub. Health Ass. Etiology of disease; physiology of bacteria.

Whetzel, Prof. H (erbert) H (ice), College of Agriculture, Ithaca, N. Y. **Plant pathology*. Near Avilla, Ind, Sept. 5, 77. A.B., Wabash, 02, A.M., 06; Cornell. Asst. bot., Cornell, 02-04, instr., 04-05, asst. prof., *col. agr.*, 05-06, *plant path.*, 06-09, *prof.*, 09- Fungi and plant disease investigation, Porto Rico, 16. A.A.; Phytopath. Soc. (pres); Bot. Soc.; British Mycol. Soc.; Verein. für angewandte Bot. Diseases of ginseng; fire blight of pomaceous fruits; Botrytis diseases; dusting.

Whipple, Prof. George C (handler), Harvard University, Cambridge, Mass. *Sanitary science*. New Boston, N. H., March 2, 66. B.S., Mass. Inst. Tech., 89. Biologist, Boston Water Works, 89-97; director, Mt. Prospect lab, Dept. Water Supply, Gas and Elec., N. Y. City, 97-04; *consulting sanit. engineer*, 04-; *prof. sanit. eng.*, Harvard, 11-, *sec'y. sch. pub. health, Harvard and Mass. Inst. Tech.*, 13- Dept. engineer, Commission on Additional Water Supply, N. Y. City, 03; consulting prof. water supply, Brooklyn Polytech., 04-11; mem. pub. health council, Mass. State Dept. Pub. Health, 14-; major and deputy commissioner to Russia, Red Cross, 17; senior sanit. engineer, U. S. Pub. Health Service; chief, div. sanit., League of Red Cross Societies, 19. A.A.; Civil Eng.; Water Works Ass; fel. Am. Acad.; New Eng.

Water Works Ass; Brooklyn Eng. Club (pres, 08); Boston Soc. Civil Eng. (pres, 17). Water purification; sewage disposal; stream pollution; plumbing; vital statistics.

Whipple, Dr. George (Hoyt), Hooper Research Laboratory, San Francisco, Calif. **Pathology*. Ashland, N. H., Aug. 28, 78. A.B., Yale, 00; M.D., Hopkins, 05. Asst. path., Hopkins, 05-06, instr., 06-07; pathologist, Ancon Hosp., Panama, 07-08; res. pathologist, Hopkins Hosp., 08-14; assoc. path., Hopkins, 08-10, assoc. prof., 10-14; *director, Hooper Foundation Med. Research and prof. research med., California*, 14-, *dean, med. sch.*, 20- Pathologist, Bay View Asylum, Baltimore, 07, 09. A.A.; Am. Med. Ass.; Ass. Path. and Baet.; Physiol. Soc.; Soc. Exp. Path.; Am. Physicians; Soc. Biol. Chem.; Soc. Exp. Biol. Tuberculosis; uncinariasis; black-water fever; pancreatic lesions; chloroform poisoning in animals.

Whipple, Prof. Guy Montrose, University of Michigan, Ann Arbor, Mich. **Psychology, Education*. Danvers, Mass, June 12, 76. A.B., Brown, 97; Clark, 97-98; Ph.D., Cornell, 00. Asst. psychol., Clark, 97-98; Cornell, 98-02, lecturer edue., 02-04, asst. prof., 04-11, edue. psychol., 11-14; assoc. prof. edue., Illinois, 14-15, prof., 15-18; acting director, bur. salesmanship research, Carnegie Inst. Tech., 17-19, prof. applied psychol., 18-19; *prof. exp. edue. and director, bur. tests and measurements, Michigan*, 19- Acting prof. edue. psychol., Missouri, 07-08; Wisconsin, summer, 09; co-operator ed. board, 'Psychol. Bull.' 'Jour. Delinquency,' 'Jour. Criminol,' 'Jour. Applied Psychol'; mem. Nat. Research Council. A.A.; Psychol. Ass.; Nat. Soc. Study Educ. (see 'y-treas, ed, 'Year-books'). Time order of disparate stimuli; synesthesia; analysis of recognitory judgment in discrimination of pitch after various time intervals; discrimination of pitch of chords and melodies; children's vocabularies; vocabulary and word-building tests; distribution of daily time of Cornell students; effect of practise on the range of attention; psychology of report; standardization of mental tests; the value of various mental tests; effective methods of studying.

Whitaker, Prof. M (ilton) C, 27 William St, New York, N. Y. **Chemical engineering*. Frazeysburg, Ohio, Dec. 16, 70. B.S., Colorado, 97, M.S., 00, LL.D., 13; D.Ch.Eng., Pittsburgh, 15. Instr. chem., Colorado, 98; Columbia, 02; chemist, Welsbach Co., 03, gen. supt., 03-10; prof. chem. eng., Columbia, 11-17; *v. pres., U. S. Indust. Alcohol Co. and pres., U. S. Indust. Chem. Co.*, 17- Ed., 'Jour. Indust. and Eng. Chem.', 11-16. Chem. Soc.; Soc. Chem. Indust. (chairman, N. Y. sect, 11); Chem. Eng. (pres, 14); N. Y. Chemists Club (pres, 15-17, trustee). Applied chemistry.

Whitbeck, Prof. R (ay) H (ughes), University of Wisconsin, Madison, Wis. *Geography*. Rochester, N. Y., April 2, 71. A.B., Cornell, 01. Principal, Pike Sem, Pike, N. Y., 92-96; high sch., Schuylerville, N. Y., 96-98; asst. physiog., Cornell, 00-01; supervisor, State Model Sch., Trenton, N. J., 01-09; asst. prof. *physiog. and geog.*, Wisconsin, 09-11, assoc. prof., 11-15, *prof.*, 15-

- Lecturer geog, summer session, Tennessee, 02; Chicago, 16; physical geog, summer sessions, Cornell, 03-07, 13, 20; geog, Adelphi, 06-09; asst. prof. physiog, summer session, Wisconsin, 08, 09; ed., 'Jour. of Geog.', 10-18; geographer, Wis. Geol. Surv.; Ass. Geog.; Nat. Council Geog. Teachers (pres, 20).
- Whitcomb, W(illiam) H(enry)**, Box 606, New Haven, Conn. *Chemistry*. Boston, Mass, March 14, 80. B.S., Mass. Inst. Tech, 03, M.S., 06. Asst. physics, Mass. Inst. Tech, 03-06; asst. prof. chem, Miami, 06-08, assoc. prof, 08-13, prof, 13-17; *director lab. control, footwear div. U. S. Rubber Co*, 17- A.A.; Chem. Soc. Inorganic chemistry.
- White, Prof. A(lbert) E(aston)**, University of Michigan, Ann Arbor, Mich. *Metallurgy*. Plainville, Mass, March 12, 84. A.B., Brown, 07; Harvard, 07-08. Research worker, Jones and Laughlin Steel Co, 08-11; instr. *metal*, Michigan, 11-13, asst. prof, 13-17, *prof*, 19- Head, metal branch, inspection div, ordnance dept, U.S.A., 17-18, tech. staff, 18-19; consulting engineer, Detroit Edison Co; Packard Motor Car Co; Saginaw Malleable Iron Co. Min. and Metal. Eng; Chem. Soc.; Soc. Test. Mat. Condenser tubes: recrystallization of steel; malleable iron.
- White, Prof. Alfred H(olmes)**, University of Michigan, Ann Arbor, Mich. *Chemical engineering*. Peoria, Ill, April 29, 73. McGill, 89-90; A.B., Michigan, 93, B.S., 04; Polytech, Zürich, 96-97. Asst. chem, Illinois, 93-96; instr. chem. technol, Michigan, 97-04, asst. prof, 04-07, junior prof. chem. eng, 07-11, *prof*, 11- Consulting engineer, U. S. Bur. Mines, 10-; capt. and later lieut. col, chief research, tech. sect, assoc. chief, nitrate div, ordnance dept, 17-19; consulting chem. engineer ordnance dept, 19- Chem. Eng; Am. Gas Inst; Soc. Test. Mat. Volume changes in concrete; destructive distillation of coal and manufacture of illuminating gas; recovery of methyl alcohol from waste liquors of wood pulp mills; fixation of nitrogen.
- White, (Charles) David**, U. S. Geological Survey, Washington, D. C. **Paleobotany*. Palmyra, N. Y., July 1, 62. B.S., Cornell, 86. Asst. paleontologist, *U. S. Geol. Surv.*, 86-94, asst. geologist, 94-00, geologist, 00-12; *chief geologist*, 12- Assoc. curator paleobot, U. S. Nat. Museum. Nat. Acad; A.A.; Bot. Soc; Geol. Soc; Paleont. Soc. (v. pres, 09); Wash. Acad; Wash. Geol. Biol. and Bot. Societies. Stratigraphic study of Paleozoic fossil plants; geological climate; flora of the Pottsville formation.
- White, Prof. Charles E(dgar)**, New Concord, Ohio. *Mathematics*. Trafalgar, Ind, Oct. 25, 68. A.B., Indiana, 96, A.M., 07. Principal, high schools, Ind, 97-04; teacher *math*, Mishawaka, 04-06; instr, Vanderbilt, 08-09; *prof*, W. Va. Wesleyan, 09-20; *Muskingum*, 21- Math. Ass. Irreducible cases of equations; solutions of equations; remainder theorems.
- White, Capt. Cha(rles) H(enry)**, Mills Building, San Francisco, Calif. *Geology, Mining*. Yackin Co, N. C., Aug. 13, 65. Peabody, 85-87; Vanderbilt, 88; B.S., North Carolina, 94; B.S., Harvard, 97, A.M., 01. Instr. geol, Tennessee, 95-96; asst, Harvard, 98, instr. mining and metal, 99-05, asst. prof, 05-15, prof, 15-17; consulting geologist, 17- Field asst, U. S. Geol. Surv, 98, 03; instr, George Crocker Sch. of Practical Mining, Colo., 04; capt, ordnance dept, 18-19, O.R.C., 19- Min. Eng; Chem. Soc.
- White, Prof. C(harles) J(ames)**, 259 Marlborough St, Boston, Mass. *Dermatology*. Boston, Dec. 26, 68. A.B., Harvard, 90, M.D., 93; Paris and Vienna, 93-95. Asst. physician *skin diseases*, Mass. Gen. Hosp, 95-03, *physician*, 03-; asst. *dermat*, Harvard, 98-02, instr, 02-11, asst. prof, 11-16, *prof*, 16- Consulting dermatologist, Boston Insane Hosp, 03-; Infants Hosp, 16-; past chairman, med. advs. board, Mass. Hosp. for Lepers; med. ed. board, 'Archives of Dermat.' Ass. Path. and Bact; Am. Med. Ass. (chairman, dermat. sect, 10-12); Dermat. Ass. (sec'y and treas, 02-05, pres, 15); Ass. Cancer Research; New Eng. Soc. Dermat. (sec'y, 15-17); hon. fel. London Dermat. Soc.
- White, Dr. C(ourtland) Y(ardley), (Jr)**, 6611 N. Tenth St, Philadelphia, Pa. *Pathology*. Philadelphia, Aug. 12, 73. Cent. High Sch, Phila., 90-92; M.D., Pennsylvania, 95; Vienna, 98. Instr. clin. med, Pennsylvania, 99-04, lecturer and demonstrator morbid anat, vet. dept, 99-10, asst. director, William Pepper Lab, 99-05. Pathologist, Phila. Zool. Garden, 01-06; Pa. Live Stock Sanit. Board, 03-10; Henry Phipps Inst. Tuberculosis, 05-08; director, path. lab, Episcopal Hosp, Phila, 08; chief bacteriologist, Phila. Bur. of Health, 10. A.A.; Ass. Path. and Bact; Am. Med. Ass; Phila. Col. Physicians; Phila. Acad; Phila. Path. Soc. (treas, 06-); Phila. Pediat. Soc. General and comparative pathology and bacteriology; the blood.
- White, Dr. E(dith) Grace**, 1600 Sherwin Ave, Chicago, Ill. *Zoology*. Boston, Mass, May 16, 90. A.B., Mt. Holyoke, 12; A.M., Columbia, 13, Ph.D., 18. *Prof. biol*, Heidelberg (Ohio), 18-20; *Shorter*, 20- A.A. Electrical organs of *Astroscopus guttatus*; elasmobranch fishes.
- White, Prof. E(dward) A(lbert)**, Cornell University, Ithaca, N. Y. *Horticulture*. Townsend, Mass, May 23, 72. B.S., Mass. Col. Asst. horticulturist, Mass. Col, 95-97; horticulturist, Baron de Hirsch Sch, Woodbine, N. J., 97-99; asst. prof. hort, Tex. Col, 99-02; *prof. bot. forestry and landscape gardening*, Conn. Col, 02-07; *floriculture*, Mass. Col, 07-13; *Cornell*, 13- Soc. Hort. Sci. Mycology; floriculture.
- White, Dr. Franklin W(arren)**, 322 Marlborough St, Boston, Mass. *Medicine*. Boston, Oct. 23, 69. B.S., Mass. Inst. Tech, 90; M.D., Harvard, 95. Prof. med, Dartmouth; *visiting physician*, Boston City Hosp; *instr. med*, Harvard Med. Sch. Am. Physicians; Gastro-Enterol. Soc. (v. pres); Am. Med. Ass. (sec'y, sec. gastro-enterol). Diseases of the digestive organs.
- White, Dr. (George) Benjamin**, 375 South St, Jamaica Plain, Boston, Mass. *Bacteriology*. Cooperstown, N. Y., Jan. 15, 79. Ph.B., Yale, 00, Ph.D., 03; Berlin, 06; London and Munich, 07. Asst. director, dept. bacter, Hoagland Lab, 03-07, director, 07-14; asst. director, bacter. laboratories, Dept. Health, N. Y. City, 14-18; capt. Sanit. C, 18-19; *director, div. biol. laboratories*, Mass. Dept. Public Health, 20- Asst. dept. prev. med, Harvard, and lecturer immun-ity, Mass. Col. Pharmacy, 20- A.A.; Ass. Path.

- and Bact; Soc. Bact; Soc. Exp. Biol; Ass. Immunol; Pub. Health Ass; Ass. Tuber; assoc. fel. N. Y. Acad. Immunology; biochemistry; serology; purin metabolism; tuberculin; immunity reactions of vegetable proteins; tuberculosis.
- White, Prof. George Cleveland**, Storrs, Conn. *Dairy husbandry*. Harrisonville, Mo, May 25, 87. B.S, Missouri, 10, A.M, 12. Asst. *dairy husbandry*, Missouri, 10-11, instr, 11-12; asst. prof, Nebraska, 12-13, *prof, Conn. Col. and dairy husbandman, Storrs Exp. Sta, 13-* Dairy Sci. Ass. Abortion in cattle; calf and dairy cattle feeding.
- White, Dr. George F(rederic)**, Clark University, Worcester, Mass. *Chemistry*. Melrose, Mass, June 15, 85. B.S, Mass. Inst. Tech, 06; fellow, Hopkins, 09-10, Ph.D, 10. Asst. chem, Mass. Inst. Tech, 06-08; *assoc. prof, Richmond, 10-12*; instr, asst. prof, and later *assoc. prof, org. chem, Clark, 12-*, instr. *biol. chem, 14-* Scientific asst, Bur. Fisheries, Woods Hole, summers, 10-16; special expert U. S. Pub. Health Service, summers, 16-18. A.A; Chem. Soc. Qualitative analysis; fisheries products; viscosity; vitamins; trinitrotoluol poisoning.
- White, Dr. G(ershom) Franklin**, U. S. Department of Agriculture, Washington, D. C. *Pathology*. Hooksburg, Ohio, Dec. 22, 75. B.S, Ohio (Athens), 01; Ph.D, Cornell, 05; M.D, George Washington, 09. Asst. histol, embryol. and micros, Cornell, 01-02, comp. bacter. and path, 02-03, instr. comp. path, 03-06; expert animal bacter, bur. animal indust, U. S. *Dept. Agr, 06-07, bur. entom, 07-17, specialist insect diseases, 19-* Capt, M.C, 18-19. A.A; Agr. Hist. Soc: Wash. Entom. Soc. Diseases of honey bees and of other insects.
- White, Dr. Gertrude M(arean)**, Carnegie Institute of Technology, Pittsburgh, Pa. *Zoology*. Menominee, Wis. A.B, Milwaukee-Downer, 13; A.M, Wisconsin, 14, Ph.D, 18. Asst. *zool, Wisconsin, 14-18*; instr, *Carnegie Inst. Tech, 18-* A.A; Zool. Soc. Association and color discrimination in fish.
- White, Prof. H(enry) C(lay)**, University of Georgia, Athens, Ga. *Chemistry*. Baltimore, Md, Dec. 30, 48. B.S, C.E, M.E, Virginia, 70, Ph.D, 87; D.C.L, Sewanee, 04; LL.D, Illinois, 05; Columbia, 08; hon. Sc.D, Michigan, 07. *Prof. chem, St. John's (Md), 71-72*; *Georgia, 72-*; chemist and v. director, Ga. Exp. Sta, 89-13. State chemist, Ga, 80-90; pres, Ga. State, 90-07; sci. lecturer, Peabody Inst, Baltimore, 70-71. A.A; Chem. Soc; Agr. Chem. (pres, 81); Ass. Agr. Col. (pres, 89); cor. mem. British Ass; fel. London Chem. Soc. Agricultural and physiological chemistry; proteids of cotton; nitrogen, phosphorus and potash feeding of cotton.
- White, Prof. H(enry) S(eely)**, Vassar College, Poughkeepsie, N. Y. **Mathematics*. Cazenovia, N. Y., May 20, 61. A.B, Wesleyan, 82; Ph.D, Göttingen, 90; LL.D, Northwestern, 15. Tutor math, Wesleyan, 84-87; asst. pure math, Clark, 90-92; assoc. prof. and Noyes prof, Northwestern, 92-05; *prof. math, Vassar, 05-* Assoc. ed, 'Annals of Math,' 99-06. Nat. Acad; A.A. (v. pres, 15); Math. Soc. (asst. ed, 'Trans,' 02-06, ed, 07-14, pres, 06-08). Theory of invariants; geometry of curves and surfaces; triad systems, especially on 15 and 31; special types of (3, 3) correspondences on gauche cubic; special plane curves of low orders.
- White, Prof. H(orace) L(oring)**, 516 E. Washington St, Los Angeles, Calif. *Chemistry*. Portland, Maine, March 20, 71. B.S, Maine, 98; A.M, Columbia, 04. Adj. prof. chem, col. med, Vermont, 00, prof, 01-08, sec'y and treas, 06-08; asst. prof, physiol. chem, N. Dak. Col, 08-17, asst. chemist, Exp. Sta, 08-17; *prof. biol. chem, Southern California, 17-* Medico-legal chemist, Vt. Board of Health, 05-08. Chem. Soc. Bleaching of flour; storage of flour and wheat.
- White, Dr. I(srael) C**, Morgantown, W. Va. **Geology*. Monongalia Co, W. Va, Nov. 1, 48. A.M, West Virginia, 72; LL.D, West Virginia, 19; Ph.D, Arkansas, 80. Asst. geologist, Pa. Geol. Surv, 75-84; U. S. Geol. Surv, 84-88; prof. geol, West Virginia, 77-92; *state geologist, W. Va, 97-* Mem. jury of awards, Columbian Expos, 93; assoc. ed, 'Am. Geologist'; chief, Brazilian Coal Commission, 04-06; mem. Conf. on Waste of Fuel Resources, 08. Delegate, Int. Geol. Cong. St. Petersburg, 97; Paris, 00. A.A. (v. pres, 97); Geol. Soc. (treas, 92-07, pres, 20); Ass. Petrol. Geol. (pres, 19); Philos. Soc; Wash. Geol. Soc; Wash. Acad. Stratigraphy; coal; petroleum; natural gas; the Appalachian coal fields.
- White, James**, 450 Wilbrod St, Ottawa, Can. *Geography*. Ingersoll, Ont, Feb. 3, 63. Grad, Royal Mil. Col. Topographer, Can. Geol. Surv, 84-94, geographer and chief draughtsman, 94-99, chief geographer, Can, 99-09; sec'y, *Commission of Conservation of Can, 09-13, deputy minister and asst. chairman, 13-* Alaska boundary convention, 03. Fel. Royal Soc. Can; Can. Inst. Eng; Can. Min. Inst; fel. Royal Geog. Soc. 'Atlas of Canada, 1906; maps of Canada; altitudes in Canada; derivation of place-names; treaties and boundary disputes affecting Canada.
- White, Prof. Jesse H(ayes)**, 323 Coltart Square, Pittsburgh, Pa. *Psychology*. Alamo, Ind, March 5, 77. A.B, Indiana, 03, A.M, 04; Ph.D, Clark, 08. Supt. schools, Waveland, Ind, 04-06; *prof. psychol, Pittsburgh, 08-* Lecturer psychol, Carnegie Library Sch, 18-19. A.A; Psychol. Ass; Pittsburgh Acad. Experimental and social psychology; child psychology.
- White, Prof. John**, Rose Polytechnic Institute, Terre Haute, Ind. *Chemistry*. Poolesville, Md, Feb. 24, 66. A.B, Hopkins, 88, A.M, Ph.D, 91. Asst. *chem, Cornell, 91-03*; instr, Nebraska, 93-97, adj. prof, 97-99, prof, 00-03; *prof. and head, dept. chem, Rose, 03-*, acting pres, 16-17, 19- Acting head, dept. chem, Nebraska, 99-00. A.A; Chem. Soc; Chem. Gesell. Dissociation of metallic oxides in metallic vapors; molecular weight determinations of the aldehydes and peroxides; the metallic suboxides; physical chemistry of the pyridin bases; the reactions involved in the formation of certain complex salts of lead; Indiana coals.
- White, Prof. Jonathan Winborne**, State College, Pa. *Agronomy*. Greenville, N. C, March 28, 83. B.S, N. C. Col, 03; M.S, Illinois, 12. Re-

- search chemist, 03-05; fertilizer chemist, Pa. Exp. Sta., 06-11, asst. prof. and assoc. prof. agron., Pa. State, 12-19, *prof. soil technol.*, 19- Soil fertility; soil bacteriology; plot experiments; pot culture; soil composition.
- White, Dr. Orland E(mile)**, Brooklyn Botanic Garden, Brooklyn, N. Y. *Botany*. Sibley, Iowa, April 25, 85. B.S., S. Dak. Col., 09; M.S., 11; Harvard, 12, Sc.D., 13. Asst. bot., S. Dak. Col., 07-09, instr., 10-11; asst., Radcliffe, 12, genet., 13; *collaborator, bur. plant indust., U. S. Dept. Agr.*, 15-; asst. curator *plant breeding, Brooklyn Bot. Garden*, 13-16, *curator*, 16- A.A.; Soc. Nat.; Bot. Soc.; Soc. Exp. Biol.; Torrey Bot. Club. Genetics; experimental biology; physical basis of inheritance; commercial plant breeding.
- White, Dr. Paul D(udley)**, Massachusetts General Hospital, Boston, Mass. *Medicine*. Boston, June 6, 86. A.B., Harvard, 08, M.D., 11. Intern., Mass. Gen. Hosp., 11-13; Harvard traveling fellow, Europe, 13-14, *teaching fellow med., Harvard Med. Sch.*, 15-; *house physician, Mass. Gen. Hosp.*, 14- With Harvard Med. Unit, B.E.F., 16; capt., M.C., A.E.F., 17-19; capt., A.R.C., Balkan Commission, 19. Soc. Clin. Invest.; Am. Med. Ass. Internal medicine; cardiac physiology; electrocardiography; heart disease.
- White, Dr. S(olon) Marx**, Nicolle Clinic, 1009 Nicolle Ave., Minneapolis, Minn. *Medicine*. Hokah, Minn., July 16, 73. B.S., Illinois, 76; M.D., Northwestern, 97. Intern., Cook Co. Hosp., Chicago, 97-98; demonstrator path. and bacter., Minnesota, 98-00, asst. prof., 00-08, assoc. prof. med., 08-17, *prof.*, 17- Pathologist, St. Barnabas, Northwestern and City Hospitals, 08. Ass. Path. and Bact.; Am. Med. Ass.; Am. Physicians; Minn. Acad. Med.; Minnesota Path. Soc. Internal medicine; tuberculous glomerulitis; regeneration in the adrenal gland of guinea pigs; lymphosarcomatosis of the intestine; focal infections as related to systemic disease; Eggleston method of administering digitalis; Digitalis lutea and D. thapsi; block in branches of His bundle.
- White, Dr. Walter P(orter)**, Geophysical Laboratory, Washington, D. C. **Physics*. Roxbury, Mass., Feb. 23, 67. A.B., Amherst, 87, A.M., 92; Harvard, 88; Mass. Inst. Tech., 89-90; Wisconsin, 01-02; Cornell, 02-04, fellow, 03-04, Ph.D., 04. Teacher, prep. and high schools, 87-01; *physicist, geophys. lab., Carnegie Institution*, 04- Physical Soc.; Wash. Philos. Soc. Galvanometers; potentiometers; thermoclements; high temperature measurements; silicate equilibria; calorimetry.
- White, Dr. William A(lanson)**, Government Hospital for the Insane, Washington, D.C. *Neurology*. Brooklyn, N. Y., Jan. 24, 70. Cornell, 85-89; M.D., L. I. Col. Hosp., 91; Munich, 10. Asst. physician, Binghamton State Hosp., 92-03; *supt. St. Elizabeth's Hosp.*, 03-; *prof. nervous and mental diseases, Georgetown*, 03-; *George Washington*, 04- Lecturer mental and nervous diseases, Army and Navy Med. Schools; mem. advisory board of editors, 'Journ. Nervous and Mental Diseases'; co-editor, 'Psychoanal. Rev.' U. S. delegate, Int. Cong. on Relief of
- Insane, Vienna, 08; Int. Cong. Psychiat., Neurol., Psychol. and Nursing of Lunatics, Amsterdam, 07. A.A.; Am. Med. Ass.; Psychopath. Ass.; Medico-Psychol. Ass.; Inst. Criminal Law and Criminol. (v. pres); D. C. Med. Jurisprudence Soc. (pres); Wash. Acad. Psychiatry; psychopathology.
- White, Dr. W(illiam) Charles**, Bedford and Wandless Sts., Pittsburgh, Pa. *Medicine*. Woodstock, Ont., Sept. 4, 74. M.B., Toronto, 98, M.D., 02. Prof. path., Central Col. (Ind), 00-05; prof. neuro-anat. and clin. psychiatry, 05-07; asst. prof. med., Pittsburgh, 08-18; *med. director, Pittsburgh Tuber. League*, 19- Chief, bur. tuber., Red Cross, France, 17-18, director, Tuber. Commission to Italy, 18-19. Am. Physicians; Climat. Ass.; Ass. Tuber. (director). Sociology; pulmonary diseases; circulation; auscultation.
- Whiteford, Prof. G(ilbert) H(ayes)**, Fort Collins, Colo. *Chemistry*. Glen Morris, Md., Oct. 17, 76. B.S., Md. Col., 97; A.M., Columbia, 12; Ph.D., Hopkins, 17. Teacher, pub. schools, Md. and Ga., 99-05; instr. science, Anne Arundel Acad., 05-07; Bellefonte Acad., 07-11; *prof. chem.*, Albright, 11-14; *Colo. Agr. Col.*, 17- A.A.; Chem. Soc. Analytical chemistry.
- Whitehead, Prof. John B(oswell)**, 19 W. Cold Spring Lane, Baltimore, Md. **Applied electricity*. Norfolk, Va., Aug. 18, 72. E.E., Hopkins, 93, A.B., 98, Ph.D., 02. Electrician, Westinghouse Elec. and Mfg. Co., 93-96; Niagara Falls Power Co., 96-97; instr. applied elec., Hopkins, 97-00, assoc., 01-04, assoc. prof., 04-10; *prof.*, 10-, *dean, faculty eng.*, 20- Lab. asst., U. S. Bur. Standards, 02; research asst., Carnegie Institution; major, corps engineers, 17-19. Elec. Eng. Inductive E.M.F. in transformers; magnetic effect of electric displacement; single phase railway system; alternating current-direct current transformations; reactance in armored cables; ionization due to alternating voltage; submarine detection; measurement of high alternating voltage.
- Whitehead, Dr. Walter L(ucius)**, Massachusetts Institute of Technology, Cambridge, Mass. *Geology*. Allegheny, Pa., July 5, 91. B.S., Mass. Inst. Tech., 13, Austin fellow, 14-16, Ph.D., 17. *Consulting mining geologist*, 16- Min. Eng. Mining geology; geochemistry; economic geology; origin of ore deposits.
- Whitehome, Prof. W(illiam) R(isby)**, Bates College, Lewiston, Maine. *Physics*. Jamaica, W. I., Feb. 9, 73. A.B., Tufts, 95, Ph.D., 01. Instr., physics, Lehigh, 04-06; math., Pratt Inst., 06-07; *prof. physics, Bates*, 07- A.A.; assoc. Physical Soc. Electricity; electrochemistry; development of primary battery.
- Whitfield, Dr. J(ames) Edward**, 406 Locust St., Philadelphia, Pa. *Metallurgy*. Albany, N. Y., Sept. 27, 59. Rensselaer, 80; M.A., Ph.D., Nat. Col., 86. Asst., U. S. Geol. Surv., 80-88; *prof. chem.*, Nat. Col., Washington, D. C., 84-88; *mem. firm of Booth, Garrett and Blair*, Phila., 88- A.A.; Chem. Soc.; Civil Eng.; Phila. Soc.; Franklin Inst. Meteorites; metallurgy of iron and steel.
- Whitford, Dr. E(dward) E(verett)**, 1681 Broadway, New York, N. Y. *Mathematics*. Brook-

- field, N. Y. Jan. 31, 65. A.B., Colgate, 86, A.M., 90; Ph.D., Columbia, 12. Teacher math, Colby Acad, New London, N. H., 86-91; Keystone Acad, Factoryville, Pa., 91-98; principal, high sch., Brookfield, N. Y., 00-01; tutor and later instr. math, Col. City of N. Y., 05-14, *asst. prof.*, 14- Math. Soc. The Pell equation and its application to units of quadratic domains.
- Whitford, Prof. H(arry) N(ichols)**, 264 Willow St., New Haven, Conn. *Forestry*. Manhattan, Kans., March 11, 72. B.S., Kansas State, 90, M.S., 00; Ph.D., Chicago, 03. Instr. biol., Armour, 98-00; *asst. bot.*, Chicago, 00-04; *bot. collector*, Bur. Science, P. I., 04-06; *chief, div. investigation*, Bur. Forestry, P. I., 06-12; *asst. prof. silviculture*, Univ. Philippines, 10-12; *asst. forester*, Commission of Conservation of Can., 13-16; *asst. prof. tropical forestry, forest sch.*, Yale, 16- Collaborator, bur. of forestry, U. S. Dept. Agr., 01-04, 17-; *mem.* U. S. Dept. State econ. surv. exped. to Guatemala and Honduras, 19. A.A.; Soc. Foresters; Ecol. Soc.; Can. Forestry Ass. Forest botany and geography; tropical forests; forests of Michigan, Montana, Philippine Islands, British Columbia and South America.
- Whiting, Prof. Albert L(emuel)**, University of Illinois, Urbana, Ill. *Agronomy*. Stoughton, Mass., May 12, 85. B.S., Mass. Col., 08; M.S., R. I. Col., 10; fellow, Illinois, 10-12, Ph.D., 12. *Asst. agron.* and *instr. vet.*, R. I. Col., 08-10, *asst. soil biol.*, Illinois, and *Exp. Sta.*, 12-13, *assoc.*, 13-16; *asst. prof.*, and *asst. chief*, 17, *assoc. prof.*, 18, *prof. and chief*, 19- A.A.; Soc. Agron.; Soc. Baet.; Chem. Soc. Soil biology; nitrogen in legumes; solvent action of soil bacteria; nitrates.
- Whiting, Prof. P(hineas) W(escott)**, Annandale-on-Hudson, N. Y. *Genetics*. Lowell, Mass., Oct. 28, 87. A.B., Harvard, 11, M.S., 12; Ph.D., Pennsylvania, 16. Harrison research fellow, Pennsylvania, 16-18; *prof. biol.*, Franklin and Marshall, 18-20; *St. Stephen's*, 20- A.A.; Soc. Nat.; Soc. Zool. Cytology; genetics of Diptera; coat colors of cats and rats; Mediterranean flour moth; cytology of mosquitoes and parasitic wasps.
- Whiting, Prof. S(arah) F(rances)**, Wilbraham, Mass. *Physics, Astronomy*. Wyoming, N. Y., Aug. 23, 46. A.B., Ingham; Mass. Inst. Tech., 76-79; Berlin, 89; Edinburgh, 96-97; hon. Sc.D., Tufts, 05. *Prof. physics and physical astron.*, Wellesley, 76-12, *director, Whittin Observatory*, 04-16, *emer. director*, 16- A.A.; Astron. Soc.; Physical Soc.
- Whitley, Prof. Mary T(heodora)**, Teachers College, Columbia University, New York, N. Y. *Psychology*. London, Eng., Oct. 4, 78. B.S., Columbia, 05, A.M., 06, Ph.D., 11. Instr. educ. psychol., Teachers Col., Columbia, 10-14, *asst. prof. educ.*, 14- A.A.; Psychol. Ass. Education; tests; child psychology; religious information scale.
- Whitlock, Herbert P(ercy)**, American Museum of Natural History, New York, N. Y. *Mineralogy*. New York, July 31, 68. C.E., Columbia, 89. *Asst. miner.*, Columbia, 92-00; N. Y. State Museum, 00-04, *mineralogist*, 04-17; *curator miner.*, Am. Museum Nat. Hist., 17- Geol. Soc.; Miner. Soc. (sec'y, 20-); Am. Acad.; fel. N. Y. Acad.; N. Y. Miner. Club (sec'y and curator, 18). Crystallography; calcite; crystal forms of minerals.
- Whitmore, Prof. E(ugene) R(udolph)**, George Washington University Medical School, Washington, D. C. *Bacteriology*. Lancaster, Wis., June 18, 74. B.S., Wisconsin, 96; M.D., Col. Physicians and Surg., Chicago, 99. Intern, Cook Co. Hosp., 99-01; *adj. prof. chem.*, Col. Physicians and Surg., Chicago, 99-01; *med. officer*, U.S.A., 01-20, *retired*, 20, *prof. path.* and *bacter.*, Army Med. Sch., 13-19, *curator*, Army Med. Museum, 13-15; *assoc. prof. bacter.* and *prof. prev. med.*, George Washington, 20- Detached service, U.S.A. Bur. Science, P. I., 08-10; *lecturer trop. med.* and *instr. protozool.* and *helminthol.*, N. Y. Post-Grad. Med. Sch., 13. A.A.; Soc. Trop. Med.; Far East Ass. Trop. Med.; Manila Med. Soc. Protozoology; vaccine therapy; chemotherapy of tuberculosis; bacillary dysentery; rabies; amebae; flagellates; malaria; cholera; rabies; leishmaniasis; trypanosomiasis; diseases due to nematodes and to arthropods.
- Whitmore, Prof. Frank C(lifford)**, Northwestern University, Evanston, Ill. *Chemistry*. North Attleboro, Mass., Oct. 1, 87. A.B., Harvard, 11, A.M., 12, Ph.D., 14. Instr. org. chem., Williams, 16-17; Rice Inst., 17-18; *asst. prof.*, Minnesota, 18-20; *prof. chem.*, Northwestern, 20- Chem. Soc. Organic chemistry; malonic ester; organic mercurials.
- Whitnall, Prof. H(arold) O(rville)**, Hamilton, N. Y. *Geology*. Morristown, N. J., Aug. 3, 77. Ph.B., Colgate, 00, A.M., 07. Instr. geol. and biol., Colgate, 03-07, *asst. prof. geol.*, 07-12, *assoc. prof. miner. and econ. geol.*, 12- Field expert, N. Y. State Geol. Surv., 05-08. A.A.; Min. Eng. Stratigraphy and paleontology of the sedimentary series of central New York State.
- Whitnall, Prof. S(amuel) E(rnest)**, McGill University, Montreal, Can. *Anatomy*. Manchester, England, March 30, 76. Manchester; M.A., Oxford, 07, B.Ch., 07, M.D., 19; M.R.C.P., London, 08, L.R.C.P., 08. Demonstrator human anat., Oxford, 08-19; *prof. anat.*, McGill, 19- Welch prize, 03; Radcliffe prize, 13. Anat. Soc. Gt. Britain and Ireland. Ophthalmological anatomy.
- Whitney, Prof. A(lbert) W(urts)**, 15 Park Row, New York, N. Y. *Mathematics*. Geneva, Ill., June 20, 70. A.B., Beloit 91; fellow, Chicago, 93-95, *grad. student*, 95-97. Instr. math., Nebraska, 97-98; Michigan, 98-99; California, 99-04, *asst. prof.* and *later assoc. prof. math.* and *insurance*, 04-13; *gen. manager, Nat. Workmen's Compensation Service Bur.*, 14- Math. Soc.; fel. Actuarial Soc.; fel. Casualty Actuarial and Statistical Soc. Theory of probabilities; actuarial science.
- Whitney, Prof. Alvin G(oodnow)**, New York State College of Forestry, Syracuse, N. Y. *Zoology*. Hamilton, Ont., March 2, 83. A.B., Dartmouth, 07; Yale, 08-10. *Asst. biol. surv.*, U. S. Dept. Agr., 12; Bur. Fisheries, 12-14; *instr. forest zool.*, N. Y. State Col. Forestry, Syracuse, 19-20; *asst. research prof. and asst. director, Roosevelt Wild Life Forest Exp. Sta.*, 20- A.A.; Ecol. Soc.; Soc. Mammal; Meteorol. Soc. Animal and plant ecology; ecology of birds; forest zoology.

- Whitney, Prof. David D(ay)**, University of Nebraska, Lincoln, Nebr. **Zoology*. Brookfield, Vt, Aug. 6, 78. A.B. Wesleyan, 04; A.M., Columbia, 06, Ph.D. 09. Asst. *zool*, Columbia, 07-08; instr. Wesleyan, 08-11, assoc. prof, 11-16; *prof*, Nebraska, 16- A.A.; Soc. Nat; Soc. Zool; Nebr. Acad. (pres, 18). Sex and its regulation in rotifers.
- Whitney, Prof. F(rancis) L(uther)**, University of Texas, Austin, Tex. *Paleontology*. Enfield, N. Y., Sept. 2, 78. A.B. Cornell, 06, A.M., 11. Asst. geol. Cornell, 03-07; asst. geologist, La. Geol. Surv, 05-07; acting prof. biol. Buchtel, 07-08; prof., Hastings, 08-09; instr. *geol. and paleont*, Texas, 09-14, adj. prof, 14-19, *assoc. prof*, 19- Ass. Petrol. Geol; Southwest. Geol. Soc. The Cretaceous.
- Whitney, Prof. Mary W(atson)**, Worcester Lane, Waltham, Mass. *Astronomy*. Waltham, Sept. 11, 47. A.B. Vassar, 68, A.M., 72; Harvard, 72; Zürich, 74-76. Teacher, high schools, Waltham and Chelsea, Mass, 72-74; asst. observatory, Vassar, 81-88, prof. *astron*, 89-10, *emer. prof*, 10- A.A.; Astron. Soc; Math. Soc. Longitude of Smith College Observatory; observations of comets, asteroids, variable stars, etc.
- Whitney, Prof. Milton**, U. S. Department of Agriculture, Washington, D. C. *Soil physics*. Baltimore, Md, Aug. 2, 60. Hopkins. Asst. chemist, Conn. Exp. Sta, 83; supt. exp. farm, N. C. Exp. Sta, 86-88; prof. agr, South Carolina, and v. director, S. C. Exp. Sta, 88-91; soil physicist, Md. Exp. Sta, 91-94; *chief, bur. soils*, U. S. Dept. Agr, 94- Prof. soil physics, Md. Col, 94-01. Soc. Prom. Agr. Sci; Wash. Geol. Soc. Correlation of soil types of the United States; adaption of special crops to special soil types; causes of soil fertility.
- Whitney, Dr. Walter T(icknor)**, 988 N. Holliston Ave, Pasadena, Calif. *Physics*. Los Angeles, Calif, Dec. 26, 88. B.S. Pomona, 10, M.S., 12; Ph.D, Chicago, 16. Research fellow *physics*, Calif. Inst. Tech, 17-19, instr, 19-20, *asst. prof*, 20- A.A.; Physical Soc. Spectroscopy.
- Whitney, Dr. W(illiam) F(iske)**, 228 Marlborough St, Boston, Mass. *Anatomy*. Boston, March 26, 50. A.B. Harvard, 71, M.D., 75. *Curator, anat. museum, Harvard*, 82- Pathological anatomy.
- Whitney, Prof. W(illis) R(odney)**, General Electric Co, Schenectady, N. Y. **Chemistry*. Jamestown, N. Y, Aug. 22, 68. B.S. Mass. Inst. Tech, 90; Ph.D, Leipzig, 94; Ch.D. Pittsburgh, 19; Sc.D, Union, 19. Asst. instr. chem, Mass. Inst. Tech, 90-92, instr, 95-00, asst. prof, 01-04, non-res. assoc. prof. theoret. chem, 04-08, *non-res. prof. chem. research*, 08-; *director, research lab, Gen. Elec. Co, Schenectady*, N. Y, 01- Assoc. ed, 'Jour. Indust. and Eng. Chem,' 08- Willard Gibbs medal, 16; mem. Nat. Research Council; U. S. Naval Consulting Board; mem. corp, Mass. Inst. Tech, 17-; board of directors, Albany Med. Col; board of governors, Union. Nat. Acad; A.A.; Elec. Eng; Chem. Soc. (pres, 09); Electrochem. Soc. (pres, 12); Min. and Metal. Eng; Physical Soc; Min. Eng; Am. Acad; British Inst. Metals. Solubility; colloids; suspensions; corrosion of iron; chromium sulphate compounds.
- Whitson, Prof. Andrew B(obinson)**, R. F. D. 7, Madison, Wis. *Soils*. Stanton, Minn, Oct. 9, 70. Wisconsin, 90-92; B.S, Chicago, 94, 94-95, 99-00. Principal, high sch, Beloit, Wis, 95-99; asst. prof. agr. physics, Wisconsin, 00-01, *prof*, 01-05, *soils*, 05- Field asst, U. S. Geol. Surv, 92-93. A.A.; Wis. Acad. Nitrification in soils; relation of proteids in plants to soil; availability and losses of soil phosphates; soil survey.
- Whittelsey, Dr. Theodore**, 73 Overlook Road, Upper Montclair, N. J. *Chemistry*. New Berlin, N. Y, May 15, 68. A.B. Williams, 90; Ph.D, Göttingen, 95. Asst. chem, Williams, 90-91; in charge, chem. dept, Pacific, 91-93, 95-97; instr. chem, Cornell, 97-03; assoc. prof, Northwestern, 03-09; research chemist, dept. of investigation, Continental-Mexican Rubber Co, 07-08; chief chemist, Rubber Regenerating Co, 09-13; director, gen. laboratories, U. S. Rubber Co, 13-18, manager, development dept. and chem. research, 18-20, mem. operating council, 17-20; v. pres. and treas, Rubber Regenerating Co, 18-20. Eighth Int. Cong. Applied Chem. A.A.; Chem. Soc; Soc. Chem. Indust.
- Whittemore, C(harles) F(arnum)**, 1060 Vine St, Denver, Colo. *Chemistry, Physics*. Pembroke, N. H, April 12, 89. B.S. N. H. Col, 11, M.S., 13. Asst. chem, N. H. Col, 11-13; junior chemist radioactivity, U. S. Bur. Mines, 13-15, asst. chemist, 15-16; chemist and physicist, Schlesinger Radium Co, 16-17; *chief physicist, Radium Co. of Colo*, 17- A.A.; assoc. mem. Physical Soc; Chem. Soc. Rare earths; radio-activity.
- Whittemore, Prof. James K(elsey)**, Yale University, New Haven, Conn. **Mathematics*. Cambridge, Mass, April 13, 75. A.B. Harvard, 95, A.M., 96. Instr. *math*, Harvard, 95-97, 99-06, asst. prof, 06-11; Western Reserve, 11-14; instr, Yale, 16-20, *asst. prof*, 20- Ed, 'Annals of Math,' 07-11, assoc. ed, 17- Math. Soc; Math. Ass. Geometry.
- Whitten, Prof. John C(harles)**, University of California, Berkeley, Calif. *Horticulture*. Augusta, Maine, Sept. 14, 66. B.S. S. Dak. Col, 92, M.S., 98; Cornell, 92; Mo. Bot. Garden, 93, 94; Ph.D, Halle, 02. Instr. in charge hort, S. Dak. Col. and horticulturist, Exp. Sta, 92; asst, Mo. Bot. Garden, 93-94; prof. hort, Missouri, and horticulturist, Exp. Sta, 95-18; *prof. pomol, California*, 18- A.A.; Soc. Hort. Sci; Soc. Prom. Agr. Sci; Pomol. Soc; Mo. Hort. Soc; St. Louis Acad. Relation of color to temperature and hardness of cultivated plants; breeding for hardy varieties of peaches; development of fruit buds of orchard fruits; plant diseases.
- Whitten, Dr. J(ohn) H(amilton)**, 7111 Normal Boulevard, Chicago, Ill. *Botany*. Bradford, Ill, Oct. 3, 73. A.B. Illinois, 11, A.M., 12, Ph.D., 14. Asst. bot, Illinois, 10-14; *teacher, Chicago Nor. Sch*, 14- A.A.; Ill. Acad. Plant physiology; education.
- Whitten, W(illiam) M(airion)**, duPont Building, Wilmington, Del. *Chemistry*. South Bend, Ind, Jan. 7, 72. B.S.(Chem), Michigan, 95; M.S. Kansas, 97; Hopkins, 97-98. With Sig. C. U. S. vols, 98-99; chemist, Aluminum Co. of Am, 99-06; *E. I. duPont de Nemours and Co*, 07-17, *asst. chem. director*, 17- Electrochem. Soc; Chem. Soc; Chem. Eng.

- Whittier, Prof. F(rank) N(athaniel)**, Bowdoin College, Brunswick, Maine. *Pathology, Bacteriology*. Farmington, Maine, Dec. 12, 61. A.B., Bowdoin, 85, A.M., 88, M.D., 89. Lecturer hygiene, Bowdoin, 88-89, demonstrator *path. and bacter.*, 97-01, *prof.*, 01-, *hygiene and physical training*, 03- Pathologist, Maine Gen. Hosp., 09-; med. examiner, Cumberland Co., Maine, 09-; major, M.R.C., 19. A.A.; Ass. Path. and Bact. Action of disinfectants.
- Whittle, Charles L(ivy)**, 50 Congress St., Boston, Mass. *Geology*. Deering, N. H., Oct. 1, 62. Harvard, 87. U. S. Geol. Surv., 87-92; *mining geologist and manufacturer of Whittle Diamond Saws*, 92- *Geology*; lithology; ore deposits.
- Wholey, Dr. C(ornelius) C(ollins)**, 4616 Bayard St., Pittsburgh, Pa. *Psychiatry*. Staunton, Va., 75. A.B., Rock Hill, 95, hon. A.M., 02; M.D., Virginia, 98, fellow, 98-99; Vienna, 00-01; Hopkins, 01-03. *Instr. psychiat.*, Pittsburgh, 15- Mem. psychiat. staff, St. Francis Hosp., Pittsburgh, 13-; asst. neurologist, W. Pa. Hosp., 15- Medico-psychiat. Ass.; Psychopath. Ass.; Am. Med. Ass.; Ass. Study Int. Secretions. Nervous and mental diseases; drug addictions.
- Wiancko, Prof. A(lfred) T(heodor)**, Purdue University, La Fayette, Ind. *Agronomy*. Ont., Can., Oct. 16, 72. B.S.A., Ont. Agr. Col., 95. Asst. librarian and instr. German, Ont. Agr. Col., 98-01; instr. agr., Nebraska, and asst. agriculturist, Exp. Sta., 01-03; *prof. agron.*, Purdue, and *chief, dept. soils and crops*, Exp. Sta., 03- A.A.; Soc. Agron.; Ind. Acad. Soil fertility; crop improvement.
- Wichers, Dr. Edward**, W. Woodbine St., Chevy Chase, Md. *Chemistry*. Zealand, Mich., March 25, 92. A.B., Hope, 13, hon. A.M., 16; M.S., Illinois, 15, fellow, 16-17, Ph.D., 17. Asst. chemist, *Bur. Standards*, 17-19, *assoc. chemist*, 19- Chem. Soc. Inorganic chemistry; rare earths; platinum metals.
- Wick, Dr. Frances G(ertrude)**, Vassar College, Poughkeepsie, N. Y. *Physics*. Butler, Pa., Oct. 2, 75. A.B., Wilson, 97; A.B., Cornell, 05, A.M., 06, fellow, 07-08, Ph.D., 08. Instr. high sch., Butler, Pa., 98-04; instr. *physics*, Simmons, 08-10; Vassar, 10-15, asst. prof., 15-19, *assoc. prof.*, 19- Acting asst. prof. physics, Cornell, 18-19. A.A.; Physical Soc.; Ass. Prof. Electrical properties of silicon; the silicon detector; fluorescence; phosphorescence; luminescence; absorbing power; phosphorescence of hexagonite and fluorite.
- Wickenden, Prof. W(illiam) E(lgin)**, Massachusetts Institute of Technology, Cambridge, Mass. *Electrical engineering*. Toledo, Ohio, Dec. 24, 82. B.S., Denison, 04; Wisconsin, 05-08. Instr. physics, Mechanics' Inst., Rochester, N. Y., 04-05; asst. Wisconsin, 05-06, instr. *elec. eng.*, 06-09; *asst. prof.*, Mass. Inst. Tech., 09- Assoc. Elec. Eng. Illumination; photometry.
- Wickham, Miss Evelyn W(ornham)**, 45 Adriance Ave., Poughkeepsie, N. Y. *Astrophysics*. Rensselaer, N. Y., June 7, 95. A.B., Vassar, 16; M.S., Chicago, 17. Computer, Yerkes Observatory, 16-19, observer, 17-19; *asst. to engineer, development and research branch*, Am. Telephone and Telegraph Co., 19- Mem. Yerkes Observatory eclipse exped. to Green River, Wyo., 19. Astron. Soc. Radial velocity.
- Wickham, Prof. H(enry) F(rederick)**, State University, Iowa City, Iowa. *Entomology*. Shrewton, England, Oct. 26, 66. Iowa, 87-91, M.S., 94. *Asst. curator, zool. museum, Iowa*, 91-, instr. and later asst. prof. zool., 94-03, *prof. entom.*, 03-, *applied zool.*, 19- Temporary field asst., bur. entom., U. S. Dept. Agr., 14-16, U. S. Biol. Surv., 17-19. A.A.; Entom. Soc.; Iowa Acad.; Wash. Entom. Soc.; cor. mem. Davenport Acad.; hon. mem. Ont. Entom. Soc.; cor. mem. Ottawa Field Nat. Club; Soc. entom. de Belgique; Entom. Gesell. Geographical distribution of Coleoptera; larvae of Coleoptera; Cicindelidae; fossil Coleoptera; desert fauna.
- Wickson, Prof. E(dward) J(ames)**, University of California, Berkeley, Calif. *Horticulture*. Rochester, N. Y., Aug. 3, 48. A.B., Hamilton, 69, A.M., 72. Lecturer dairy husbandry and agr., California, 79-91, *assoc. prof. agr. hort. and entom.*, 91-97, *prof. agr. practise*, 97-12, *dean, col. agr.*, 05-15, acting director, Exp. Sta., 05-07, director, 07-15, *prof. hort.*, 12-15, *emer. prof.*, 15- Horticulture; irrigation practise.
- Widmann, Otto**, 5105 Enright Ave., St. Louis, Mo. *Ornithology*. Karlsruhe, Germany, June 15, 41. Ph.G., Karlsruhe, 64. Fel. Ornith. Union; Wilson Ornith. Club; Cooper Ornith. Club; St. Louis Acad. Geographic distribution and migration of birds; bird protection; catalogue of birds of Missouri; botany.
- Widtsoe, Pres. John A(ndreas)**, 1425 Sigsbee Ave., Salt Lake City, Utah. *Chemistry*. Island of Froyen, Norway, Jan. 31, 72. B.S., Harvard, 94; Ph.D., Göttingen, 99; Zürich, 99-00. Prof. chem., Utah Col., 94-98, 00-05; chemist, Exp. Sta., 94-98, director, 00-05; director, sch. agr., Brigham Young, 05-07; *pres.*, Utah Col., 07-16; *Utah*, 16- A.A.; Chem. Soc.; Chem. Gesell. Carbohydrates; desert soils and vegetation; chemical development of plants; relations of soils and water to plant growth and composition.
- Wiegand, Dr. E(arl) M(cKay)**, Cornell University, Ithaca, N. Y. **Botany*. Truxton, N. Y., June 2, 73. B.S., Cornell, 94, Ph.D., 98. Asst. bot., Cornell, 94-99, instr. 99-07; *assoc. prof.*, Wellesley, 07-13; *prof.*, N. Y. State Col. Agr., Cornell, 13- A.A.; Bot. Soc. Taxonomy of plants; plant geography.
- Wieland, Dr. G(eorge) R(eber)**, Yale University, New Haven, Conn. **Paleontology*. Center Co., Pa., 65. B.S., Pa. State, 93; Ph.D., Yale, 00; Pennsylvania; Göttingen. Teacher, Chester, Pa., 95-98; *paleontologic research*, Yale, 98-, *lecturer paleobot.*; *assoc.*, Carnegie Institution. Paleontologist, Geol. Inst. Mex.; various explorations in western Am. (especially Black Hills), Mex. and S. Am.; Archduke Rainer gold medal, Austrian Zool. and Bot. Soc., 14. A.A.; Geol. Soc.; Paleont. Soc.; Bot. Soc.; Soc. Geol. Mex.; Bologna Acad. Sci. Testudinata; paleobotany; geological climatology and distribution; cycads and cycadoids; Cretaceous turtles; polar climate as a controlling factor in the evolution of plants and animals.
- Wieman, Prof. Harry L(ewis)**, University of Cincinnati, Cincinnati, Ohio. *Zoology*. Cincinnati,

- June 13, 83. A.B., Cincinnati, 05, A.M., 06; Ph.D., Chicago, 09. Instr. science, Cincinnati, 05-07, asst. biol., 06-07; lab. asst. zool., Chicago, 07-08; instr., *Cincinnati*, 08-10, asst. prof., 10-14, assoc. prof., 14-18, *prof.*, 18- A.A.; Soc. Nat.; Soc. Zool.; Micros. Soc. Cytology; histogenesis; embryology.
- Wiener, Dr. Norbert**, 29 Sparks St., Cambridge, Mass. *Mathematics, Logic*. Columbia, Mo., Nov. 26, 94. A.B., Tufts, 09; A.M., Harvard, 12, Ph.D., 13, Sheldon traveling fellow, 14-15; Cornell, 10-11; Cambridge, 13-15; Göttingen, summer, 14; Columbia, 15. Asst. philos., Harvard, 15-16; instr. math., Maine, 16-17; staff writer, 'Ency. Americana,' 17-18; computer, Aberdeen proving ground, 18-19; *instr. math.*, Mass. *Inst. Tech.*, 19- Bowdoin prize, Harvard, 14; docent-lecturer, Harvard, 15. Math. Soc. Postulate theory; foundations of mathematics; assemblages and functions of a real variable; epistemology.
- Wiggins, Prof. C(leo) C(laude)**, University of Nebraska, Lincoln, Nebr. *Horticulture*. Mercer Co., Mo., Oct. 20, 89. B.S.A., Missouri, 12, A.M., 13, Ph.D., 18. Asst. hort., Missouri, 13-15, instr., 15-18; research horticulturist, Del. Exp. Sta., 18-19; *assoc. prof. hort.*, Nebraska, 19- A.A. Fruitfulness in apples.
- Wiggers, Dr. Carl J(ohn)**, Western Reserve Medical College, Cleveland, Ohio. **Physiology*. Davenport, Iowa, May 28, 83. M.D., Michigan, 06. Instr. *physiol.*, Michigan, 06-11; asst. prof., Med. Col., Cornell, 11-18; *prof.*, Western Reserve, 18- A.A.; Physiol. Soc.; Soc. Pharmacol.; Soc. Exp. Biol.; Am. Med. Ass. Circulation under normal and pathological conditions.
- Wigglesworth, Dr. Edward**, 234 Berkeley St., Boston, Mass. *Geology*. Boston, Nov. 3, 85. A.B., Harvard, 08, A.M., 09, Ph.D., 17. Asst. geol., Harvard, 10-16; curator, Gardner photographs, geol. museum, Harvard, 09-17; *director and keeper geol. collections*, Boston Soc. Nat. Hist., A.A.; Seismol. Soc.; Boston Nat. Hist. Soc.; Boston Geol. Soc. (sec'y-treas.); fel. Royal Meteor. Soc. Serpentes of Vermont; geology of Martha's Vineyard.
- Wigglesworth, Henry**, General Chemical Co., 25 Broad St., New York, N. Y. *Chemistry*. Belfast, Ireland, Nov. 2, 66. Robert Gordon Col., Aberdeen. Chemist, Nichols Chem. Co., 89-90; *director of development*, Gen. Chem. Co., 90- Chem. Soc.; Electrochem. Soc.; Soc. Chem. Indust.; N. Y. Zool. Soc. Chemical industry.
- Wight, W(illiam) F(ranklin)**, U. S. Department of Agriculture, Chico, Calif. *Botany*. Allegan, Mich., 74. B.S., Mich. Agr. Col., 94; A.B., Stanford, 99, A.M., 00. *Asst.*, dept. syst. bot., Stanford, 99-00; *bur. plant indust.*, U. S. *Dept. Agr.*, 00- With Argentine Rep. Dept. Agr., 12. A.A.; Soc. Hort. Sci. Economic and systematic botany; flora of Alaska; agricultural exploration; fruit breeding; systematic pomology.
- Wightman, Dr. E(ugene) P(ickney)**, Eastman Kodak Co., Rochester, N. Y. *Chemistry*. Baltimore, Md., Dec. 24, 88. B.S., Richmond, 08; Ph.D., Hopkins, 11. Carnegie research asst. chem., Hopkins, 11-14; instr., Washington (St. Louis), 14-15; fellow, Mellon Inst., 16; acting prof. chem., Richmond, 16-17; research chemist, Parke, Davis and Co., 17-20; *research chemist*, Eastman Kodak Co., 20- Lieut., C.W.S., 18. A.A.; Chem. Soc. (v. pres., Va. sect., 17). Conductivity and dissociation of substances in water and water-alcohol mixtures; latent image in photography; preparation of diethylanilin; salicylic acid; photographic emulsions.
- Wilber, D(avid) T(ruxton)**, 508 University Ave., Ithaca, N. Y. *Physical chemistry*. Sherburne, N. Y., April 1, 88. A.B., Cornell, 10. Instr. miner. and crystallog., Cornell, 12-14; *research asst.*, Carnegie Institution, 14- Instr. physics, Cornell, 18-19. A.A.; Physical Soc.; Chem. Soc. Crystal chemistry; luminescence.
- Wilbur, Dr. R(ay) L(yman)**, Stanford University, Calif. *Medicine*. Boonesboro, Iowa, April 13, 75. A.B., Stanford, 96, A.M., 97; M.D., Cooper Med. Col., 99; London and Frankfurt-on-the-Main, 03-04; Munich, 09-10; LL.D., California and Arizona, 19. Asst. physiol., Stanford, 94-96, instr., 96-97; lecturer and demonstrator, Cooper Med. Col., 99-00; asst. prof., Stanford, 00-03; practising physician, 04-09; prof. med., Stanford, 09-16, *pres.*, 16- Extern, City and Co. Hosp., San Francisco, 99-00; acting head, dept. hygiene, Stanford, 01-02; mem. Examining Board of Physicians, Calif., 02-03. A.A.; Am. Med. Ass. (mem. council on med. educ. and hospitals); Ass. Path. and Bact.; Calif. Acad. Acidosis; urobilin; botulism.
- Wilcox, Miss Alice W(ilson)**, Brenau College, Gainesville, Ga. *Biology*. Providence, R. I., June 25, 71. A.B., Vassar, 94; fellow, Chicago, 00-02; fellow, Brown, 05-06, A.M., 09. Instr. biol., Vassar, 96-00; zool., Wellesley, 02-05; biol. and eutherics, Woman's Col., Brown, 06-13; director, Fairbanks Museum Nat. Science, 13-17; instr. biol., Hunter, 17-19; *prof.*, Brenau, 20- A.A.; Bot. Soc.; R. I. Audubon Soc. (sec'y-treas. and director, 07-13); Mus. Ass. Fresh-water Bryozoa; locomotion in young colonies of *Pectinatella magnifica*; life history of *Pectinatella magnifica*.
- Wilcox, Dr. E(arley) V(ernon)**, 301 Southbrook Court, Washington, D. C. *Entomology. Veterinary science*. Busti, N. Y., Feb. 16, 69. A.B., Otterbein, 90; A.B., Harvard, 92, A.M., 94, Ph.D., 95. Asst. entom., Ohio Exp. Sta., 90; prof. biol., Montana, 96-99; assoc. ed., 'Exp. Sta. Record,' 99-08; special agent in charge, Hawaii Exp. Sta., 08-15; *special staff writer western agr.*, 'Country Gentleman,' Ass. Econ. Entom.; Vet. Med. Ass.; Oriental Soc.; Wash. Entom. Soc. Cytology; entomology; poisonous plants; improvement of Hawaiian agricultural methods.
- Wilcox, Dr. Edwin Mead**, Agricultural Experiment Station, Santo Domingo. *Botany*. Busti, N. Y., May 21, 76. B.S., Ohio State, 96; Harvard, 97-99, A.M., 98, Ph.D., 99, fellow, 99-00. Asst. bot., Ohio State, 94-97; prof. bot. and entom., Okla. Col., 00-01; biol. and hort., Ala. Polytech., 01-04; prof. bot. and plant physiologist and pathologist, Ala. Exp. Sta., 04-08; prof. agr. bot., Nebraska, botanist, Exp. Sta. and state botanist, 08-20; *director*, Santo Domingo Exp. Sta., 20- A.A.; Soc. Nat.; Bot. Soc.; Phytopath. Soc. General physiology and pathological histology; dormancy in plants; diseases of Irish potato.

- Wilcox, Prof. G(uy) M(aurice)**, Armour Institute of Technology, Chicago, Ill. *Physics*. Kansas City, Kans, Feb. 2, 70. A.B., Carleton, 91; A.M., Wisconsin, 02. Instr. science, high sch, Faribault, Minn, 93-96; Albert Lea, Minn, 96-00; *physics*, Wisconsin, 01-03; *prof.*, Armour, 03-A.A.; Physical Soc. Optical rotatory power of sugar in various solvents; solution in the surface layer of liquids.
- Wilcox, Raymond B(oorman)**, U. S. Department of Agriculture, Washington, D. C. *Plant pathology*. B.S., Wisconsin, 12, M.S., 13. *Scientific asst., office fruit disease investigations, bur. plant indust., U. S. Dept. Agr.*, 13- A.A.; Bot. Soc.; Phytopath. Soc.; Pomol. Soc.; Wash. Bot. Soc. Diseases of small fruits.
- Wilcox, Dr. Reynold Webb**, 679 Madison Ave., New York, N. Y. *Medicine*. Madison, Conn, March 29, 56. A.B., Yale, 78; hon. A.M., Hobart, 81; M.D., Harvard, 81; LL.D., Maryville, 92; D.C.L., Wittenberg, 15. *Prof. med.*, N. Y. Post-Grad. Med. Sch, 90-08; *consulting physician, Nassau Hosp.*, 03- Ed. therapist, 'Am. Jour. Med. Sci.' 90-09; v. chairman, revision committee, U. S. Pharmacopoeia, 00-10. A.A.; fel. Am. Acad. Med.; Col. Physicians (pres, 15-); Am. Cong. Internal Med. (pres, 15-); Therapeut. Soc. (pres, 01); Ass. Med. Juris. (pres, 13-17); Ass. Mil. Surg.; Ass. Med. Reserve Corps (pres, N. Y. div, 14-15). Internal medicine; therapeutics.
- Wilczynski, Prof. E(rnest) J(ulius)**, University of Chicago, Chicago, Ill. **Mathematics*. Hamburg, Germany, Nov. 13, 76. Ph.D., Berlin, 97. Computer, 'Nautical Almanac,' Office, 98; instr. math, California, 98-02, asst. prof, 02-06, assoc. prof, 06-07; Illinois, 07-10; Chicago, 10-15, *prof.*, 15- Instr. summer sch, George Washington, 98; *prof.*, California, 16; research assoc., Carnegie Institution, 05. Prize, Royal Acad., Belgium, 10. Nat. Acad.; A.A.; Math. Soc. (mem. council, assoc. ed, 'Trans'); Math. Ass. (v. pres. and mem. council); Circolo Mat. di Palermo. Solar rotation; theory of spiral nebulae; theory of differential equations; theory of ruled surfaces and congruences; projective differential geometry.
- Wilde, Prof. Norman**, University of Minnesota, Minneapolis, Minn. *Philosophy*. Dobbs Ferry, N. Y., June 12, 67. A.B., Columbia, 89, A.M., 90, Ph.D., 94; Berlin, 91-93; Harvard, 93-94. Asst. philos., Columbia, 94-98; instr., Minnesota, 98-00, asst. prof, 00-02, acting prof, 02-03, *prof.* philos. and psychol, 03-10, *philos.*, 10-A.A.; Philos. Ass. (exec. committee, 17-18); Psychol. Ass.; West. Philos. Ass. (v. pres, 05, pres, 20). History of English ethics; political and social ethics.
- Wilder, Prof. Burt G(reen)**, Chestnut Hill, Mass. **Vertebrate morphology*. Boston, Mass, Aug. 11, 41. B.S., Harvard, 62, M.D., 66. Med. cadet, asst. surgeon and surgeon, 55th Mass. Inf'y, U.S.A., 62-65; asst. comp. anat., museum comp. zool., Harvard, 66-68; *prof. neur. and vert. zool.*, Cornell, 67-10, *emer. prof.*, 10- Prof. physiol., Med. Sch. of Maine, Bowdoin, 75-84; lecturer, med. dept., Michigan, 76. A.A. (v. pres, 85); Soc. Nat.; Ass. Anat. (pres, 98); Neur. Ass. (pres, 85); Philos. Soc.; Phila. Acad.; Boston Soc. Nat. Hist. Habits of spiders; human locomotion; intermembral homologies; structure and habits of ganoids; anatomy of apes and the cat; morphology of the brain, especially in selachians; characteristics of the brain of the American negro; terminology.
- Wilder, Prof. Charles E(dward)**, 723 Monroe St., Evanston, Ill. *Mathematics*. Boston, Mass, Aug. 21, 89. A.B., Harvard, 12, A.M., 13, Ph.D., 15. Instr. math., Harvard, 13-14; Pa. State, 15-16; *Northwestern*, 16-18, *asst. prof.*, 19-A.A.; Math. Soc.; Math. Ass.; Circolo Mat. di Palermo. Analysis; degree of approximation to discontinuous functions by trigonometric sums; linear differential equations.
- Wilder, Dr. Frank A(lonzo)**, North Holston, Va. *Geology*. Akron, Ohio, Feb. 2, 70. A.B., Oberlin, Ohio, 92; Yale, 93; Royal Mining Sch., Freiberg, 01; Ph.D., Chicago, 02. Instr. nat. sciences, high sch., Des Moines, Iowa, 97-00; asst. state geologist, Iowa, 01; assoc. prof. geol., North Dakota, 02-03; *prof. econ. geol.*, Iowa, 03-06; state geologist, Iowa, 04-06; *pres.*, South. Gypsum Co., 06- A.A.; Geol. Soc.; Soc. Test. Mat. Lignite coal; gypsum.
- Wilder, Prof. Harris H(awthorne)**, Smith College, Northampton, Mass. **Zoology*. Bangor, Maine, April 7, 64. A.B., Amherst, 86; Ph.D., Freiburg, 91. Teacher, Jefferson High Sch., Chicago, 86-89; Lake View High Sch., 91-92; *prof. zool.*, Smith, 92- A.A.; Soc. Nat.; Soc. Zool. (v. pres, east. branch, 10, 19); Soc. Anat.; Anthropol. Ass.; Am. Acad.; Boston Soc. Nat. Hist. Vertebrate anatomy and embryology; epidermic markings of palms and soles of primates; vertebrate teratology; amphibian anatomy and taxonomy.
- Wilder, Mrs. H. H. (Inez Whipple)**, Smith College, Northampton, Mass. *Zoology*. Diamond Hill, R. I., May 19, 71. Ph.B., Brown, 00; A.M., Smith, 04. Teacher biol., R. I. Nor. Sch., 93-97; high sch., Northampton, Mass., 00-02; instr. *zool.*, Smith, 02-14, *assoc. prof.*, 14- Soc. Zool. Epidermic markings of mammalian palms and soles; antomy, embryology and life history of amphibians.
- Wilder, Dr. Russell M(orse)**, Mayo Clinic, Rochester, Minn. *Medicine*. Cincinnati, Ohio, Nov. 24, 85. B.S., Chicago, 07, Ph.D., 12, M.D., Rush Med. Col., 12. Instr. internal med., Rush Med. Col., 14-17, fellow, Sprague Mem. Inst., Chicago, 15-17; *mem. staff.*, Mayo Clinic, 19-; *asst. prof. med.*, Mayo Foundation, Minnesota, 19- With M.C., U.S.A., 17-19. Am. Med. Ass. Typhus fever; carbohydrate metabolism.
- Wildermuth, V(ernon) L(eroy)**, U. S. Entomological Laboratory, Tempe, Ariz. *Entomology*. Groveport, Ohio, Aug. 15, 85. B.S., Ohio State, 09. Asst. zool., Ohio State, 08-09; *entom. asst.*, U. S. Dept. Agr., 09- A.A.; Entom. Soc.; Ass. Econ. Entom.; Wash. Entom. Soc. Cereal and forage insects.
- Wildman, Dr. Edward E(mbree)**, 4331 Osage Ave., Philadelphia, Pa. *Zoology*. Selma, Ohio, Oct. 19, 74. B.S., Pennsylvania, 04, M.S., 08, Ph.D., 12. Asst. instr. biol., Pennsylvania, 02-04; *prof. biol.*, Cent. High Sch., Phila., 06-12; *head, science dept.*, W. Phila. High Sch. for Girls, 12-; instr. *zool.*, Pennsylvania, 19- Instr., Woods Hole, summers, 08-11. A.A.; Soc. Zool.

- Physiology and cytology in heredity; chromatic behavior.
- Wildman, Prof. E(mnest) A(tkins)**, Earlham College, Richmond, Ind. *Chemistry*. Chattanooga, Tenn., July 2, 89. B.S., Earlham, 12; M.S., Illinois, 14. Mem. chem. staff, Rockefeller Inst., 15-17; director chem. research, Eli Lilly and Co., 17-19; *prof. chem. and director of dept.*, Earlham, 19- Chem. Soc.; Pharmaceut. Ass.; Ind. Acad. Organic chemistry; syntheses in the diphenylmethane series; chemotherapeutics; synthetic local anesthetics.
- Wiley, Prof. Carroll C(arson)**, University of Illinois, Urbana, Ill. *Civil engineering*. Edinburg, Ill., July 28, 84. B.S., Illinois, 04, C.E., 10. Instr. civil eng., Illinois, 06-14, assoc., 14-19, *asst. prof. highway eng.*, 19- Ill. Soc. Eng. Highway engineering; strength of pavement slabs.
- Wiley, Prof. Forbes B(agley)**, Granville, Ohio. *Mathematics*. Brighton, Mich., Feb. 80. A.B., Kalamazoo, 06; Chicago, 06, fellow, 13-14, Ph.D., 14. *Prof. math.* and head of dept., Des Moines, 06-08; instr. Cent. High Sch., Detroit, Mich., 08-10; Denison, 10-11, *asst. prof.*, 11-12; *asst.*, Chicago, 12-13; *prof. and head of dept.*, Denison, 14- A.A.; Math. Soc. Finiteness of the modular covariants of systems of binary and ternary forms and cogredient points.
- Wiley, Dr. H(arvey) W(ashington)**, Cosmos Club, Washington, D. C. **Chemistry*. Kent, Ind., Oct. 18, 44. A.B., Hanover, 67, A.M., 70, Ph.D., 76, LL.D., 98; M.D., Indiana Med. Col., 71; B.S., Harvard, 73; LL.D., Vermont, 12; Sc.D., Lafayette, 13. *Prof. Latin and Greek*, Butler, 68-70; teacher science, high sch., Indianapolis, 71; *prof. chem.*, Butler, 74; *prof. chem.*, Purdue, and state chemist, Ind., 74-83; chief chemist, U.S. Dept. Agr., 83-12; *prof. agr. chem.*, George Washington, 99- Mem. jury of awards, Columbian Expos., 93; Paris Expos., 00; Jamestown Expos., 07; consulting prof., Brooklyn Polytech., 05; director, bur. foods, sanit. and health, 'Good Housekeeping Mag.' Medal, first class, Physico-chem. Acad., Italy, 08; Chevalier, Mérite Agr., 00; Chevalier, Légion d'honneur, 09; Elliott Cresson medal, Franklin Inst., 10. U. S. delegate, Int. Cong. Applied Chem., Vienna, 98; Paris, 00; Berlin, 03; Rome, 06; London, 09. Int. Cong. Repression of Adulteration, Geneva, 08 (hon. pres.); U. S. delegate, Soc. Univ. de la Croix blanche de Genève. A.A. (v. pres., 86, gen. sec'y., 91); Chem. Soc. (pres., 93, 94); Agr. Chem. (sec'y., 89-, life pres., 12-); Soc. Chem. Indust. (v. pres., 10); Soc. Biol. Chem.; Am. Med. Ass.; Pharmaceut. Ass. (chairman, pharm. convention, 10-20); Pub. Health Ass.; Therapeut. Soc. (pres., 10); Electrochem. Soc.; Soc. Med. Juris; Philos. Soc.; hon. mem. Am. Brewing Inst.; Ind. Acad. (pres., 02); Wash. Acad. (v. pres., 09, 10); hon. mem. Franklin Inst.; Phila. Col. Pharm.; Soc. Pub. Analysts, London; British Federated Inst. Brewers; Chem. Gesell.; Verein Zuckertechniker; Soc. sci. d'Hygiène alimentaire; Physico-Chem. Acad., Italy; cor. mem. Sch. Chem. Sci., Museo de La Plata, Argentine. Cultivation of sugar-producing plants and the manufacture of sugar; effect of environment on the composition of plants; soil ferments and their importance in agriculture; principles and practises of agricultural analysis; adulteration of foods; effect of preservatives and colors on health and digestion; beverages and their adulteration; composition and changes in aging of distilled spirits; food tests.
- Wilgus, W(illiam) J(ohn)**, 165 Broadway, New York, N. Y. *Civil engineering*. Buffalo, N. Y., Nov. 20, 65. Diploma, Univ. State of N. Y. With Chicago Great West. Ry., 85-91; *asst. engineer*, N. Y. C. and H. R. R. R., 93-97, *res. engineer and chief asst. engineer*, 97-98, *engineer maintenance of way*, 98-99, *chief engineer*, 99-03, v. pres., 03-07; *consulting engineer*, 07- Chairman, Elec. Traction Commission, N. Y. C. and H. R. R. R.; Advisory Board of Engineers, Detroit River Tunnel; Board of Consulting Engineers, Vehicular Tunnel, N. Y. and N. J.; col., U.S.A. and deputy director gen., transportation, France; D. S. medal; Officier Légion d'honneur; Thomas Fitch Rowland prize, Soc. Civil Eng.; Telford gold medal, British Inst. Civil Eng. Consult. Eng. (past director); Soc. Civil Eng. (director, 02-04); R. R. Eng.; Ry. Guild; St. Paul Soc. Civil Eng.; British Inst. Civil Eng. Costs and economics of railroad operation and construction.
- Wilkinson, Prof. John A(nderson)**, Iowa State College, Ames, Iowa. *Chemistry*. Sidney, Ohio, June 21, 80. B.S., Ohio State, 03; Ph.D., Cornell, 09. *Asst. prof. anal. chem.*, Ohio State, 09-13; *assoc. prof. chem.*, Iowa State, 13-19, *prof. anal. and physical chem.*, 19- Capt., C.W.S. Chem. Soc. (pres., Ames sect., 14). Formaldehyde; adsorption.
- Willard, Prof. A(rthur) C(utts)**, University of Illinois, Urbana, Ill. *Mechanical engineering*. Washington, D. C., Aug. 12, 78. B.S., Mass. Inst. Tech., 04. Teacher indust. chem., Calif. Sch. Mech. Arts, 04-06; *asst. prof. mech. eng.*, George Washington, 06-09; *asst. sanit. and heating engineer*, Q.M.C., 09-11, *sanit. and heating engineer*, 11-13; *asst. prof. heating and ventilation*, Illinois, 13-17, *prof.*, 17- Mech. Eng.; Heat. and Vent. Eng. Heating; ventilation.
- Willard, Prof. Daniel E(verett)**, Northern Pacific Building, St. Paul, Minn. *Geology*. Nile, N. Y., Aug. 22, 62. A.B., Alfred, 88, A.M., 90; Chicago, 93-95. Principal, Albion Acad., 88-92; *prof. nat. sciences*, N. Dak. Nor. Sch., 95-03; *geol.*, N. Dak. Col., 03-10; *with North Pacific Ry.*, 10- Principal, high sch.; *asst.*, U. S. Geol. Surv., 02-05; moraine mapping in North Dakota. Artesian water; soil map of North Dakota; development of natural resources along the Northern Pacific Railway; landscape geology of North Dakota; Minnesota.
- Willard, Prof. Harley R(ichard)**, University of Maine, Orono, Maine. *Physics, Mathematics*. Sutton, Vt., March 13, 75. A.B., Dartmouth, 99, A.M., 02; fellow, Yale, 09-10, A.M., 10, Ph.D., 12. Principal schools, Barton Landing, Vt., 99-00; *asst. physics*, Dartmouth, 00-02; *instr. math.*, Kenyon Mil. Acad., 02-04; Maine, 04-07, *asst. prof.*, 07-09, 12-13, *assoc. prof.*, 13-19, *prof.*, 19- Statistician, Food Ad., and special expert, W.T.B., 17-19. Soc. astron. de France. Radiations emitted by a Rigbi vibrator; a family of oscillating orbits of short period.

- Willard, Dr. H(obart) H(urd)**, 802 Monroe St, Ann Arbor, Mich. *Chemistry*. Erie, Pa, June 3, 81. A.B, Michigan, 03, A.M, 05; fellow, Harvard, 08-09, Ph.D, 09. Instr. chem, Michigan, 05-06, 09-11, *assoc. prof*, 18- A.A; Chem. Soc; Electrochem. Soc. Atomic weights of silver, lithium and chlorine; perchloric and periodic acids and their salts; quantitative analysis.
- Willard, Prof. J(oseph) M(oody)**, State College, Pa. *Mathematics*. Orford, N. H, Feb. 1, 65. A.B, Dartmouth, 87, hon. M.S, 12; scholar, fellow, fellow by courtesy, Hopkins, 90-93. Instr. math, Pinkerton Acad, Derry, N. H, 87-90; *prof*, Pa. State, 93-, sec'y, council of administration, 06-16. With U. S. Coast and Geod. Surv, 87-89, 18. Math. Soc. Differential equations and applications.
- Willard, Prof. J(ulius) T(errass)**, Agricultural College, Manhattan, Kans. *Chemistry*. Wabaunsee, Kans, April 9, 62. B.S, Kansas State, 83, M.S, 86, hon. Sc.D, 08; Hopkins, 87-88. Asst. chem, Kansas State, 83-87, asst. prof, 90-96, *assoc. prof*, 96-97, *prof*. applied chem, 97-01, chem, 01-, dean, div. of gen. science, 09-, v. pres, 18-, asst. chemist, Exp. Sta, 88-97, chemist, 97-18, director, 00-06, v. director, 07-18. Chemist, Kans. State Board of Agr, 97- A.A; Chem. Soc; Am. Soc. Animal Nutrition (registrar, 08-13); Kans. Acad. (pres, 01). Composition and digestibility of foods and feeds; improvement of sorghum and corn by seed selection based on chemical analysis; soil moisture; nitric acid and ammonia of rain water; digestion and nutrition investigations; milling tests of wheat; baking qualities of flour in relation to chemical composition; food analysis; soil investigation.
- Willard, Prof. W(illiam) A(lbert)**, College of Medicine, University of Nebraska, Omaha, Nebr. *Anatomy*. Grinnell, Iowa, April 24, 73. A.B, Grinnell, 95; fellow, Tufts, 97-98; A.M, 98; Harvard, 99, Ph.D, 10. Acting prof. zool, Grinnell, 01-02; instr, Nebraska, 02-03, *assoc. prof*, 03-10, *prof*. histol. and embryol, 08-14, *anat*, 14- A.A; Ass. Anat; Soc. Zool. Vertebrate nervous system.
- Willcox, Prof. Marguerite**, 60 Ashland Ave, Buffalo, N. Y. *Chemistry*. Worcester, Mass, June 23, 92. A.B, Mt. Holyoke, 13; A.M, Ph.D, Bryn Mawr, 16. Asst. prof. chem, Agnes Scott, 16-18; Wells, 18-19; Wellesley, 19-20; *chemist*, Nat. Aniline and Chem. Co, 20- Anal. chemist, Nat. Aniline and Chem. Co, summer, 19. Chem. Soc. Reversible replacement of alcohols in aldehyde alcoholates.
- Willcox, Prof. M(ary) A(lice)**, 63 Oakwood Road, Newtonville, Mass. *Zoology*. Kennebunk, Maine, April 24, 56. Newnham Col, England, 80-83; Zürich, 96-98, Ph.D, 98. Teacher, Charlestown High Sch, Boston, 76-79; *prof. zool. and physiol*, Wellesley, 83-10, *emer. prof*, 10- A.A; Soc. Nat; Soc. Zool; Boston Soc. Nat. Hist. Comparative anatomy of mollusks; comparative anatomy of Acmæidae.
- Willcox, Dr. Oswin W(illiam)**, Aetna Explosives Co, Mount Union, Pa. *Chemistry*. Austin, Tex, Oct. 11, 70. Fellow, B.S, Texas, 01; Loewenthal fellow, Chicago, 03-04, Ph.D, 04. Instr. chem, Utah, 01-02; asst. prof, Iowa State, 04; asst. chemist, Sandy Hook Proving Ground, 04-08; manager, Scientific Sta. for Pure Products, 09; *chief chemist and supt*, Aetna Explosives Co. Ed, 'Pure Products.' A.A; Chem. Soc; N. Y. Chemists Club. Organic and technical chemistry; geology; volatimetry; non-Hauman crystallography.
- Willcox, Prof. W(alter) F(rancis)**, Cornell University, Ithaca, N. Y. *Statistics*. Reading, Mass, March 22, 61. A.B, Amherst, 84, A.M, 88; LL.D, 06; LL.B, Columbia, 87, Ph.D, 91. Instr. and later *assoc. prof*, Cornell, 91-01, *prof. econ. and statistics*, 01- Dean, col. arts and sciences, Cornell, 02-07; *chief statistician*, 12th U. S. Census, 99-02; *statist. expert*, censuses of Cuba and Porto Rico, War Dept, U.S.A, 99-00; *expert special agent*, U. S. Census, 02-12; *consulting statistician*, N. Y. State Dept. Health, 07-; U. S. delegate, Int. Statist. Cong, Brussels, 03, Berlin, 03, London, 05, Paris, 09; v. chairman, exec. committee and pres, sect. on demog, Int. Cong. Hygiene and Demog, Washington, 12. A.A; Statist. Ass. (pres, 11); Econ. Asst. (pres, 15); Int. Statist. Inst; Royal Statist. Soc. Divorce problem; negro problem; immigration; public health; population statistics.
- Willett, George**, 2123 Court St, Los Angeles, Calif. *Zoology*. Hawkesbury, Ont, May 28, 79. Whittier Col, 94-95. *Inspector game preservation, biol. surv*, U. S. Dept. Agr, 12- Ornithologist, exped. to Laysan Island, Hawaii, 12-13; with biol. surv, U. S. Dept. Agr, in southeast Alaska, summers, 12-15. Mem. Ornith. Union; Cooper Ornith. Club. Ornithology; conchology; birds of southern California and of the Hawaiian bird reservation; birds and mollusks of Alaska.
- Willey, Prof. A(rthur)**, McGill University, Montreal, Can. *Zoology*. Scarborough, England, Oct. 9, 67. Fellow, Univ. Col, London, 11, D.Sc, 94; Cambridge, Balfour student, 94-99, hon. M.A, 98. Tutor, zool, Columbia, 92-94; lecturer, biol, Guy's Hosp. Med. Sch, London, 99-01; director, Colombo Museum, Ceylon, 02-10; *Strathecona prof. zool*, McGill, 10- Mem. exped. to Peloro Faro, Messina, 89, 90; southwest Pacific, 94-97; lecturer biol, Ceylon Med. Col, 02-06; marine biologist, Ceylon Govt, 07-10. Cor. mem. N. Y. Acad; Royal Soc. Can; fel. Royal Soc; fel. London Zool. Soc; Cambridge Philos. Soc. Amphioxus; Tunicata; Peripatus; Enteropneusta; Ctenoplana; Nautilus; Hematozoa; American beaver; convergence in evolution.
- Williams, Dr. Anna W(essels)**, Foot of E. 16th St, New York, N. Y. *Bacteriology*. N. J, 63. M.D, Woman's Med. Col, N. Y, 91. Instr. path. and hygiene, Woman's Med. Col, N. Y, 92; bacteriologist, Dept. Health, N. Y. City, 95-19, *asst. director*, 19- Consulting pathologist, Infirmary for Women and Children; lecturer, N. Y. Univ; scientific asst, U. S. Pub. Health Service. A.A; Ass. Path. and Bact; Soc. Exp. Biol; Soc. Bact; Am. Med. Ass; Pub. Health Ass; Woman's Med. Ass. (pres, 15); N. Y. Acad. Med. Public health; etiology, diagnosis and treatment of infectious diseases.
- Williams, Charles Burgess**, North Carolina Agricultural Experiment Station, West Raleigh, N. C. *Agronomy*. Shiloh, N. C, Dec. 23, 71. B.S, N. C. Col, 93, M.S, 96; Hopkins, 96-97; Nat.

- Summer Sch. Agr. Ohio State, 02. Instr. chem, N. C. Col, 93; asst. N. C. Exp. Sta, 93-96; chemist, Fertilizer Control of N. C, 97-99; asst. state chemist, N. C, 99-07; director, *N. C. Exp. Sta*, 07-12, v. director, and chief, div. agron, 12-, dean, *N. C. Col*, 17-
- Williams, Dr. Charles H(erbert)**, 1069 Boylston St, Boston, Mass. *Ophthalmology*. Boston, 50. A.B, Harvard, 71, M.D, 74, A.M, 75. Asst. surgeon and surgeon, Mass. Charitable Eye and Ear Infirmary, 77-87; med. director, Burlington Relief Dept, 89-95; asst. surgeon, eye dept, Boston City Hosp. A.A.; Am. Med. Ass.; Ophthal. Soc; New Eng. Ophthal. Soc; Boston Soc. Med. Sci; Chicago Ophthal. and Otol. Soc. Standards and methods of examining eyes of railway employees for vision and color perception; test types; variations in the position of the axes of the eyes.
- Williams, Prof. C(larke) B(enedict)**, 214 Stuart Ave, Kalamazoo, Mich. *Mathematics*. Corning, N. Y, Dec. 11, 68. Rochester, 96-98; A.B, Princeton, 90, J.S.K, fellow, 90-91, A.M, 95; Göttingen, 92-93; Leipzig, 93-94, 01-03; Sc.D, Kalamazoo, 19. Instr. math, Princeton, 92-94; *Olney prof*, Kalamazoo, 94-, dean, 13- A.A; Math. Soc.
- Williams, Prof. Clement C(larence)**, Lawrence, Kans. *Civil engineering*. Bryant, Ill, Feb. 21, 82. B.S, Illinois, 07; C.E, Colorado, 09. Asst. prof. civil eng, Colorado, 07-14; *prof*. railway eng, Kansas, 14-19, *civil eng*, 19- A.A; Civil Eng; R. R. Eng; Eng. Educ. Railway engineering; highway and masonry construction.
- Williams, Clyde E**, 308 Ferry Ave, Niagara Falls, N. Y. *Metallurgy*. Salt Lake City, Utah, Sept. 8, 93. B.S, Utah, 15. Chemist, U. S. Smelting Co, 15-16; Union Assay Office, 16-17; research chemist, U. S. Bur. Mines, 17-19; *metallurgist*, *Hooker Electrochem. Co*, 19- Chem. Soc; Electrochem. Soc; Buffalo Eng. Soc. Hydrometallurgy of lead, gold and silver; electric smelting; chlorine products.
- Williams, Prof. Edward H(igginson), Jr**, Woodstock, Vt. *Mining engineering*. Proctorsville, Vt, Sept. 30, 49. A.B, Yale, 72; A.C, Lehigh, 75, E.M, 76, LL.D, 14; Sc.D, Vermont, 13. Mining engineer, Wilkes-Barre, Pa, 76-79; supt. of mines, Danville, Pa, 79-80; mining engineer, Cambria Iron Co, 80-81; *prof*. mining and geol, Lehigh, 81-02; *private work*, 02- Lecturer mining and geol, Lehigh, 02- A.A; Geol. Soc; Min. Eng; Philos. Soc. Geology; glacial geology of Pennsylvania.
- Williams, Prof. E(lmer) H(oward)**, 804 Michigan Ave, Urbana, Ill. *Physics*. Soldiers Grove, Wis, Dec. 29, 78. A.B, Wisconsin, 05; A.M, 06; fellow, Illinois, 09-10, Ph.D, 10. Asst. *physics*, Wisconsin, 05-07; instr, *Illinois*, 07-12, assoc, 12-18, *asst. prof*, 13- Physical Soc. Magnetism; electricity.
- Williams, Prof. Ennion G(ifford)**, 110 Capitol St, Richmond, Va. *Medicine*. Richmond, Jan. 31, 74. M.D, Virginia, 97. *Prof*. histol, bacter. and path, *Med. Col. of Va*, 02-08, *prev. med*, 14-; *state health commissioner*, Va, 08- Pres. Conf. of State and Provincial Boards of Health of N. Am, 16. Am. Med. Ass; Pub. Health Ass; Am.
- Röntgen Ray Soc. (v. pres, 04); Richmond Acad. Med. and Surg. (pres, 05). Public health.
- Williams, Dr. Francis H(enry)**, 505 Beacon St, Boston, Mass. *Medicine*. Uxbridge, Mass, 52 B.S, Mass. Inst. Tech, 73; M.D, Harvard, 77. Instr, Harvard Med. Sch, 84-85, *asst. prof*. mat. med. and therapist, 86-88, therapist, 88-91; *visiting physician*, *Boston City Hosp*, 96- A.A; Am. Physicians; Soc. Pharmacol; Am. Acad; Climat. Ass; Mass. Med. Soc; Boston Soc. Med. Sci; cor. mem. K. K. Gesell. der Aerzte, Wien. Diphtheria; diseases of the chest; Röntgen rays; disturbance of magnetic field by sound waves.
- Williams, Dr. Francis X(avier)**, Hawaiian Sugar Planters Association Experiment Station, Honolulu, Hawaii. *Entomology*. Martinez, Calif, Aug. 6, 82. A.B, St. Ignatius, 03; Stanford, 08; A.M, Kansas, 13; Sc.D, Harvard, 15. Inspector, Calif. State Board Hort, 08-10; *asst. curator entom. collections*, Kansas, 10-13; *asst. zool*, Harvard, 14. Entomologist, Calif. Acad. exped. to Galapagos Islands, 05-06; instr. econ. entom, Lowthorpe Hort. Sch, spring, 15; gipsy moth lab, U. S. Dept. Agr, 15-16. A.A; Entom. Soc; Pacific Coast Entom. Soc; Cambridge Entom. Club. Butterflies and hawk-moths of the Galapagos Islands; Larridae of Kansas; development of light organs in insects.
- Williams, Prof. Frank B(lair)**, Clark University, Worcester, Mass. *Mathematics*. Warrensburg, Mo, Jan. 23, 71. C.E, Missouri, 90, fellow, 92-93, M.S, 93; fellow, Clark, 98-00, Ph.D, 00. Surveyor, Miss. River Commission, 90-92, 94-95; U. S. *asst. engineer*, Tenn. River Improv, 95-97; *asst. prof*. civil eng, Union, 00-05, eng. and math, 05-06, *prof*. eng. math, 06-07; *asst. prof. math*, *Clark Col*, 07-08, *prof*, 08-, *instr*, *Clark*, 10- See'y, Y.M.C.A, France, 17-18. A.A; Math. Soc; Eng. Educ; New Eng. Ass. Teachers Math. Geometry on ruled quartic surfaces; continuous groups in the plane; method of determining radius of curvature of bent beams; curves on quintic scrolls.
- Williams, Prof. F(rank) E(mest)**, University of Pennsylvania, Philadelphia, Pa. *Geography*. Liberty, Ill, May 4, 77. A.B, Wisconsin, 10, A.M, 12. Instr. geol, Wisconsin, 10-15, *asst. prof*, 15-20; *geog. and industry*, *Pennsylvania*, 20- Mem. Nat. Geog. Soc. exped. to Alaska, 10; geologist, Wis. Geol. Surv, summers, 11, 13, 18; capt, mil. int. div, 18-19; with U. S. Shipping Board, 19. Physiography; recent deposits in the Great Lakes; erosion in Alaska firds.
- Williams, Dr. Frank M(artin)**, Telephone Building, Albany, N. Y. *Engineering*. Durhamville, N. Y, April 11, 73. A.B, Colgate, 95; Sc.D, 97; LL.B, Syracuse, 97, M.E. Mem. firm, A.L. Norton and Co, 98; res. engineer, Stanwix Eng. Co, 99-00; N. Y. State Eng. Dept, 00-08, state engineer, 09-10; v. pres. and chief engineer, Coleman duPont Road, Del, 11-12; chief engineer, Portage Co. Improvement Ass, 13-14; *state engineer*, N. Y, 15- Chairman, Barge Canal Terminal Commission, 09-11; trustee, Colgate. Civil Eng.
- Williams, Gardner F(red)**, Pacific Union Club, San Francisco, Calif. *Mining engineering*. Saginaw, Mich, March 14, 42. A.M, California, 69, LL.D, 10; Royal Min. Acad, Freiberg, 65-

- 68; Eng.D, Michigan, 18. Asst. assayer, U. S. Mint, San Francisco, 70; manager mines, Nev, Utah and Calif, 71-80; consulting engineer, 80-84; manager, gold mines, Transvaal, 84-85; Exploration Co, Ltd, London, 86-87; gen. manager, De Beers Min. Co, and De Beers Consolidated Mines, Ltd, Kimberley, 87-05. U. S. consular agent, Kimberley, sixteen years; chairman, board of managers, S. African Sch. Mines; mem. U. S. Assay Commission, 08-09. Silver medal, Royal Acad, Sweden, 08. A.A.; Min. Eng; British Ass; British Inst. Min. and Metal; S. African Ass. (pres, 05); S. African Ass. Eng. and Metal. The genesis of the diamond; the diamond mines of South Africa.
- Williams, Gardner S(tewart)**, 905 Olivia Ave, Ann Arbor, Mich. *Engineering*. Saginaw, Mich. Oct. 22, 66. B.S, Michigan, 89, C.E, 99. Engineer, water works, various cities, 87-89; draftsman and engineer, Russel Wheel and Foundry Co, Detroit, 90-93; civil engineer, Board of Water Commissioners, Detroit, 93-98; engineer in charge, hydraul. lab, and prof. exp. hydraul, Cornell, 98-04; prof, civil, hydraul. and sanit. eng, Michigan, 04-11; *consulting engineer*, 98-Mem. Int. Waterways Commission, 03-05; assoc. mem. Naval Consulting Board, 16; major, corps engineers, O.R.C, 17; mem. executive board, Am. Eng. Council. Norman medalist, Civil Eng, 02. Civil Eng. (director, 08-11, v. pres, 14-15); Ass. Eng. Societies (manager, 97-13); Water Works Ass; Pub. Health Ass; Consult. Eng; West. Soc. Eng; New Eng. Water Works Ass; Mich. Eng. Soc; Detroit Eng. Soc. (sec'y, 95-97). Civil, hydraulic and sanitary engineering; water-borne typhoid fever outbreaks in Detroit and elsewhere; flow of water in pipes, channels and over weirs; efficiency of turbines; consumption and distribution of water; measurement of water by weirs, floats, current meters and Pitot tube; water power development.
- Williams, Dr. Gertha**, Detroit Teachers College, Detroit, Mich. *Psychology*. Ionia, Mich, May 24, 84. A.B, Mt. Holyoke, 10; Ph.D, Pennsylvania, 17. Instr. *psychol*, *Detroit Teachers Col*, 16-18, *head of dept*, 19-
- Williams, Prof. Guy Y(andall)**, University of Oklahoma, Norman, Okla. *Chemistry*. Gainesville, Tex, Sept. 7, 81. A.B, Oklahoma, 06, A.M, 10; M.S, Chicago, 11; fellow, Illinois, 11-13, Ph.D, 13. Instr. *chem*, *Oklahoma*, 06-08, assoc. prof, 08-14, *prof. physical chem*, 14-Acting head, dept. chem, Oklahoma, and acting director, Okla. Pure Food and Drug Lab, 13-14; collaborating chemist, bur. chem, Okla. Dept. Agr, 14-18; director, Okla. Bur. Standards, 18-19. A.A.; Chem. Soc; Electrochem. Soc; Okla. Acad. Analytical methods; conductivity and viscosity; mineral oils of Oklahoma.
- Williams, Henry E(ugene)**, U. S. Weather Bureau, Washington, D. C. *Meteorology*. Bethel, Conn, April 3, 44. Pub. sch. and acad. Chief, forecast div, U. S. Weather Bur, 95-98, chief clerk, 98-03, asst. chief, 03-14, meteorologist in charge forecast div, 14-20. Fel. Meteorol. Soc; Wash. Econ. Soc. The protection of food products from injurious temperatures.
- Williams, Dr. Herbert U(pham)**, 24 High St, Buffalo, N. Y. **Pathology, Bacteriology*. Buffalo, Nov. 28, 66. Michigan, 84-86; M.D, Buffalo, 89; M.D, Pennsylvania, 91; Hopkins, 95; Göttingen, 99. *Prof. path. and bacter*, med. dept, *Buffalo*, 93- Pathologist, Buffalo Gen, Erie Co. and Buffalo City hospitals. A.A; Ass. Path. and Bact; Am. Physicians; Soc. Exp. Biol. Trichinosis; pancreatitis; fat necrosis; lymphomatous tumors of dog's spleen; elastic fibers in carcinoma; hematozoa of frog; sweat glands in kidney disease; infections native to America; nephritis and arteriosclerosis.
- Williams, Dr. Horatio Burt**, 437 W. 59th St, New York, N. Y. *Physiology*. Utica, N. Y, 77. A.B, Syracuse, 00, M.D, 05. Intern, N. Y. Hosp, 05-07; asst. *physiol*, med. col, Cornell, 07-11; *asst. prof*, *Columbia*, 11- Soc. Exp. Biol; Physical Soc; Harvey Soc; N. Y. Acad. Med; London Physical Soc. Electrophysiology; sounds; nerve action-current phenomena.
- Williams, Prof. Ira A(braham)** 417 Oregon Building, Portland, Oregon. *Geology*. Worth Co, Iowa, Dec. 24, 76. B.S, Iowa State, 98, M.S, 03; fellow, Columbia, 03-04, A.M, 04; Ohio State, 99-00. Instr. *geol*, Iowa State, 98-03, asst. prof. *geol* and *mining*, 03-06, assoc. prof. *ceramic eng*, 06-13; prof. *ceramics*, Oregon Sch. Mines, 13-18; *ceramist and geologist*, *Oregon Bur. Mines and Geol*, 13-; prof. *ceramics*, Washington (Seattle), 18-19; *consulting ceramist*, *U. S. Bur. Mines*, 18- Asst. geologist, Iowa Geol. Surv, 99-13; U. S. Geol. Surv, 99-02; managing ed, 'Iowa Engineer,' 07-11. A.A; Geol. Soc; Ceramic Soc; Iowa Ass. Cement Users (sec'y, 04-12); Iowa Brick and Tile Ass. (sec'y, 03); fel. Iowa Acad. Ceramics; Oregon geology.
- Williams, Dr. J. Harold**, Whittier State School, Whittier, Calif. *Psychology*. Ainsworth, Nebr, Dec. 21, 88. A.B, Stanford, 13, A.M, 14, fellow, 14-16, Ph.D, 16. Principal, high sch, Chadron, Nebr, 08-09; Broken Bow, 09-11; science instr, Nebr. State Junior Nor. Sch, 11; *director of research*, *Whittier State Sch*, 15- Managing ed, 'Jour. of Delinquency,' 16- A.A; Ass. Clin. Psychol; Ass. Study Feeble-minded; British Soc. Study Inebriety. Sociolgy; delinquency; feeble-mindedness; measurement of intelligence.
- Williams, John Charles**, 1006 12th St, Golden, Colo. *Metallurgy*. Butte, Mont, Dec. 7, 90. E.M, Colo. Sch. Mines, 13. Mill operator, Phelps-Dodge Corp, 13-14, chemist, 14-15; asst. supt, Nat. Radium Inst, 15-16; chemist, Von Schultz and Low, 16-17; *asst. director*, dept. *metal. research*, *Colo. Sch. Mines*, 17- Min. Eng. Ore dressing.
- Williams, Prof. J(ohn) E(dward)**, Blacksburg, Va. *Mathematics*. Charlotte Co, Va, Sept. 17, 67. A.B, Hampden-Sidney, 92; fellow, Virginia, 97-99, A.M, Ph.D, 99. Principal, high sch, Boydton, Va, 92-94; asst. principal, Commerce St. Sch, Roanoke, Va, 94-95; licentiate math, Virginia, 97-03; *prof. math*, *Va. Polytech*, 03- A.A; Math. Soc; Math. Ass. Lie's transformation groups; approach curves; empirical curves.
- Williams, Dr. J(ohn) Whitridge**, 107 E. Chase St, Baltimore, Md. *Obstetrics, Gynecology*.

- Baltimore, Jan. 26, 66. A.B., Hopkins, 86; M.D., Maryland, 88, hon. Sc.D., 07; Berlin and Vienna, 88-89; Leipzig, Prague and Paris, 94-95; hon. Sc.D., Dublin, 12; LL.D., Pittsburgh, 15. Assoc., later assoc. prof. and prof. *obstet.*, *Hopkins*, 93-, *obstetrician-in-chief*, *Hopkins Hosp.*, 99- A.A.; Gynec. Soc. (pres, 14); Gynec. and Obstet. Soc. Glasgow (hon. pres, 12); hon. fel. Edinburgh Obstet. Soc.; cor. mem. gynaek. Gesell., München; cor. mem. Leipzig Gesell. für Geburtshilfe. Anatomy, pathology and bacteriology of female generative tract; etiology of eclampsia and toxemia; development and diseases of human placenta; puerperal infection; metabolism and physiology of pregnancy; syphilis in relation to obstetrics.
- Williams, Prof. K(enneth) P(owers)**, Bloomington, Ind. *Mathematics*. Urbana, Ohio, Aug. 25, 87. A.B., Indiana, 08, A.M., 09; Ph.D., Princeton, 13. Instr. *math.*, *Indiana*, 09-14, asst. prof., 14-19, *assoc. prof.*, 19- Capt. F.A.C., 17-19. Acting fellow, Lowell Observatory, spring and summer, 07. Math. Soc.; Math. Ass.; Ind. Acad.; Circolo Mat. di Palermo. Difference equations; functions of a real variable; aerodynamics.
- Williams, Prof. L(eon) F(ranklin)**, North Carolina College of Agriculture and Mechanic Arts, West Raleigh, N. C. *Chemistry*. Merchant Mills, N. C., Aug. 27, 81. A.B., Trinity (N. C.), 01, A.M., 02; Ph.D., Hopkins, 07. Asst. *chem.*, *Trinity* (N. C.), 00-02; instr. *N. C. Col.*, 07-09, asst. prof., 09-12, *assoc. prof.*, 12- A.A.; Chem. Soc. (v. pres, N. C. sect, 11, pres, 12); N. C. Acad. Acyl derivatives of ortho and paramino phenols; primary, secondary and tertiary amine derivatives of camphoroxalic acid.
- Williams, Dr. L(ouis) L(aval)**, U. S. Marine Hospital, San Francisco, Calif. *Medicine*. Georgetown, S. C., Oct. 26, 59. M.D., S.C. Med. Col., 80. Asst. surgeon, *U. S. Pub. Health Service*, 85-88, passed asst. surgeon, 88-99, surgeon, 99-01, asst. surgeon gen., 01-05, senior surgeon, 16-20, *asst. surgeon gen. at large*, 20-A.A.; Am. Med. Ass.; Ass. Mil. Surg. Public health; medical aspects of immigration.
- Williams, Dr. M(abel) C(lare)**, Iowa City, Iowa. *Psychology*. Coralville, Iowa, Nov. 6, 78. Ph.B., Iowa, 99, fellow, 99-02, Ph.D., 03. Asst. instr. psychol., Iowa, 02-03, instr., 03-04; prof. psychol. and philos., *Coe*, 04-05; instr. *psychol.*, *Iowa*, 07-10, *asst. prof.*, 10- A.A.; Psychol. Ass.; Ass. Prof.; West. Philos. Ass.; Iowa Acad. Visual illusions; color vision.
- Williams, Dr. M(erton) Y(arwood)**, Geological Survey of Canada, Ottawa, Can. *Geology*. Bloomfield, Ont., June 21, 83. B.S., Queen's (Can.), 09; Ph.D., Yale, 12. Teacher, pub. sch., 03-05; instr. geol. and physiog., forest sch., Yale, 10-12; junior geologist, *Can. Geol. Surv.*, 12-14, *geologist*, 15- Field asst., *Can. Geol. Surv.*, summers, 08-11. A.A.; Geol. Soc.; Paleont. Soc. Stratigraphic paleontology; Arisaig-Antigonish district of Nova Scotia; Silurian of southwestern Ontario; Ordovician rocks of Lake Timishaming.
- Williams, Prof. N(eil) H(ooker)**, 1020 Olivia Ave., Ann Arbor, Mich. *Physics*. Almont, Mich., Oct. 23, 71. B.S.(E.E.), Michigan, 93, M.S., 95, Ph.D., 12. Principal, high sch., West Bay City, Mich., 95-98; instr. *physics*, Cent. High Sch., Detroit, 98-01; Shortridge High Sch., Indianapolis, 01-03; Rose, 03-08; asst. prof., *Michigan*, 08-17, *assoc. prof.*, 17-18, *prof.*, 18-Supt., munic. lighting system, Clinton, Mich., 93-94; inspector, elec. construction, Detroit. A.A.; Physical Soc. Alternating currents and magnetism; stability of residual magnetism; temperature effects on magnetized steel.
- Williams, Prof. R(ichard) H(ermon)**, University of Arizona, Tucson, Ariz. *Animal husbandry*. Ont. Can., April 13, 81. B.S.A., Toronto, 05; M.S., Illinois, 07, Ph.D., 12. Instr. *animal husbandry*, Ohio State, 07-09; asst. prof., Minnesota, 11-12; *prof.*, *Arizona*, 14- Soc. Animal Production. Feeding; range management.
- Williams, Prof. R(obert) D(ay)**, P. O. Box 235, Claremont, Calif. *Psychology*. Marblehead, Mass. B.S., Pomona, 03; California; A.M., Yale, 07, Ph.D., 09. Asst. bot., California, 03-04; instr. biol. and geol., Pomona, 04-06; asst. psychol., Yale, 08-09; asst. prof. philos., Pomona, 09-10, *assoc. prof.* philos. and psychol., 10-11, *prof.* psychol. and educ., 11-15; pres., Mid-Pacific Inst., Honolulu, 15-18; acting prof. philos., *Pomona*, 19, *prof.* philos. and exp. psychol., 20-, *acting sec'y*, faculty. With Y.M.C.A., A.E.F., 19; head, dept. psychol., A.E.F. Univ., Beaune, 19. A.A. Experimental psychology.
- Williams, Dr. R(obert) S(eaton)**, Massachusetts Institute of Technology, Cambridge, Mass. *Chemistry*, *Metallography*. Hartford, Conn., July 11, 80. B.S., Mass. Inst. Tech., 02; Ph.D., Göttingen, 07. Asst. *anal. chem.*, *Mass. Inst. Tech.*, 02-05, instr., 07-12, asst. prof., 12-17, *assoc. prof.*, 17- A.A.; Chem. Soc.; Am. Acad.; British Inst. Metals. Non-ferrous metallography.
- Williams, Prof. S(amuel) R(obinson)**, Oberlin College, Oberlin, Ohio. *Physics*. Marengo, Iowa, March 2, 79. Ph.B., Grinnell, 01; A.M., Nebraska, 03; Berlin, 03-05; Ph.D., Columbia, 06. Private research asst. to Prof. E. F. Nichols, 05-06; lecturer, *physics*, Barnard, Columbia, 06-07, tutor, 07-08; *assoc. prof.*, *Oberlin*, 08-10, *prof.*, 10- A.A.; Physical Soc.; Soc. Test. Mat. Optics; magnetic-mechanical analysis; magnetostriktion.
- Williams, Seward Whiting**, 2500 S. Dearborn St., Chicago, Ill. *Chemistry*. Byron, N. Y., Dec. 11, 61. Ph.C., Michigan, 81. Instr. qual. anal., Michigan, 81-82; *assoc. ed.*, 'Weekly Drug News,' 83-85; chemist, *Southern and Johnson*, 86-91, *supt. manufactures*, 91-11; *director*, *scientific dept.*, *Bauer and Black*, 11- A.A.; Chem. Soc.; Pharmacol. Ass.; N. Y. Col. Pharmacy; fel. London Chem. Soc. Rubber combination plasters; surgical dressings; gaseous disinfection.
- Williams, Prof. S(tephen) R(iggs)**, Oxford, Ohio. *Zoology*. Kalgan, N. China, Aug. 22, 70. A.B., Oberlin, 92, A.M., 93; A.M., Harvard, 98, Ph.D., 00. Teacher, high sch., Lima, Ohio, 94-96; asst. zool. lab., Harvard, 98-00; *prof. zool. and geol.*, *Miami*, 00- On staff, Lake Lab, 20. Bowdoin prize, 99; Walker prize, 03. A.A.; Soc. Zool.; Ass. Anat.; Ohio Acad. Life history of *Scutigera*; a cystid family of the Richmond agelacrinites.

- Williams, Prof. W(alter) L(ong)**, Cornell University, Ithaca, N. Y. *Veterinary science*. Argenta, Ill, Feb. 26, 56. Illinois, 75-77; grad, Montreal Vet. Col. 79. Practising veterinarian, 79-91; prof, vet. science, Purdue, 91-93; Mont. Col, 93-96; vet. surg. and obstet, Cornell, 96-16, *research prof. diseases of breeding cattle*, 16- Vet. Med. Ass. (pres, 92). Veterinary obstetrics, including the diseases of breeding animals and of the new-born.
- Williams, W(illiam) H(ill)**, Platteville, Wis. *Mathematics*. Kingsbury, N. Y, Nov. 6, 61. A.B, Williams, 84, A.M, 87; Göttingen and Erlangen, 92-94. Principal, acad, Port Byron, Ill, 85-87; master *math*, Lake Forest Acad, 87-97; *instr*, State Nor. Sch, Platteville, Wis, 97-Math. Soc. Relations between the minors of the Bezout-Sylvester determinants; algebra text books for high school.
- Williams, Dr. W(illiam) M Whitridge**, Metropolitan Building, Denver, Colo. *Medicine*. Baltimore, Md, Sept. 1, 75. A.B, Hopkins, 95, M.D, 99; Sc.D, Dublin, 12. Res. physician, St. Joseph's Hosp, Baltimore, 99-00; asst. baeter, Prague, 01; path, Harvard, 02-03; grad. asst, out-patient dept, Mass. Gen. Hosp, 03-05; asst. pharmacol, Western Reserve, 05-08; director, Webb Tuberculosis Research Lab, Colorado Springs, Colo, 08-11; consultant, Cragmor Sanatorium, 10-14; *surgeon*, U. S. Pub. Health Service; *practising physician*. Mem. Int. Tuberculosis Cong, 08. Ass. Path. and Bact; Am. Med. Ass; Ass. Tuber. Aneurism; xanthoma; origin and character of exudation cells following experimental peritonitis; hydrastis; perfusion; iodine in thyroid; hematological studies in tuberculosis; altitude lymphocytosis; serum diagnosis of syphilis; tuberculosis, including immunity production by inoculation of living bacteria beginning with one organism; serum diagnosis of tuberculosis.
- Williamson, Prof. Charles S(amuel), Jr**, Tulane University, New Orleans, La. *Chemistry*. Culeoka, Tenn, Aug. 7, 79. B.S, Vanderbilt, 02, M.S, 03. *Prof. indust. chem. and head, sch. chem. eng, Tulane, 13-* A.A.; Chem. Soc; Chem. Eng. Industrial chemistry; hydrosulphites; dyes.
- Williamson, Prof. Charles Spencer**, 25 E. Washington St, Chicago, Ill. *Medicine*. Cincinnati, Ohio, May 15, 72. B.S, Cincinnati, 93, M.S, M.D, 96; Leipzig, Berlin, Vienna and Paris, 97-00. Assoc. prof. med, col. med, Illinois, 02-05, prof. clin. med, 05, *prof. med. and head of dept*, 14- Lieut. col, U.S.A., 17-19. Gold medal, Am. Med. Ass, 18. Soc. Clin. Invest; Am. Med. Ass. Internal medicine; effects of age and sex on hemoglobin; animal hemoglobin; effects of exercise on the heart; pericarditis; sanitation.
- Williamson, E(dward) B(ruce)**, Bluffton, Ind. *Entomology*. Marion, Ind, July 10, 77. B.S, Ohio State, 98; fellow, Vanderbilt, 00-01. Asst. curator, Carnegie Museum, 98-99; teacher science, high sch, Salem, Ohio, 99-00; *pres*, Wells Co. Bank, Bluffton, Ind, 05-; *hon. curator* Odonata, Michigan. A.A.; fel. Entom. Soc; Ornith. Union; fel. Ind. Acad. (pres, 18); Ohio Acad. Dragon-flies.
- Williamson, Erskine D(ouglas)**, Geophysical Laboratory, Washington, D. C. *Physical chemistry*. Edinburgh, Scotland, 86. B.Sc, Edinburgh, 08, M.A, 09. Research asst, Carnegie Trust, Edinburgh, 12-14; *physical chemist, geophys. lab, Carnegie Institution, 14-* Manufacture of optical glass, W. I. B, 17-18. Chem. Soc; Physical Soc; Wash. Acad; Wash. Philos. Soc; Edinburgh Math. Soc. Sedimentary carbonates; high pressure; elastic properties of glass; chemical equilibrium.
- Williamson, Mrs. M. Burton**, 2343 Ocean View Ave, Los Angeles, Calif. *Conchology*. Leeds, England. American private schools; Elliot Sem; Burlington Col; special courses in philos. Conducted zool. dept. Summer Sch, Long Beach, Calif, 94; conchol. dept. 'Pop. Science News'; Isaac Lea dept, 'The Nautilus.' A.A; Wash. Biol. Soc; S. Calif. Hist. Soc. (v. pres). Popular conchology.
- Willis, Prof. Bailey**, Stanford University, Calif. **Geology*. Cornwall, N. Y, May 31, 57. M.E, Columbia, 78, C.E, 79; hon. Ph.D, Berlin, 10. Special agent, tenth census, 79-81; *geologist*, Northern Transcont. Surv, 81-84; U. S. Geol. Surv, 84-; consulting geologist to Arg. Ry, 11-14; *prof. geol, Stanford, 15-* Lecturer, Hopkins, 97-03; various official positions, U. S. Geol. Surv; geol. exploration in Eastern Asia, Carnegie Institution, 03-04; lecturer, Chicago, 09- Delegate for U. S. Int. Committee on Int. Map, London, 09. Nat. Acad; A.A. (v. pres, E, 08); Geol. Soc; Min. Eng; Ass. Geog; Philos. Soc; Am. Acad; Wash. Acad. (see'y, 10); Wash. Geol. Soc; Berlin Gesell. für Erdkunde. Stratigraphic and structural geology and physiography, with special reference to the growth of mountains and continents; stratigraphy and physiography of North America, Europe and Asia as a record of continental development.
- Williston, Arthur L(yman)**, Wentworth Institute, Boston, Mass. *Mechanical engineering*. Cambridge, Mass, Oct. 11, 68. B.S. (M.E), Mass. Inst. Tech, 89, 89-90. Asst. R. R. engineer, 90-91; instr. steam eng, Mass. Inst. Tech, 91-92; mech. engineer for mill architects, 92-93; director, dept. of indust. arts, Ohio State, 93-98, sec'y, eng. faculty, 95-98; *director*, sch. of science and tech, Pratt Inst, 98-10; *Wentworth Inst, Boston, 08-* A.A; Mech. Eng; Eng. Educ. (see'y, 07-09, v. pres, 09); Soc. Indust. Educ. (see'y and treas, N. Y. State branch). Steam engineering; friction; power transmission; physical properties of alloys and cast iron; factory organization and management.
- Willoughby, C(harles) C(lark)**, Peabody Museum, Cambridge, Mass. *Anthropology*. Hon. A.M, Bowdoin, 15. Austin teaching fellow, Harvard, 99-01; asst, dept. anthrop, Chicago Expos, 92-93; chief asst, Peabody Museum, Harvard, 94-99, asst. curator, 99-13, asst. director, 13-15, *director*, 15- A.A; Anthropol. Ass; Mus. Ass; Swedish Soc. Anthropol. and Geog. American archeology and ethnology.
- Willoughby, C(laude) H(ouston)**, 200 N. Roux St, Gainesville, Fla. *Animal husbandry*. Tamaroa, Ill, Jan. 2, 75. Grad, dairy sch, Wisconsin, 00; B.Agr, Missouri, 01; Cornell, 08. Instr. dairying, Missouri, 01-02; dairymen, Ga.

Exp. Sta, 02-09; *supt, Fern Crest Dairy*, 09-11; *prof. animal husbandry and dairying, Florida*, 12- Lecturer, Ga. Farmers' Institutes, 03-09; contributing ed, 'South. Ruralist,' 05-19; instr. animal husbandry, Peabody Col. Teachers, 18. A.A.; Dairy Sci. Ass; Soc. Animal Production; Ga. Dairy and Live Stock Ass. (officer, 03-11); Fla. Live Stock Ass. (officer, 12-18). Beef and pork production; diseases of farm animals; milk production under semi-tropical conditions.

Wills, Prof. A(lbert) P(otter), Columbia University, New York, N. Y. **Physics*. Waltham, Mass, Feb. 25, 73. B.E.E, Tufts, 94; Ph.D, Clark, 97; Göttingen and Berlin, 98-99; Sc.D, Tufts, 11. Assoc. applied math. and physics, Bryn Mawr, 99-02; physicist, Cooper Hewitt Lab, 02-03; instr. mech, *Columbia*, 03-05, adj. prof, 05-09, *prof. math. physics*, 09- Physical Soc. Magnetic permeability; magnetic shielding; magnetostriiction; conduction of electricity in mercury vapor; hydrodynamic analogy to electric and magnetic fields; magnetic properties of gases; theories of magnetism.

Wills, J(ohn) G(arden), 27 Matilda St, Albany, N. Y. *Veterinary science*. Chateaugay, N. Y, April 4, 79. B.S, Vermont, 03, D.V.M, Cornell, 06. First asst. veterinarian, N. Y. State Dept. Agr, 09-11, *chief veterinarian*, 11- Vet. Med. Ass. (chairman, sect. sanit. science, 16); U. S. Live Stock Sanit. Ass. (pres, 17); Pub. Health Ass; N. Y. Vet. Med. Ass. (pres, 17). Bovine tuberculosis; anthrax; rabies; live stock sanitation.

Willson, Prof. Fred(eric)k N(ewton), Princeton, N. J. *Descriptive geometry*. Brooklyn, N. Y, Dec. 23, 55. C.E, Rensselaer, 79; hon. A.M, Princeton, 96. Instr. math, Troy Acad, 72-79; acting prof, Lake Forest, 79-80; *prof. descriptive geom. and tech. drawing, Princeton*, 81- Asst. bookkeeper, Troy City National Bank, 71; foreign correspondent, Drexel, Morgan and Co, 80. A.A; Math. Soc; Mech. Eng; assoc. Civil Eng. Mathematics; graphics; kinematics; stereotomy; valve motion.

Willson, Prof. Robert W(heeler), 64 Brattle St, Cambridge, Mass. *Astronomy*. West Roxbury, Mass, July 20, 53. A.B, Harvard, 73; Ph.D, Würzburg, 86. Asst. Argentine Nat. Observatory, 73; Harvard Col. Observatory, 74, tutor physics, Harvard, 75-81; asst. astronomer, Winchester Observatory, Yale, 81-84; instr. astron. and physics, *Harvard*, 91-99, asst. prof. astron, 99-93, prof, 03-19, *emer. prof*, 19- A.A; Astron. Soc; Am. Acad. Conduction of heat; terrestrial magnetism; electricity; Maya astronomy.

Wilmore, Dean Jno. J(enkins), Auburn, Ala. *Mechanical engineering*. Winchester, Ind, Oct. 15, 64. B.M.E, Purdue, 88, M.E, 91. Asst, dept. mech, *Ala. Polytech*, 88-91, instr. mech. eng, 91-94, prof. 94-08, *dean, sch. eng*, 03- A.A; Mech. Eng; Eng. Educ.

Wilsey, Rex B(ishop), Eastman Kodak Co, Rochester, N. Y. *Physics*. Ravenna, Nebr, July 27, 89. B.S, Nebraska, 13, A.M, 15. *Physicist*, *Eastman Kodak Co*, 15-18, 19- Photog. physicist, Bur. Aircraft Production, 18-19. Optical Soc. X-rays and X-ray photography; reflection

coefficients of metals; photographic sensitometry.

Wilson, Prof. A(lbert) H(arris), Haverford College, Haverford, Pa. *Mathematics*. Saundersville, Tenn, Feb. 4, 72. B.S, Vanderbilt, 92, fellow, 92-93, M.S, 93; Hopkins, 93-95; Göttingen, 99-00; Bonn, 03-04; Ph.D, Chicago, 11. Instr. math, Princeton, 95-03; Illinois, 04-05; Ala. Polytech, 05-10; *assoc. prof*, *Haverford*, 10- A.A; Math. Soc.

Wilson, Dr. Alfred W(illiam) G(unning), Department of Mines of Canada, Ottawa, Can. *Engineering*. Cobourg, Ont, Feb. 6, 73. Victoria (Ont), 89-92; B.A, Toronto, 93; A.M, Harvard, 99, Ph.D, 01; Columbia, 02; McGill, 02-04. Master science, Napanee Col. Inst, 96-98; geologist, Can. Geol. Surv, 01-02, 08; demonstrator geol, McGill, 02-06; consulting geologist and engineer, 06-09; *engineer*, *Dept. Mines of Can*, 09- Tech. adviser, Can. W.T.B, 17-18. Min. and Metal. Eng; Geol. Soc; Min. Eng; Can. Inst. Min; British Inst. Min. and Metal. Physiography of Ontario; geological and geographical exploration in 'New' Ontario and Keewatin District; the copper deposits of Canada; copper smelting and spelter production in Canada; potash recovery at cement plants; pyrites and its uses; physiographic and industrial development engineering.

Wilson, Prof. A(ndrew) G(ordon), Hebron, Nebr. *Geology*. Scotch Grove, Iowa, April 5, 61. Lenox, 75-80; A.B, Wooster, 84, A.M, 87. Instr. science, Lenox, 84-85, prof. nat. science, 85-02, pres, 97-02. Dynamical geology and ore deposits; gold and silver deposits in New Mexico; electric power transmission.

Wilson, Prof. B(enjamin) D(unbar), New York State College of Agriculture, Ithaca, N. Y. *Soil technology*. Lexington, Ky, Oct. 14, 89. B.S, Kentucky, 09, M.S, 14; Ph.D, Cornell, 17. Asst. chemist, Ky. Exp. Sta, 09-14; instr. *soil technol*, N. Y. State Col. Agr, *Cornell*, 17-19, *asst. prof*, 19- Soc. Agron. Soil technology and chemistry.

Wilson, Prof. B(irtton) N(eill), University of Arkansas, Fayetteville, Ark. *Mechanical engineering*. Philadelphia, N. Y, Nov. 16, 74. B.S, (M.E), Ga. Tech, 96; M.E, Michigan, 09, M.M.E, 17. Adj. prof. mech. eng, *Arkansas*, 96-03, *prof*, 03-16, *exp. eng. and drawing*, 17- Mech. Eng. Arkansas fuels.

Wilson, Prof. Cha(rlie)s B(ranch), State Normal School, Westfield, Mass. **Biology*. Exeter, Maine, Oct. 20, 61. A.B, Colby, 81, A.M, 83, hon. Sc.D, 03; Hopkins, 94-96, Ph.D, 10. Instr. bot, Colby, 81-84; private tutor, 84-91; prof. science, State Nor. Sch, Gorham, Maine, 91-94; student asst, Hopkins, 95-96; prof. biol, *State Nor. Sch, Westfield, Mass*, 96-97, *head, dept. science*, 97- A.A; Soc. Nat; Soc. Zool; Boston Soc. Nat. Hist; Springfield Zool. Club (pres, 97, 02-14). Nemerteans and gephyreans of North America; development of frogs' eggs in various solutions; North American copepods parasitic on food and other fishes; Argulidae; Caligidæ; Ergasilidae; parasitic copepods of the Pacific coast; Chonilraeanthidae; Lernaeidae; Lernaeopodidae; influence of degeneration on classification; Sphyridae; dragon flies in re-

lation to pond-fish culture; parasitic copepods from the Congo Basin and of the Canadian Arctic expedition.

Wilson, Prof. Charles Scoon, Forest Home Drive, Ithaca, N. Y. *Pomology*. Hall, N. Y., Dec. 11, 79. A. B., Cornell, 04, M.S.A., 05. Instr. hort., Cornell, 05-07, asst. prof. pomol., 07-10, prof., 10-15; *state commissioner agr.*, N. Y., 15- Supt. fruits, N. Y. State Fair, Syracuse; N. Y. State Fair Commissioner, 15- Soc. Hort. Sci.; Hort. Cong. (v. pres). Black rot of the grape and its control; orchard surveying.

Wilson, Prof. D(avid) Wright, Johns Hopkins Medical School, Baltimore, Md. *Physiological chemistry*. Knoxville, Iowa, Jan. 4, 89. B.S., Grinnell, 10; M.S., Illinois, 12; Ph.D., Yale, 14. Asst. and assoc. *physiol. chem.*, Hopkins, 14-17, *assoc. prof.*, 17- Soc. Biol. Chem.; Physiol. Soc. Muscle extractives; parathyroid tetany; nitrogenous constituents of blood.

Wilson, Prof. D(elonza) T(ate), Case School of Applied Science, Cleveland, Ohio. *Astronomy, Mathematics*. Clinton, N. C., Aug. 1, 62. A.B., North Carolina, 87; A.M., Vanderbilt, 96; Ph.D., Chicago, 05. Instr. astron., Cincinnati, 01, 02; computer, U. S. Naval Observatory, 03; asst. prof. *math. and astron.*, Case, 03-11, *assoc. prof.*, 11- A.A.; Astron. Soc.; Math. Soc.; Math. Ass. Perturbations; the almicantar for determining star places.

Wilson, Prof. E(dmund) B(eecher), Columbia University, New York, N. Y. **Biology*. Geneva, Ill., Oct. 19, 56. Antioch, 73-74; Chicago, 74-75, LL.D., 01; Ph.B., Yale, 78, LL.D., 01; fellow, Hopkins, 79-81, Ph.D., 81, LL.D., 02; Cambridge and Leipzig, 81-82, Sc.D., Cambridge, 09; hon. M.D., Leipzig, 09. Lecturer biol., Williams, 83-84; Mass. Inst. Tech., 84-85; prof., Bryn Mawr, 85-91; *zool.*, Columbia, 91-14, *Da Costa prof.*, 14-, dean faculty, pure science, 05-06. Joseph Leidy lecturer, Pennsylvania, 13; Croonian lecturer, Royal Soc., 14. Nat. Acad.; A.A. (pres, 13); Soc. Nat. (pres, 00); Soc. Zool. (pres, 95); Soc. Exp. Biol. (pres, 05); Am. Acad.; fel. N. Y. Acad. (pres, 04); fel. Royal Micros. Soc.; for. mem. London Linnean Soc.; cor. mem. London Zool. Soc.; hon. mem. Cambridge Philos. Soc.; hon. mem. Soc. biol. de Paris; hon. mem. Soc. zool. de France; cor. mem. Royal Prussian Acad.; Bavarian Acad.; for. mem. Royal Bohemian Sci. Soc.; assoc. Accad. dei Lincei; Royal Acad. Sci., Amsterdam; for. mem. Soc. Hollandaise, Harlem; for. mem. Christiania Acad.; for. mem. Acad. Royale de Belgique. Cytology; embryology; experimental morphology.

Wilson, Dr. Edwin Bidwell, Massachusetts Institute of Technology, Cambridge, Mass. **Mathematics*. Hartford, Conn., April 25, 79. A.B., Harvard, 99; Ph.D., Yale, 01; Paris, 02-03. Instr. math., Yale, 00-06, asst. prof., 06-07; assoc. prof., *Mass. Inst. Tech.*, 07-11, *prof.*, 11-17, *math. physics, and head, dept. physics*, 17- Lecturer math., Harvard, 10-11, Lowell lecturer, aeronautics, 18. Mem. Int. Commission for Studying Vectorial Notations. Nat. Acad.; A.A.; Math. Soc. (assoc. ed., 'Trans'); Physical Soc.; Am. Acad.; Math. Verein; Soc. math. de France; Circolo Mat. di Palermo; Int. Ass.

Prom. Quaternions. Vector analysis; geometry; multiple algebra; mechanics; advanced calculus; relativity; aeronautics.

Wilson, Dr. Ernest D(ana), George Batten Co., New York, N. Y. *Chemistry*. Harlan, Iowa, Nov. 2, 90. B.S., Nebraska, 13; Ph.D., Chicago, 15. Instr. chem., Nebraska, 13; research assoc. physical chem., Mass. Inst. Tech., 13-14; asst. chem., Chicago, 14-15; fellow, Mellon Institute, 16-18; chief engineer, Graton and Knight Mfg. Co., 18-20. Chem. Soc.; Leather Chem. Ass.; Chem. Eng. Industrial chemistry; atomic structure; sulphur dioxide in smelter gases; power transmission by leather belting; currying of leather.

Wilson, Ernest Henry, Arnold Arboretum, Jamaica Plain, Boston, Mass. *Botany*. Chipping-Campden, England, Feb. 15, 76. Hon. A.M., Harvard, 16. Asst. *Arnold Arboretum*, Harvard, 06-19, *asst. director*, 19- George Robert White Medal, Mass. Hort. Soc. Bot. Soc.; Royal Hort. Soc. Botanical exploration in China and Japan; introduction of woody plants.

Wilson, Prof. Francis D(aniel), 130 Park Ave., Schenectady, N. Y. *Chemistry*. Chatham, Va., Dec. 3, 71. B.S., Va. Polytech, 94, M.S., 96; Ph.D., Hopkins, 99. Instr. chem. and research asst. to Prof. Michael Tufts, 99-00; instr. chem. and miner, Va. Polytech, 00-01, asst. prof., 01-02; adj. prof. chem., geol. and miner, 02-04, prof. chem., 04-12; *research chemist*, *Gen. Elec. Co.*, 12- A.A.; Chem. Soc. Comparative study of orthosulphaminebenzoic acid and orthocarbaminebenzene-sulphuric acid; the action of calcium carbonate and calcium bicarbonate on zinc sulphate solutions.

Wilson, Dr. Frank N(orman), 804 Lawrence St., Ann Arbor, Mich. *Medicine*. Wayne Co., Mich., Nov. 19, 90. B.S., Michigan, 11, M.D., 13. Asst. *internal med.*, Michigan, 13-14, instr., 14-16; Washington (St. Louis), 16-20; *assoc. prof.*, Michigan, 20- A.A.; Am. Med. Ass.; Soc. Clin. Invest. Clinical electro-cardiography.

Wilson, Prof. George Wade, 4369 Oakwald Ave., Chicago, Ill. *Pathology*. St. Louis, Mo., May 7, 91. A.B., 10, A.M., 13; M.D., St. Louis, 14. Asst. path., St. Louis, 15-17; fellow path. and bacter., Rockefeller Inst., 17-18, asst., 18-19; *prof. path. bacter. and prev. med.*, Loyola, 19- Bacteriology; fluid substitutes for blood; epinephrin; cytotoxins; increased antibody production; effect of X-rays on cell-division; neurological syphilis.

Wilson, Prof. Guy West, Fayette, Iowa. *Botany, Mycology*. Near Carmel, Ind., June 19, 77. B.S., De Pauw, 02, A.M., 03; M.S., Purdue, 06. Prof. biol., Mt. Union, 03-04; teacher bot., high sch., La Fayette, Ind., 04-05; aid, N. Y. Bot. Garden, 06-07; prof. biol., Upper Iowa, 07-10; asst. plant path., N. C. Exp. Sta., 10-12; asst. prof. mycol. and plant path., Iowa, 14-16; assoc. bot. and plant path., Clemson, 18-19; *prof. biol.*, Upper Iowa, 19- A.A.; Phytopath. Soc.; fel. Iowa Acad.; Kans. Acad. (sec'y, 18). North American Peronosporales; flora of Indiana; diseases of cotton, grains and chestnut; phycomycetes; soil fungi of North America; parasitic fungi; fungi of Iowa.

Wilson, Prof. H(arley) F(rost), University of Wisconsin, Madison, Wis. *Entomology*. Del

- Norte, Colo, April 14, 83. B.S, Colo. Agr. Col, 07; Illinois, 07-08; M.S, Oregon Col, 13. Special agent, bur. entom, U. S. Dept. Agr, 08-10; research asst. entom, Oregon Exp. Sta, 10-13; prof, Oregon Col, and entomologist, Exp. Sta, 13-15; *prof. econ. entom, Wisconsin, 15- A.A.*; Entom. Soc; Ass. Econ. Entom; Pacific Coast Ass. Econ. Entom. (pres, 15). Insecticides; Aphididae.
- Wilson, Prof. H(arold) A(lbert)**, Rice Institute, Houston, Tex. **Physics*. York, England, Dec. 1, 74. M.Sc, Leeds, 97; 1851 Exhibition scholar, London, 97-00, D.Sc, 00; Clerk-Maxwell student, Cambridge, 01-04, M.A, 04. Fellow, Trinity Col, Cambridge, 01-07; *prof. physics*, King's Col, London, 05-09; McGill, 09-12; *Rice Inst, 12- A.A.*; Physical Soc; Philos. Soc; fel. Royal Soc; London Physical Soc; Cambridge Philos. Soc; Soc. de Physique. Electrical properties of flames and incandescent solids; discharge through gases at low pressures; induced electromotive force; ionic charge; heat conduction; optical properties of metals; perception of direction of sound; receivers for sound in water; diamagnetism; electromagnetic momentum; gravitation.
- Wilson, Prof. H(enry) V(an Peters)**, Chapel Hill, N. C. **Zoology*. Baltimore, Md, Feb. 16, 63. A.B, Hopkins, 83, fellow, 87-89, Ph.D, 88. Asst. U. S. Fish Commission, 89-91; *prof. biol. North Carolina, 91-04, zool, 04- Director*, U. S. Fisheries Lab, Beaufort, N. C, 98-01; south. exchange lecturer, 15-16. A.A; Soc. Nat; Soc. Zool. (v. pres, east. branch, 08, pres, 11); Boston Soc. Nat. Hist. Comparative and experimental embryology; coelenterates; sponges; amphibians; teleosts.
- Wilson, Prof. H(erbert) C(ouper)**, 207 Winona St, Northfield, Minn. **Astronomy*. Northfield, Oct. 24, 58. A.B, Carleton, 79, A.M, 82; Ph.D, Cincinnati, 86. Asst. astronomer, Cincinnati Observatory, 81-82, astronomer (pro tem), 82-84, asst. astronomer, 84-86; computer, Transit of Venus Commission, 86-87; asst. prof. astron, Carleton, 87-89, assoc. prof. math. and astron, 99-09, *prof. and director, Goodsell Observatory, 09- Ed, 'Popular Astron'; research asst, Lick Observatory, 10-11. Astron. Soc. Observations of double stars and comets; celestial photography; measurement of photographs for positions of asteroids; variable stars.*
- Wilson, H(erbert) M(ichael)**, The Associated Companies, Hartford, Conn. *Engineering*. Glasgow, Scotland, Aug. 23, 60. C.E, Columbia, 81. Levelman, transitman and party chief, R. R. surveys, Mex, 81-82; topographer, U. S. Geol. Surv, 82-88, irrig. engineer, 89-90, geographer, 91-06, chief engineer structural and fuel testing, 07-10; engineer in charge, U. S. Bur. Mines, 10-14; director, dept. safety and inspection, *The Associated Companies, 15-18, gen. manager, 18- Lecturer on irrig, Columbia, 92-93. Civil Eng; Wash. Acad. Civil and mining engineering; geography; irrigation; safety in mining; compensation insurance.*
- Wilson, Dr. Herrick E(ast)**, Oberlin, Ohio. *Paleontology*. Bradford, Pa, Feb. 5, 84. A.B, Oberlin, 09, A.M, 10; fellow, Chicago, 10-12, Ph.D, 13. Asst. zool, Oberlin, 07-08, paleont, 09-10; private research, 13-14; paleontologist, U. S. Nat. Museum, 15-20. A.A; Paleont. Soc; N. Y. Zool. Soc. Crinoid morphology.
- Wilson, Prof. J(ames) C(ornelius)**, 1509 Walnut St, Philadelphia, Pa. *Medicine*. Philadelphia, March 25, 47. A.M, Princeton, 67; M.D, Jefferson Med, Col, 69. Attending physician, Phila. Hosp, 76-90; German Hosp, 90-98; *prof. practise of med. and clin. med, Jefferson Med. Col, 91-11, emer. prof. 11-; attending physician, Pa. Hosp, 95-11, emer. physician, 11-; physician-in-chief, Lankenau (formerly German) Hosp, 98- First lieut. and later capt, M.R.C. Am. Physicians (pres, 02); Am. Med. Ass; Am. Acad. Med. (pres, 97); Philos. Soc; Climat. Ass. (pres, 04); Therapeut. Soc. (pres, 09); Wash. Acad; Phila. Co. Med. Soc. (pres, 95-96); Phila. Col. Physicians (pres, 13, 14); Phila. Path. Soc. (pres, 85, 86). Clinical medicine.*
- Wilson, Prof. J(ames) K(enneth)**, 202 Dearborn Place, Ithaca, N. Y. *Soil technology*. Maryville, Mo, Aug. 5, 81. B.S, Okla. Col, 06; Ph.D, Cornell, 15. Asst. bacteriologist, N. Y. Exp. Sta, Geneva, 06-12; asst. plant physiologist, Cornell, 12-14, asst. prof. soil technol, 14-20, *prof, 20- Soc. Bact. Soil technology; soil bacteriology; crops and nitrates.*
- Wilson, Prof. James W(ilbur)**, Brookings, S. Dak. *Animal husbandry*. Traer, Iowa, Feb. 12, 69. B.S.A, Iowa State, 96, M.S.A, 98. Asst. prof. animal husbandry, Iowa State, 97; private sec'y, Sec'y of Agr, 97-00; *prof. animal husbandry, S. Dak. Col, and director, Exp. Sta, 02- Stock breeding and feeding.*
- Wilson, John Arthur**, A. F. Gallun and Sons Co, Milwaukee, Wis. *Chemistry*. Chicago, Ill, Aug. 16, 90. N. Y. Univ; Leeds, England. Asst. chemist, Edison Chem. Works, 11; *A. F. Gallun and Sons Co, 12-16, chief chemist, 16- Hon. research asst, Procter Int. Research Lab, Leeds, 15-16. Chem. Soc. (chairman, Milwaukee sect. 20, leather chem. sect, 20-); Leather Chem. Ass. (v. pres, 20-). Physical and colloidal chemistry; leather.*
- Wilson, Prof. J(ohn) Gordon**, 5755 Kenwood Ave, Chicago, Ill. *Anatomy, Physiology*. Edinburgh, Scotland, 66. A.M, Edinburgh, M.B, C.M, 89; Vienna and Berlin, 90-91. Instr. and asst. prof. anat, Chicago, 01-08; *prof. and head, dept. otol, Northwestern, 09- Otolologist, Wesley Hosp, Chicago. Ass. Anat; Laryngol. Ass; Otol. Soc. Otolology; nerves and nerve endings in heart, larynx and ear; cranial connections of nerves of the ear; physiology of the vestibular mechanism.*
- Wilson, Dr. J(ohn) Howard**, Castine, Maine. *Anthropology*. Philadelphia, Pa, April 9, 71. A.B, Brooklyn Polytech, 95; A.M, Columbia, 05, Ph.D, 06. Cong. Int. d'Anthrop. et d'Archéol. prehist; Cong. prehist. de France. A.A; Am. Geog. Soc; Anthropol. Ass; N. Y. Acad. Geology; glacial history of Nantucket and Cape Cod.
- Wilson, Prof. J(ohn) Hunt**, 531 Cattell St, Easton, Pa. *Chemistry*. Easton, Nov. 30, 85. B.S, Lafayette, 05; M.S, Harvard, 07, Ph.D, 08. Research asst. path, Harvard Med. Sch, 08-09; instr. physical chem, Lehigh, 10-16; *prof, Lafayette, 16- Chem. Soc; Franklin Inst. Atomic weight of lead; energy changes in the dilution of amalgams.*

- Wilson, Dr. L(evi) T(homas)**, U. S. Naval Academy, Annapolis, Md. *Mathematics*. Jonesboro, Ark, Dec. 24, 85. A.B., Washington and Lee, 09, A.M., 10; Columbia, 13; Ph.D., Harvard, 15. *Instr. math*, Illinois, 15-17; *U. S. Naval Acad*, 17-20, *asst. prof*, 20- Math. Soc.
- Wilson, Dr. Louis B(lanchard)**, The Mayo Foundation, Rochester, Minn. *Pathology, Bacteriology*. Pittsburgh, Pa, Dec. 22, 66. Pa. State Nor. Sch, 86; M.D., Minnesota, 96. Teacher biol, Central High Sch, St. Paul, 88-96; senior demonstrator path. and bacter, Minnesota, 97-04; *pathologist and director laboratories, St. Mary's Hosp*, 05-; clin. prof. surg. path, *Minnesota*, 05-14, *prof. path, Mayo Foundation*, 15- First asst. bacteriologist, Minn. State Board of Health, 96-04; major, lieut. col. and col, M.C., A.E.F., and asst. director, lab. div, 18-19. A.A.; Ass. Path. and Bact; Am. Physicians; Pub. Health Ass; Am. Med. Ass; Ass. Mil. Surg; Minn. Path. Soc. (pres). Bacteriology (diphtheria and hemorrhagic septicaemia groups); variations in morphology and virulence of *B. diphtheriae*; etiology of the so-called spotted fever of the Rocky Mountains; pathology of goiter; relation of gastric ulcer to gastric cancer; tumors of the kidney; pathology of spleen and prostate; tumors of parotid; ballistics in relation to gunshot wounds; graduate medical education.
- Wilson, Dr. Lucy**, 51 Pine Ridge Road, Waban, Mass. *Physics*. Bloomington, Ill, Oct. 19, 88. A.B., Wellesley, 09; fellow, Hopkins, 16-17, Ph.D, 17. Asst. physics, Mt. Holyoke, 09-11, instr, 11-12, 13-14; instr. physics and psychol, *Wellesley*, 17-20, *asst. prof. physics*, 20- A.A.; Physical Soc. Theories of vision; optics in pure physics.
- Wilson, Mrs. L(ucy) L(angdon) W(illiams)**, 640 N. 32d St, Philadelphia, Pa. *Anthropology, Geography*. St. Albans, Vt, Aug. 18, 65. Ph.D, Pennsylvania, 97. *Principal, S. Phila. High Sch*, 16- Gold medal, Paris Expos, 00; Pan-Am. Expos, 01. A.A.; Anthropol. Ass; Am. Geog. Soc; Archeol. Inst. Education; anthropo-geography; American archeology.
- Wilson, Dr. M(orley) E(vans)**, Geological Survey of Canada, Ottawa, Can. *Geology*. Bright, Ont, Feb. 8, 82. B.A., Toronto, 07; Ph.D, Yale, 12. *Geologist, Can. Geol. Survey*, 07- A.A.; Geol. Soc. Pre-Cambrian geology.
- Wilson, Dr. N(orman) R(ichard)**, Wesley College, Winnipeg, Manitoba, Can. *Mathematics*. Cobourg, Ont, March 23, 79. B.A., Toronto, 99, M.A., 01; Ph.D, Chicago, 08. *Instr. math*, Royal Mil. Col, Kingston, Ont, 99-00; *lecturer, Wesley Col, Univ. of Manitoba*, 00- A.A.; Math. Soc. Group theory.
- Wilson, Prof. O(rville) T(urner)**, 3414 Telford Ave, Cincinnati, Ohio. *Botany*. Winchester, Kans, Oct. 19, 86. A.B., Emporia, 07; A.M., Kansas, 12, fellow, 11-13; fellow, Wisconsin, 13-15, Ph.D, 15. Instr. and principal of acad, Emporia, 07-11; *instr. bot*, Kansas, 11-13; *Cincinnati*, 15-16, *asst. prof*, 16-20, *assoc. prof*, 20- With Kans. Biol. Surv, 12-13; U. S. Dept. Agr, 18, 19. Bot. Soc. Plant pathology; bacteriology; anatomy of seed plants; diseases of alfalfa, market fruits and vegetables.
- Wilson, P(ercey)**, 2779 Briggs Ave, New York, N. Y. *Botany*. South Orange, N. J, May 21, 79. High sch. Museum asst, N. Y. Bot. Garden, 99-03; asst. botanist, Cuban Exp. Sta, Santiago de las Vegas, 04; administrative asst, N. Y. Bot. Garden, 04-10, asst. curator, 11-13, *assoc. curator*, 14- Numerous bot. expeditions to Ga, East Indies, P. R, Honduras, Cuba, Bahamas and Isle of Pines. Torrey Bot. Club (see'y, 09, 10, chairman, field committee, 06, 07, 15-17). Flora of North America and the West Indies; Rutaceae; Typhaceae; Meliaceae.
- Wilson, Dr. Ralph E(lmer)**, Dudley Observatory, Albany, N. Y. *Astronomy*. Cincinnati, Ohio, April 14, 86. A.B., Carleton, 06; Ph.D, Virginia, 10. Acting director, Goodsell Observatory, Carleton, 10-11; asst, Lick Observatory, 11-13; asst. astronomer in charge, D. O. Mills exped. to Chile, 13-15, acting astronomer, 15-18; *astronomer, Carnegie Institution*, 18- A.A.; Astron. Soc; Soc. astron. de France. Astrophysics; double stars; star positions in the Orion nebula; spectroscopic binaries; radial velocities of stars, gaseous nebulae and Magellanic clouds.
- Wilson, Rev. Robert**, 181 Queen St, Charleston, S. C. *Paleontology, Zoology*. Charleston, Oct. 28, 38. Col. of Charleston, 53-55; Virginia, 55-56; M.D., Med. Col. of S. C, 59; D.D., Washington (Md), 83. Asst. surgeon, C. S. A., 62-65; rector, Claremont Parish, S. C, 66-68; St. Paul's, Kent and St. Peter's, Easton, Md, 68-84; St. Luke's, Charleston, 84-01; *pres, Charleston Library Soc*, 98- Huguenot Soc. (v. pres); S. C. Audubon Soc. (v. pres); Huguenot Soc. of S. C. (pres, 99-); Elliott Soc. (pres, 01). Habits of birds of lower South Carolina; paleontology of South Carolina phosphate beds.
- Wilson, Prof. R(obert) E(dward)**, 2015 Sherman Ave, Evanston, Ill. *Mathematics*. Oak Lawn, Ill, Aug. 12, 72. Ph.B., Northwestern, 98, Ph.M., 00; Berlin and Göttingen, 03-05. *Instr. math, Northwestern*, 00-03, 05-07, *asst. prof*, 03- Math. Soc; Math. Verein.
- Wilson, Prof. Robert E(rastus)**, Massachusetts Institute of Technology, Cambridge, Mass. *Chemistry*. Beaver Falls, Pa, March 19, 93. Ph.B., Wooster, 14; B.S., Mass. Inst. Tech, 16. Research lab, Gen. Elec. Co, 16; *research assoc. applied chem, Mass. Inst. Tech*, 16-17, *asst. director*, 19-20, *director and assoc. prof. chem. eng*, 20- Consulting chem. engineer, U. S. Bur. Mines, 17-18; major, C.W.S., 18-19; consulting chem. engineer, Corona Chem. Co; A. D. Little, Inc; B. and M. R. R. Chem. Soc. Physical chemistry; gases; smoke; vapor pressures.
- Wilson, Prof. Robert North**, Durham, N. C. *Chemistry*. Lenoir, N. C, March 3, 75. A.B., Haverford, 98; M.S., Florida, 09. Prof. chem, Guilford, 98-10; asst. chemist, Fla. Exp. Sta, 07-09; asst. prof. chem, *Trinity (N. C)*, 10-18, *prof*, 18- Asst. supt. exten. work, Florida, 10. A.A.; Chem. Soc; N. C. Acad. Agricultural chemistry.
- Wilson, Dr. Stanley D(avis)**, Peking Union Medical College, Peking, China. *Chemistry*. Waldo, Maine, Feb. 5, 81. A.B., Wesleyan, 09, A.M., 10; Swift fellow, Chicago, 13-14, Ph.D, 16. Instr. chem. and geol, Washburn, 10-12; chem, Kansas, 12; Chicago, 14-16; org. chem,

- Rice Inst, 16-17; instr. chem. and head of dept, pre-med. sch, *Peking Union Med. Col.* 17-20, asst. prof, 20- A.A.; Chem. Soc. Velocities of reactions; indicators; foods.
- Wilson, Prof. W(ilbur) M.** University of Illinois, Urbana, Ill. *Civil engineering.* West Liberty, Iowa, July 6, 81. B.M.E. Iowa State, 00; C.E. 14; Sibley fellow, Cornell, 03-04, M.M.E. 04. Instr. mech. eng, Iowa State, 01-03, asst. prof, 04-06, assoc. prof, 06-07; structural detailer, designer and estimator, Ill. Steel Co, 08-11, chief designer, 12-13; asst. prof. *structural eng, Illinois*, 13-17, assoc. prof, 19- Capt. and major, corps engineers, 17-18. Soc. Test. Mat; West. Soc. Eng. Steam engines; iron spur gears; stresses.
- Wilson, Prof. Wilford M(urry)**, 319 Dryden Road, Ithaca, N. Y. *Meteorology.* Esypville, Pa, Jan. 24, 60. Allegheny, 97; M.D, Memphis Med. Col, 95. *With U. S. Weather Bur*, 85-; prof. *meteorol, Cornell*, 12- Atmospheric moisture in relation to artificial heating.
- Wilson, Prof. W(illiam) B.** 748 Poplar St, Ottawa, Kans. *Botany.* Near Jonesboro, Tenn, March 7, 66. B.S, Ottawa (Kans), 97, M.S, 98; Chicago, summers, 03, 07, 09. *Prof. math.* and nat. science, Indian, 95-96; nat. science, Bethel (Ky), 97-03; *biol, Ottawa (Kans)*, 04-, dean, 18- V. pres, Ottawa (Kans), 15-17; instr. bot, Kansas, summers, 15-19. Bot. Soc; Kans. Acad. Morphology and pathology of plants.
- Wilson, Dr. W(illiam) Harold**, 324 E. Davenport St, Iowa City, Iowa. *Mathematics.* Edwardsburg, Mich, Nov. 17, 92. A.B, Albion, 13; A.M, Illinois, 14, Ph.D, 17. Asst. *math, Illinois*, 14-16; *instr, Mass. Inst. Tech*, 17-19; *Iowa*, 19- Math. Soc; Math. Ass. Functional equations.
- Wilson, Dr. W(illiam) P(owell)**, 640 N. 32d St, Philadelphia, Pa. **Botany.* Oxford, Mich, Oct. 17, 44. B.S, Harvard, 78; Sc.D, Tübingen, 80. Teacher various schools; instr. bot, Harvard, 74-77; prof, Pennsylvania, 84-96; director, sch. of biol, 90-94; organizer and director, *Phila. Museums*, 94- Commercial attaché to Am. delegation to Pan-Am. Cong, Mexico, 02; mem. many foreign commercial organizations. A.A; Soc. Nat; Bot. Soc; Philos. Soc. (curator, 10); Phila. Acad; Wash. Acad; Mus. Ass. (treas, 06); Bot. Gesell. Plant physiology.
- Wilson, Prof. Winter L(incoln)**, Bethlehem, Pa. *Civil engineering.* Cecil Co, Md, Dec. 29, 66. C.E, Lehigh, 88, M.S, 01; admitted to bar, 94. Practising civil engineer, 88-98; instr. civil eng, Lehigh, 98-01; asst. prof. in charge, dept. civil eng, Tulane, 01-04; asst. prof. civil eng, *Lehigh*, 04-07, *prof. railroad eng, dept. civil eng*, 07- Chief engineer, Eastern R. R. of Ala, summer, 02. Civil Eng; Eng. Educ. Virtual profiles; economic construction and operation of railroads.
- Wiltbank, Prof. R(utledge) T(hornton)**, University of Chicago, Chicago, Ill. *Psychology.* Philadelphia, Pa, Dec. 26, 77. Ph.B, Bucknell, 98; Ph.D, Chicago, 17. Instr. *psychol, Washington (Seattle)*, 17-19; asst. prof, *Chicago*, 19- Comparative psychology.
- Winchell, Prof. A(lexander) N(ewton)**, University of Wisconsin, Madison, Wis. **Petrology, Mineralogy.* Minneapolis, Minn, March 2, 74. B.S, Minnesota, 96, M.S, 97; Sc.D, Paris, 00. Instr. physics, Cent. High Sch, Minneapolis, 98; miner. expert, U. S. Commission, Paris Expos, 00; prof. geol. and miner, Mont. Sch. of Mines, 00-07; asst. prof. *miner. and petrol, Wisconsin*, 07-08, *prof*, 08- Field asst, U. S. Geol. Surv, 01-07, asst. geologist, 07-10; director, Mont. mineral exhibits, La. Purchase Expos, 04; Mont. exhibits, Portland Expos, 05. A.A; Geol. Soc; Min. Eng; Mineral. Soc; Soc. Econ. Geol; Nat. Ass. State Mining Schools (see'y-treas, 04); Mont. Soc. Eng; Wis. Acad. Petrography of Minnesota gabbroid rocks; optical mineralogy; mining districts of Dillon quadrangle, Montana; petrology and mineral resources of Jackson and Josephine counties, Oregon; rock classification on three coordinates; rocks of Bingham, Utah; petrology and mineral resources.
- Winchell, Horace V(aughn)**, 1212 First National Soo Line Building, Minneapolis, Minn. *Geology.* Galesburg, Mich, Nov. 1, 65. Minnesota, 83-96; B.S, Michigan, 89. Asst. state geologist, Minn, 89-91; geologist in charge exploration of Mesabi and Vermilion iron ore ranges for Minn. Iron Co, 92-93; consulting mining engineer and geologist, 93-97; geologist, Anaconda Copper Min. Co, 98-06; chief geologist, Gt. North. Ry. Co, 06-08; consulting mining engineer and geologist, 08- Assoc. ed, 'Econ. Geol'; 'Zeitschrift für praktische Geol'; exploration in Russia and Siberia, 17. Prize, British Min. Eng, 97. Int. Cong. Geol, 92. A.A; Geol. Soc; Min. and Metal. Eng. (pres, 19); Mont. Soc. Eng; Minn. Acad; British Fed. Inst. Min. Eng; British Inst. Min. and Metal. Value of and modes of extraction of ores and minerals; genesis of ore deposits; artificial production of metallic sulphid ores by methods analogous to their formation in nature from solution in ground waters.
- Winchester, Prof. George**, Standard Oil Co, Elizabeth, N. J. *Physics.* Elmore, Ill, May 22, 76. Ph.D, Chicago, 07. Prof. physics, Washington and Jefferson, 07-19; research physicist, *Standard Oil Co*, 19- Lieut, A.E.F. A.A; Physical Soc. Electron theory; fatigue of metals under influence of ultra-violet light; production of H in vacuum tube; the nature of the electric current.
- Wing, Prof. Cha(rles) B(enjamin)**, Palo Alto, Calif. *Civil engineering.* Willow Brook, N. Y., Jan. 18, 64. C.E, Cornell, 86, fellow 86-87. Instr. civil eng, Cornell, 87-89, asst. prof, 90-91; *prof. bridge and hydraul. eng, Wisconsin*, 91-92; *structural eng, Stanford*, 92- Asst. engineer, various companies, 87-90; major and lieutenant, corps engineers, A.E.F, 17-19, lieutenant col, O.R.C. Civil Eng; Int. Ass. Test. Mat. The flow of water in the six foot steel and wood pipe line of the Pioneer Power Co; structural design.
- Wing, Prof. H(enry) H(iram)**, Cornell University, Ithaca, N. Y. *Agriculture.* New York, N. Y., Nov. 29, 59. B.Agr, Cornell, 81, M.S, 91. Asst. director, N. Y. Exp. Sta, Geneva, 82-84; adj. prof. agr. and farm supt, Nebraska, 84-88; deputy director and sec'y, Exp. Sta, Cornell, 88-91, asst. prof. animal and dairy husbandry, 91-02, *prof. animal husbandry*, 05- A.A; N. Y.

State Agr. Soc; N. Y. Dairymen's Ass. (pres, 09); Nebr. Dairymen's Ass. (sec'y, 85-88). Feeding of animals; dairy manufacture.

Winger, Dr. R(oy) M(artin), University of Washington, Seattle, Wash. *Mathematics*. McCune, Kans, Oct. 10, 85. A.B., Baker, 06; fellow, Hopkins, 11-12, Ph.D. 12. Instr. *math*, Illinois, 12-13; asst. prof., Oregon, 13-18; *Washington (Seattle)*, 18- Math. Soc. Curves; projective transformations.

Winkenwerder, Prof. Hugo (August), University of Washington, Seattle, Wash. *Forestry*. Watertown, Wis, March 16, 78. B.S., Wisconsin, 02; M.F., Yale, 07. Instr. high sch., Sheboygan, Wis, 02-05; chief, sect. educ. U. S. Forest Service, 07-08; asst. prof. forestry, Colo. Col., 08-09; assoc. prof., *Washington (Seattle)*, 09-12, dean, *col. forestry*, 12- Collaborator, U. S. Forest Service, 08-13. A.A.; Soc. Foresters. Dendrology; forest mensuration; migration of birds.

Winkler, Prof. C(harles) H(erman), 10 Clark St, Morgantown, W. Va. *Agriculture*. The Grove, Tex, Dec. 5, 78. Tex. Col; B.S., Texas, 04, A.M., 14; fellow, Missouri, 15-16, Ph.D., 16. Instr. *agr. educ*, Texas, 09-16; asst. prof. and head of dept, *West Virginia*, 16-17, *prof. and state director vocational agr*, 17- Ass. Agr. Teaching; Soc. Vocational Educ; W. Va. Sci. Soc. Agricultural teaching; horticulture.

Winne, Dr. Charles K(nickerbocker), Jr, 151 Chestnut St, Albany, N. Y. *Medicine*. Sidney Barracks, Nebr, Sept. 30, 77. A.B., Hopkins, 97, M.D., 01. Extern and acting house officer, Hopkins Hosp, 01-03; asst. Bender Hygienic Lab, Albany, N. Y., 03-05; *instr. med. Albany Med. Col.*, 05- Res. physician, Thos. Wilson Sanatorium, Mt. Wilson, Md, summer, 03; attending physician to hospitals of Albany, N. Y., 05- A.A.; Ass. Path. and Bact; Am. Med. Ass. Bacteriology.

Winninghoff, Dr. W(ilford) J(oseph), 730 Grand St, Hoboken, N. J. *Physical chemistry*. Philipsburg, Mont, Nov. 11, 87. B.S., Montana, 10; Ph.D., Mass. Inst. Tech, 14. Physical Soc; Chem. Soc; Electrochem. Soc. Solutions.

Winslow, Arthur, 131 State St, Boston, Mass. *Mining*. Salem, N. C, Aug. 5, 60. B.S., Mass. Inst. Tech, 81. Asst. geologist, Pa. Geol. Surv, 81-83; Ark. Geol. Surv, 87-89; state geologist, Mo, 89-94; *management of mining properties*, 94- Geol. Soc; Min. Eng. Economic geology.

Winslow, Carlile P(atterson), Forest Products Lab, Madison, Wis. *Forestry*. Washington, D. C. Aug. 5, 84. Ph.B., Yale, 05. Construction engineer, Ont. Power Co, 05-07; with U. S. Forest Service, 08-14, asst. director, *Forest Products Lab*, 14-17, *director*, 17- Soc. Foresters; Civil Eng; Ass. Pulp and Paper Indust; Wood Preservers Ass. Properties and uses of wood; wood waste and its by-products.

Winslow, Prof. C(harles)-E(dward) A(mory), Yale Medical School, New Haven, Conn. *Sanitary science*. Boston, Mass, Feb. 4, 77. B.S., Mass. Inst. Tech, 98, M.S., 99; hon. A.M., Yale, 15; D.P.H., N. Y. Univ, 18. Asst. health officer, Montclair, N. J, 98; asst. biol., Mass. Inst. Tech, 99-01, instr., 01-05, asst. prof., 05-10, biologist in charge sanit. research lab. and sewage exp.

sta, 03-10; assoc. prof. biol., Col. City of N. Y., 10-14; *prof. pub. health*, Yale, 15- Asst. in engineer's office, Mass. State Board of Health, summers, 99-02; curator, pub. health, Am. Museum Nat. Hist, 10-; lecturer, Chicago, 10; chairman, N. Y. Commission on Exp. Study of Ventilation, 13-17; director pub. health activities, League of Red Cross Societies, Geneva, 21. Medal, Inst. Polit. and Social Sci, 18. A.A.; Soc. Nat; Soc. Exp. Biol; Pub. Health Ass; Soc. Bact. (pres, 13); Statist. Ass; Mass. Ass. Boards of Health; New Eng. Water Works Ass; Boston Soc. Civil Eng; Boston Soc. Med. Sci. Industrial hygiene; ventilation; effect of mineral salts on the viability of bacteria; bacteriology of water, sewage and ice; sewage purification; etiology and epidemiology of typhoid fever; vital statistics; classification of Coccaceae.

Winston, Isaac, 503 Custom House, New York, N. Y. *Engineering*, *Geodesy*. Tusculumbia, Ala, Sept. 7, 53. Grad. Va. Mil. Inst, 73. Rodman and cement inspector under corps engineers, U. S. A., 76-78; aid and later *hydrographic and geod. engineer, and inspector in charge N. Y. Field Sta*, U. S. Coast and Geod. Surv, 78- Delegate of U. S. Int. Geod. Ass, Paris, 00. A.A.; Wash. Philos. Soc. Precise leveling.

Winston, John R(obinson), U. S. Department of Agriculture, Washington, D. C. *Plant pathology*. Hanover, Va, Jan. 27, 90. B.S., Va. Polytech, 11; fellow, Pa. State, 11-12, M.S., 12. Asst. plant path, N. C. Exp. Sta, 12-13; plant pathologist, Hood River Exp. Sta, 13-16; *pathologist, bur. plant indust*, U. S. Dept. Agr, 16- A.A.; Phytopath. Soc; Bot. Soc. Diseases of fruits.

Wintenberg, W(illiam) J(ohn), Geological Survey, Ottawa, Can. *Archeology*. New Dundee, Ont, May 18, 76. Archeologist, Provincial Museum, Toronto, 02, asst., 03, collaborator, 03-10; *asst. archeologist, Can. Geol. Surv*, 12- Folk-lore Soc; Can. Folk-lore Soc. (gen. sec'y, 09-11); Ont. Archeol. Ass; Ont. Hist. Soc; Ottawa Field Nat. Club. Folk-lore.

Winternitz, Dr. M(ilton) C(harles), 210 Prospect St, New Haven, Conn. **Pathology*. Baltimore, Md, Feb. 19, 85. A.B., Hopkins, 03, M.D., 07, fellow, 07-08. Asst. path, Hopkins, 08-09, instr., 09-10, assoc. and later assoc. prof., 10-17; *prof. Yale*, 17-, *dean, sch. med*, 20- Asst. res. pathologist, Hopkins Hosp, 10-13; assoc. res. pathologist, 13-17; pathologist, City Hosp, Baltimore, 10-17; New Haven Hosp, 17- Major, M.C., 18-19. Int. Cong. Tuber. A.A.; Ass. Path. and Bact; Soc. Exp. Path. The nucleic acid ferments; catalase; peroxidase; lipase; melanotic sarcoma; tuberculosis of the stomach; tuberculous cavities of the liver; the relation of duct changes to chronic pancreatitis; regeneration of the kidney; pathology of war gas; influenza; artificial production of pneumonia.

Winters, Dr. R(hett) Y(oumans), Agricultural Experiment Station, West Raleigh, N. C. *Agronomy*. Society Hill, S. C, March 9, 86. B.S., Clemson, 06; M.S., Florida, 09; Ph.D., Cornell, 12. Asst. bot., Florida, 06-09; plant breeding, Cornell, 10, instr., 11-12; with N. C. Exp. Sta, 12- A.A.; Ass. S. Agr. Workers (sec'y,

- agron. sect, 19). Breeding of farm crops; community improvement of farm seeds.
- Winton, Dr. A(drew) L(incoln)**, Wilton, Conn. **Chemistry*. Westport, Conn., Jan. 26, 64. Ph.B. Yale, 84, Ph.D., 04; Graz. Chemist, Conn. Agr. Exp. Sta, 84-90, in charge anal. lab, 90-07; instr. prox. org. anal, Yale, 02-06; chief, Chicago food and drug lab, bur. chem, U. S. Dept. Agr, 07-14. Chem. Soc; Agr. Chem. (pres, 98). Chemical and microscopical analysis of agricultural products; microscopic investigation of vegetable foods.
- Winton, Prof. W(ill) M(cClain)**, Texas Christian University, Ft. Worth, Tex. *Biology*. Santa Rosa, Calif, April 21, 85. B.S., M.S., Vanderbilt, 08. Prof. biol, Cent. State Nor. Sch, Okla, 08-11; instr. Tex. Col, 11-13; *prof. biol. and geol, Tex. Christian Univ*, 13- Research fellow, Rice Inst, 14-15. A.A.; Soc. Ichthyol. and Herp; Ass. Petrol. Geol. Paleontology; physiology and ecology of Iguanidae; paleontology of northern Texas.
- Wintringham, J(oseph) P(arker)**, 153 Henry St., Brooklyn, N. Y. *Mineralogy*. Brooklyn, May 2, 52. Brooklyn Polytech; Columbia; Wisconsin. *Curator, departments miner. and micros, Brooklyn Inst.* Pres, Brooklyn Inst, 11-13. A.A.; Optical Soc; Elec. Eng; N. Y. Acad; N. Y. Miner. Club; N. Y. Micros. Soc. Optics; crystallography; electricity.
- Wise, Prof. L(ouis) E(lsberg)**, Syracuse University, Syracuse, N. Y. *Chemistry*. New York, N. Y., Jan. 29, 88. A.B., Columbia, 07, Ph.D., 11. Commercial research chemist, 11-12; instr. biochem, Columbia, 12-13; chem, Missouri, 13-14; biochemist, bur. chem, U. S. Dept. Agr, 14, 15, bur. plant indust, 15-18; chemist, Bur. Aircraft Production, 18-19; research chemist, E. I. duPont de Nemours and Co, 19-20; *prof. forest chem, N. Y. State Col. Forestry, Syracuse*, 20-Chem. Soc. (chairman, Univ. Mo. sect, 14). P-aminobenzonitril; Chinawood oil; organic soil constituents; photo-sensitizing dyes from quino- lin; micro-analytic methods.
- Wislocki, Dr. George B(ernays)**, 1306 Linden Ave., Baltimore, Md. *Anatomy*. San Jose, Calif. A.B., Washington (St. Louis), 12; M.D., Hopkins, 16. Asst. anat, Hopkins, 16-17; lieut, M.C., 17-18; Cabot fellow in charge lab. surg. research, Harvard Med. Sch, 18-20; *assoc. anat, Hopkins*, 20- Ass. Anat. Ductless glands; vital dyes; physiology of embryo and fetus.
- Wisner, G(eorge) M(onroe)**, 900 S. Michigan Ave, Chicago, Ill. *Civil engineering*. Detroit, Mich, Feb. 9, 70. B.S. (C.E.), Michigan, 92. In eng. dep't, *Chicago Drainage Canal*, 92-07, chief engineer, 07- Civil Eng; Mech. Eng; West. Soc. Eng. Sewage disposal; trade wastes from stock yards and tanning industries.
- Wissler, Dr. Clark**, American Museum of Natural History, New York, N. Y. **Anthropology, Psychology*. Wayne Co, Ind, Sept. 18, 70. A.B., Indiana, 97, A.M., 99; fellow, Columbia, 00-01, Ph.D., 01. Asst. psychol, Indiana, 95-97; instr. psychol. and educ, Ohio State, 97-99; asst. psychol, Columbia, 99-00; instr. pedag, N. Y. Univ, 01-02; official asst. ethnol, Am. Museum Nat. Hist, 02-05; asst. anthropol, Columbia, 03-04, lecturer, 04-09; *curator ethnol, Am. Museum*
- Nat. Hist*, 05-07, *anthrop*, 07- Ed, anthrop. publications, Am. Museum Nat. Hist, 07-; chairman, div. anthrop. and psychol, Nat. Research Council, 20- A.A. (v. pres, 15); Psychol. Ass; fel. Ethnol. Soc; Anthropol. Ass. (pres, 19); Folk-lore Soc; fel. Am. Geog. Soc; fel. N. Y. Acad. (v. pres, 13). Correlation of mental and physical tests; decorative art and symbolism among the American Indians; ethnology of the Blackfeet and Dakota Indians; the American Indian.
- Withers, Dr. W(illiam) A(lphonso)**, Raleigh, N. C. *Chemistry*. River View, N. C., May 31, 64. A.B., Davidson, 83, A.M., 85, Sc.D., 17; Cornell, 88-89, fellow, 89-90. Asst. chemist, N. C. Exp. Sta, 84-88, chemist, 97-, acting director, 97-99, *prof. chem, N. C. Col*, 89-, v. pres, 16-, *director, summer sch*, 17- Teacher chem. and physics, Peace Inst, Raleigh, 90-93; statist. agent, U. S. Dept. Agr, 95-02, 05-15; state chemist, N. C., 97-98; mem. exec. committee, Pure Food and Drug Cong, 98. A.A.; Chem. Soc. (pres, N. C. sect, 01); Soc. Chem. Indust; Agr. Chem. (pres, 09); Ass. Agr. Col. (chairman, committee on pure food legislation, 99-05); Soc. Prom. Agr. Sci; N. C. Acad. (pres, 17). Food adulteration; nitrification; cottonseed.
- Withrow, Prof. James R(enwick)**, Ohio State University, Columbus, Ohio. **Chemistry*. Philadelphia, Pa, Aug. 29, 78. B.S., Pennsylvania, 99, Ph.D., 05. Chemist, Barrett Mfg. Co, Phila. 99-00, in charge test. and research lab. and benzol and light-oil departments, 00-03; asst. instr. and instr. chem, Illinois, 05-06; asst. prof, *Ohio State*, 06-09, assoc. prof, 09-11, *prof. 11-* Mem. Naval Consulting Board, Ohio; consulting chem. engineer, U. S. Bur. Mines, 17; C.W.S., 17-18; mem. joint committee on eng. educ, Carnegie Foundation for Adv. of Teaching; ed, chem. eng. sect, 'Am. Year Book,' 14- A.A.; Chem. Soc; Electrochem. Soc; Chem. Eng. (director, mem. chem. educ. committee, 6 years); Miner. Soc; Ass. Eng. Societies; Eng. Educ. (mem. committee, 11); Ass. Prof; Phila. Miner. Club (pres, 00); Ohio Acad. Rapid analysis of halids; electrolytic precipitation of gold, silver and copper; amalgams; chlorates and hypochlorates; brines; sulphur dioxide; methane; syrup from sugar beets; sugar refining; petroleum; wood distillation; sophistication of acids; insecticides; paints; industrial chemistry; electrochemistry.
- Witmer, Prof. Lightner**, University of Pennsylvania, Philadelphia, Pa. **Psychology*. Philadelphia, June 28, 67. A.B., Pennsylvania, 88, 88-91; Ph.D., Leipzig, 92. Asst. exp. psychol, *Pennsylvania*, 90-92, lecturer, 92-94, asst. prof, 92-04, *prof. psychol*, 04- Lecturer psychol, Bryn Mawr, 96-98; psychologist, Pa. Training Sch. for Feeble Minded Children, Elwyn, Pa. 96-; Haddonfield Training Sch, 02; prof. psychol, Lehigh, 04-06. A.A.; Psychol. Ass; Psychopath. Ass; Soc. Sci. Educ; Philos. Soc; Phila. Acad. Psychological esthetics; comparative tests and measurements; the abnormal child; examination and pedagogical treatment of backward children; vocabulary and ideas of school children; the knee-jerk; comparative psychology.

- Witt, Dr. J(oshua) C(hitwood)**, University of Pittsburgh, Pittsburgh, Pa. *Chemistry*. Connorsville, Ind., Aug. 5, 84. A.B., Butler, 08; B.S., Chicago, 09; M.S., Pittsburgh, 12, Ph.D., 15. Director of lab, Robert Hunt and Co, 10-15; chief of sect, Bur. Science, Manila, P. I., 15-17; tech. director, Rizal Cement Co, 17. A.A.; Chem. Soc.; Chem. Eng. Oxidation and reduction reactions; cement ceramics; galvanized iron.
- Wittenborg, Dean A(ugust) H(ermsmeier)**, University of Tennessee School of Medicine, Memphis, Tenn. *Anatomy*. Matorf, Germany, Sept. 4, 83. Grad, Kaiser Wilhelm Gymnasium, Hanover; M.D., Tennessee, 10. *Prof. anat. Tennessee, 12-; dean, 17- Ass. Anat. Gross anatomy.*
- Witzemann, Dr. Edgar J(ohn)**, 321 S. Ridgeland Ave, Chicago, Ill. *Chemistry*. Decatur, Ill., July 13, 84. A.B., Millikin, 07; fellow, Ohio State, 07-09, A.M., 09, Ph.D., 12. Instr. chem, Ohio State, 09-12; *chemist, Sprague Mem. Inst, Chicago, 12- A.A.; Chem. Soc. Synthetic organic chemistry; colloid chemistry; organic oxidation.*
- Wodehouse, R(oger) P(hilip)**, 10 Stone St, Yonkers, N. Y. *Biological chemistry*. Toronto, Ont., Dec. 9, 89. Upper Canada, 02-07; B.A., Toronto, 13; A.M., Harvard, 14, 15-16. Teaching fellow zool, Toronto, 13; protein chemist to J. L. Goodale, Boston, Mass, 16; research chemist, Peter Bent Brigham Hosp, Boston, 16-17; *chemist, Arlington Chem. Co. A.A.; Chem. Soc; Bot. Soc. Plant physiology; permeability; anaphylaxis.*
- Wodsdalek, Prof. J(erry) E(dward)**, University of Idaho, Moscow, Idaho. *Zoology*. Keweenaw, Wis., Aug. 5, 84. Ph.B., Wisconsin, 10, Ph.M., 11, fellow, 11-13, Ph.D., 13. Asst. zool, Wisconsin, 10-11, *prof. zool. and entom. and head of dept, Idaho, 13-; head of div, Exp. Sta, 18- Instr. zool. and entom, Wisconsin, summers, 11, 12. A.A.; Soc. Nat; Soc. Zool; Ecol. Soc; Micros. Soc. Animal behavior; cytology; embryology; physiology of insects; sex-determination; social hygiene.*
- Woglom, Prof. William H(enry)**, 1145 Amsterdam Ave, New York, N. Y. *Pathology*. Brooklyn, N. Y., Sept. 13, 79. M.D., Columbia, 01. Asst. path, L. I. Col. Hosp, 07-08; pathologist, dept. health, N. Y. City, 08-09; asst. cancer research, Columbia, 09-12; asst. to director, Imp. Cancer Research Fund, London, 11-12; asst. *prof. cancer research, George Crocker Fund, Columbia, 12-17, assoc. prof, 17- Asst. pathologist, St. Luke's Hosp. A.A.; Ass. Cancer Research (sec'y and treas, 17-); Am. Med. Ass.*
- Woglum, R(ussell) S(age)**, 824 N. Curtis Ave, Alhambra, Calif. *Entomology*. North Bay, N. Y., Aug. 3, 82. A.B., Cornell, 04, M.S.A., 05. Asst. and acting state entomologist, N. C., 05-07; special agent, bur. entom, U. S. Dept. Agr, 07-12, entom. asst, 12-18, *entomologist, 18-20; Calif. fruit growers exchange, 20- Introduced hydrocyanic acid gas fumigation into Spain, 10; citrus white fly investigations, India and the Orient, 10-11. A.A.; Ass. Econ. Entom; Entom. Soc; Wash. Entom. Soc. Entomology; use of hydrocyanic acid gas in fumigation.*
- Wohlleben, Prof. W(illiam) J(oseph)**, University of Dayton, Dayton, Ohio. *Organic chemistry*. Chicago, Ill., Jan. 19, 76. B.S., St. Mary's (Dayton), 02; A.M., Freiburg, 07, Ph.D., 08. Instr. chem, Saint Peter and Paul High Sch, St. Louis, Mo., 00-04; *head, dept. chem, Dayton, 09- A.A.; Chem. Soc; Ass. Math. Teachers. Halogen derivatives of the phenols.*
- Wolbach, Dr. S(imeon) Burt**, Harvard Medical School, Boston, Mass. **Bacteriology, Pathology*. Grand Island, Nebr., 80. Lawrence Sci. Sch., Harvard, 97-99, M.D., Harvard, 03. Second asst. path, Boston City Hosp, 03-04, first asst, 04-05; asst, Harvard Med. Sch, 05-06, instr, 06-08; director, Bender Hygienic Lab, Albany, N. Y., 08-09; adj. prof. bacter. and path, Albany Med. Col., 08-09; lecturer path, and director, histol. lab, McGill, 09-10; asst. prof. bacter, *Harvard Med. Sch, 10-14, assoc. prof. path. and bacter, 14- Pathologist, L. I. Hosp, Boston, 05-07; Peter Bent Brigham Hosp; director, path. lab, Montreal Gen. Hosp, 09-10; Typhus Research Commisison, Warsaw, Poland. Am. Physicians; Ass. Path. and Bact; Soc. Exp. Biol; Ass. Tuber; Ass. Cancer Research (sec'y-treas, 11-14); Soc. Exp. Path; Am. Acad; Boston Soc. Med. Sci. Human and bovine tubercle bacilli and specificity of their tuberculins; cutaneous blastomycosis and coccidioidal granuloma; herniae of cerebrum and cerebellum due to ultra-cranial pressure; tumors; histogenesis of X-ray carcinoma; Rocky Mountain spotted fever; typhus fever.*
- Wolcott, E(dson) R(ay)**, 917 Crenshaw Boulevard, Los Angeles, Calif. *Physics*. Sharon, Wis., April 22, 77. B.S., Wisconsin, 00, fellow, 01-02; Berlin, 02-03; Chicago, 04. Asst. physics, Wisconsin, 00-01; asst. prof., Colo. Sch. of Mines, 03-04, prof. physics and electrometal, 04-07; consulting engineer, Chicago, 08-13; *research engineer, West. Precipitation Co, 14- Medal, Science Club, Wisconsin, 00. A.A.; Physical Soc; Chem. Soc. Coherers; alternating currents; radioactivity; fixation of nitrogen; electrical precipitation of dust and fume; effects of dielectrics on sparking voltage.*
- Wolcott, George N(orton)**, Insular Experiment Station, Rio Piedras, P. R. *Entomology*. Yorkville, N. Y., July 12, 89. B.S.A., Cornell, 09, M.S.A., 12, 19; Illinois, 16-17. Agent and expert, bur. entom, U. S. Dept. Agr, 10-12; traveling entomologist, Board of Commissioners of Agr, P. R., 12-14, *entomologist, P. R. Exp. Sta, 14-16, 19- With A.E.F., 17-19. A.A.; Ass. Econ. Entom; Ecol Soc. Sugar-cane insects.*
- Wolcott, Dr. Rob(ert) H(enry)**, University of Nebraska, Lincoln, Nebr. *Zoology*. Alton, Ill., Oct. 11, 68. B.L., Michigan, 90, B.S., 92, M.D., 93; A.M., Nebraska, 95. Asst. zool, *Nebraska, 94-95, instr, 95-98, adj. prof, 98-02, asst. prof, zool. and demonstrator anat, 02-03, assoc. prof. zool. in charge, anat. lab, 03-05, prof. anat, 05-09, chairman dept. and prof. zool, 09-, acting dean, col. med, 09-14. With Biol. Surv, Mich. Fish Commission, summers, 93-94; in charge biol, Missouri, summers, 01, 04, 05, 07. A.A.; Soc. Zool; Ecol. Soc; Wilson Ornith. Club; mem. Ornith. Union; Entom. Soc; Micros. Soc. (past sec'y); Nebr. Acad. (past pres);*

- Mich. Acad; Nebr. Ornith. Union (past pres). Michigan and Nebraska Lepidoptera; ornithology; Acarina, especially Hydrachnidæ; faunal distribution, especially in Nebraska; color variation in the tiger-beetles of Nebraska; economic zoology.
- Wold, Dr. P(eter) I(rving)**, Union College, Schenectady, N. Y. *Physics*. S. Dak. Nov. 27, 81. B.S. Oregon, 01, E.E. 02; White fellow, Cornell, 14-15, Ph.D. 15. Instr. physics, Oregon, 00-03; examiner in charge radio signaling, Patent Office, 03-05, 08-10; instr. physics, Cornell, 05-08; head, dept. physics, Am. Indemnity Co., Peking, China, 10-14; physicist, West. Elec. Co., 15-20; head, dept. physics, Union, 20- Adviser patent matters, Sig. C, U.S.A.; mem. board instr, Sig. E.R.C. A.A.; Physical Soc. Radio communication.
- Wolesensky, Dr. Edward**, Edgewood Arsenal, Edgewood, Md. *Chemistry*. Crete, Jan. 19, 82. B.S. Doane, 03; A.M. Wisconsin, 06, Ph.D. 09. Instr. chem, Iowa, 09-16; research chemist, Nat. Aniline and Chem. Co., 16-18; Bur. Mines, and C.W.S., 18-19; Barrett Co., 19-20; *Edgewood Arsenal*, 20- Chem. Soc. General, inorganic and industrial organic chemistry; dyestuffs and intermediates; coal-tar products.
- Wolf, Dr. Frederick A(dolphus)**, West Raleigh, N. C. *Botany*. Odell, Nebr. June 25, 85. A.B. 07; A.M. 08; fellow, Cornell, 10-11, Ph.D. 11. Instr. Texas, 08-10; plant pathologist, Ala. Exp. Sta., 11-15; N. C. Exp. Sta., 16- A.A.; Bot. Soc.; Phytopath. Soc. Plant pathology; mycology.
- Wolf, Prof. Harry J(ohn)**, 42 Broadway, New York, N. Y. *Mining engineering*. Philadelphia, Pa. Feb. 6, 81. E.M. Colo. Sch. Mines, 03, M.S. 13. Assayer, chemist, mining engineer, elec. engineer, supt. and director, various mines and concerns, 02-12; prof. mining, Colo. Sch. Mines, 12-13, prof. and head of dept, 14-18; assoc ed, 'Eng. and Mining Jour,' 19; consulting engineer, 20- A.A.; Min. and Met. Soc.; Min. Eng.; Electrochem. Soc.; Eng. Educ.; assoc. Elec. Eng.; Colo. Sci. Soc.; Colo. Metal Min. Ass. Chlorin Cells; chlorination of sulphid ores; heat of formation; metal and coal mining; mine management; mine valuation.
- Wolfe, Dr. Clyde (Lynne Earle)**, 401 S. Chester Ave, Pasadena, Calif. *Mathematics*. Morrison, Ill. April 9, 85. B.S. Occidental, 06, M.S. 07; A.M. Harvard, 08; Ph.D. California, 19. Acting prof. physics, Occidental, 12-16, assoc. prof. math, 16-17; teaching fellow, California, 17-19; dean, Junior Col. Santa Rosa, Calif. 19-20; asst. prof. math, Calif. Inst. Tech., 20- Math. Soc.; Math. Ass. Theory of numbers.
- Wolfe, Prof. Harold E(ichholtz)**, Bloomington, Ind. *Mathematics*. North Manchester, Ind. June 6, 91. A.B. Indiana, 13, fellow, 13-14, 16-18, A.M. 14, Ph.D. 18. Instr. math, South Dakota, 14-16; instr. Indiana, 19, asst. prof., 19- Instr. math, F. A. Cent. Officers' Training Sch., 18. A.A.; Math. Ass.
- Wolff, Prof. Frank A(lfred)**, Bureau of Standards, Washington, D. C. **Physics, Electrical engineering*. Baltimore, Md. April 8, 71. A.B. Hopkins, 90, fellow, 92-93, Ph.D. 93; Leipzig, 94. Prof. physics and elec. eng. George Washington, 95-04, elec. eng. 04-08; assoc. physicist, Bur. Standards, 01- Physicist, div. of soils, U. S. Dept. Agr.; examiner, Civil Service Commission; verifier, Office Standard Weights and Measures. Assoc. mem. Int. Committee on Elec. Units and Standards. A.A.; Physical Soc.; assoc. Elec. Eng.; Electrochem. Soc.; Wash. Acad; Wash. Philos. Soc. Effect of magnetism on chemical action; the verification of electrical standards and electrical measuring apparatus; the accuracy of Ohm's law; standard cells; the international electrical units.
- Wolff, Prof. John E(liot)**, University Museum, Cambridge, Mass. **Mineralogy, Petrography*. Montreal, Can. Nov. 21, 57. A.B. Harvard, 79, Ph.D. 89; Heidelberg, 84-85. Asst. geologist, U. S. Geol. Surv. 85-04; instr. petrog. Harvard, 86-92, asst. prof. 92-95, prof. petrog. and miner. and curator, miner. museum, 95- A.A.; Geol. Soc.; Am. Acad; Boston Soc. Nat. Hist. Geology and petrography of Green Mountains, Vermont, and of New Jersey and Montana.
- Wolkoff, Dr. Michael Ivanovitch**, Urbana, Ill. *Agronomy*. Tver, Russia, Sept. 13, 86. B.S. Mich. Agr. Col. 15, M.S. 16; Ph.D. Rutgers, 18. Assoc. soil fertility, Illinois, 18- Chem. Soc. Soil fertility.
- Woll, Prof. F(ritz) W(ilhelm)**, University Farm, Davis, Calif. *Agriculture*. Bergen, Norway, May 23, 65. B.S. Royal Frederiks Univ, Christiania, 82, Ph.B. 83; M.S. Wisconsin, 86, Ph.D. 04. Asst. chemist, Wis. Exp. Sta. 87-93, chemist, 93-13, asst. prof. agr. chem. Wisconsin, 93-04, assoc. prof. 04-06, prof. 06-13; animal nutrition, California, 13- Mem. int. jury, Panama-Pacific Expos. 15. A.A.; Soc. Prom. Agr. Sci.; Agr. Chem. (pres. 10); Soc. Animal Production; Wis. Acad. Chemistry; dairy and agricultural science; animal husbandry.
- Wollstein, Dr. Martha**, Box 507, Woodmere, L. I., N. Y. *Bacteriology*. New York, N. Y. Nov. 21, 68. M.D. Woman's Med. Col. N. Y. 89. Demonstrator histol. Woman's Med. Col. N. Y. 90-93, path. 93-99; assoc. Rockefeller Inst. 06- Pathologist, Babies Hosp. 92-; trustee, N. Y. Infirmary for Women and Children. Soc. Bact.; Ass. Path. and Bact.; Soc. Exp. Biol.; Harvey Soc.; N. Y. Acad. Med. Immunology; experimental pneumonia and parotitis.
- Wolman, Abel**, 16 W. Saratoga St. Baltimore, Md. *Sanitation*. Baltimore, June 10, 92. A.B. Hopkins, 13, B.S.E. 15. Div. engineer, Md. State Dept. Health, 15- Pub. Health Ass.; Water Works Ass.; Ass. Eng.; Statist. Ass. Water purification; sewage treatment.
- Wood, Prof. Alfred Conard**, 2035 Walnut St. Philadelphia, Pa. *Surgery*. Hatboro, Pa. June 17, 63. Ph.G. Phila. Col. Pharmacy, 85; M.D. Pennsylvania, 88. Asst. prof. surg. Pennsylvania, 08- Surgeon, Univ. Phila. Gen. Howard and St. Timothy's Hospitals. A.A.; Surg. Ass.; Am. Med. Ass.; Ass. Genito-Urinary Surg.; Phila. Acad. Surg.
- Wood, Prof. Arthur J(ulius)**, State College, Pa. *Mechanical engineering*. Newark, N. J. Sept. 3, 74. M.E. Stevens, 96; M.S. Pa. State, 16. Assoc. ed, 'Railroad Gazette,' N. Y. City, 96-00; instr. mech. eng. Worcester, 00-02; prof. mech. and elec. eng. Delaware, 02-04; asst. prof. exp. eng. Pa. State, 04-08, assoc. prof. 08-18,

- prof. railroad and mech. eng.*, 18-, in charge, *eng. exp. sta.*, 20- A.A.; Mech. Eng.; Eng. Educ.; Refrig. Eng.; R. R. Eng.; Eng. Soc. of Pa. Transmission of heat in building and insulating materials; locomotive operation; hydraulic rams; properties of cold-drawn steel; acceleration of trains; engine heat losses; lubrication; specific heat of anhydrous liquid ammonia; properties of coals of Pennsylvania.
- Wood, Prof. Casey A(lbert)**, 7 W. Madison St., Chicago, Ill. *Ophthalmology*. Wellington, Ont., Nov. 21, 56. C.M., M.D., Bishop's Col. (Can), 77, hon. D.C.L., 98; M.D., C.M., McGill, 05; Berlin, Vienna, Paris and London, two years. Prof. chem, Bishop's Col. (Can), 78-84; clin. ophthal., Illinois, 99-06, *emer. prof. ophthal.*; head prof. ophthal., Northwestern, 06-08; col. M.R.C. A.A.; Am. Acad. Ophthal. (pres); Am. Acad. Med. (pres); assoc. mem. Ornith. Union; fel. London Zool. Soc. Anatomy and physiology of the visual apparatus; anatomy and physiology of the eyes of birds.
- Wood, Dr. Edward J(enner)**, 201 Chestnut St., Wilmington, N. C. *Medicine*. Wilmington, July 12, 78. B.S., North Carolina, 99; M.D., Pennsylvania, 02; diploma in trop. med.; Royal Col. Physicians and Surg., 20. Asst. clin. med., Guy's Hosp., London, 19-20. Am. Physicians; Soc. Trop. Med.; fel. Royal Soc. Trop. Med. and Hygiene. Tropical medicine; pellagra; sprue; malaria; nervous diseases.
- Wood, Dr. Elvira**, 8 Chamberlain Terrace, Waltham, Mass. *Paleontology*. West Gouldsborough, Maine. Mass. Inst. Tech.; A.M., Columbia, 08, Ph.D., 10. Instr. paleont., Mass. Inst. Tech., 99-03; asst. geol., U. S. Geol. Surv., 03-07; curator paleont., Columbia, 10-11; asst. curator, museum comp. zool., Harvard, 11-14. Paleontology of Lancaster, N. Y.; Crinoidea; phylogeny of Gastropoda.
- Wood, Dr. F(rancis) C(arter)**, 853 Seventh Ave., New York, N. Y. *Pathology*. Columbus, Ohio, Dec. 30, 69. B.S., Ohio State, 91; M.D., Columbia, 94; Berlin and Vienna, 96. Asst. *clin. path.*, Columbia, 96-98, instr., 98-04, adj. prof., 04-06, *prof.*, 06- Director, Crocker Cancer Research Fund, 12- Intern, St. Luke's Hosp., 94-96; pathologist, 97-, director of laboratories, 10- A.A.; Am. Physicians; Soc. Exp. Biol.; Ass. Cancer Research; Ass. Path. and Bact.; N. Y. Path. Soc. (sec'y, 01-08, ed., 'Proc.', 02-09, treas., 11); Harvey Soc. (sec'y, 08-10). Pathology of endothelial tumors; blood regeneration after poisoning; precipitins produced by immunizing animals; effect of physical agents on bacteria; experimental cancer.
- Wood, Harry O(scar)**, Cosmos Club, Washington, D. C. *Seismology*. Gardiner, Maine, July 28, 79. A.B., Harvard, 02, A.M., 04. Asst. miner. and petrog., Harvard, 02-04; instr. miner. and geol., California, 04-12; research assoc. seismol., Hawaiian Volcano Observatory, Mass. Inst. Tech., 12-17; *acting and asst. sec'y*, Nat. Research Council, 19-; *sec'y*, Am. Geophys. Union, 19- Capt., E.R.C. and engineers. A.A.; Seismol. Soc. (third v. pres., 17-). Crystallography; seismic geology; vulcanology; general physical geology.
- Wood, Prof. Harry P(eterman)**, 471 Van Buren St., Milwaukee, Wis. *Electrical engineering*. Muney, Pa., July 18, 78. B.S.(E.E.), Pa. State, 99, E.E., 03. Engineer, J. G. White and Co. and N. Y. Edison Co., 99-02; asst. *prof. elec. eng.*, Pa. State, 02-06; Illinois, 06-07; *prof.*, Ga. Tech., 07-17; *exten. dir.*, Wisconsin, 17- Elec. Eng.
- Wood, Dr. Horatio C(harles), Jr.**, University of Pennsylvania, Philadelphia, Pa. *Pharmacology*. Philadelphia, Feb. 26, 74. Pennsylvania, 90-92, M.D., 96; Bern, 97-98. Demonstrator pharmacodynamics, Pennsylvania, 98-07, assoc. *prof. pharmacol.*, 07-10; *prof. pharmacol. and therapeut.*, Medico-Chirurg. Col. Phila., 10-17; *Pennsylvania*, 17- Mem. revision committee, U. S. Pharmacopœia, 10- A.A.; Soc. Pharmacol.; Therapeut. Soc.; Pharmaceut. Ass.; Am. Med. Ass. (chairman, sect. pharmacol.); Phila. Col. Physicians. Origin of the Traube waves; physiology of the pulmonary circulation; pharmacology of ether and chloroform, lecithin, ergot, apocynum, cannabium, veratrum, aspidosperm; rheumatic fever; caffeine; digitalis.
- Wood, Norman A(sa)**, University of Michigan, Ann Arbor, Mich. *Ornithology*. Ann Arbor, Aug. 19, 57. High sch. Taxidermist, *museum zool.*, Michigan, 95-11, *curator of birds*, 11- Mem. numerous Univ. of Mich. Museum ornith. expeditions to various parts of Mich. Mem. Ornith. Union; Cooper Ornith. Club. Birds and mammals of Michigan.
- Wood, Prof. R(obert) W(illiams)**, Johns Hopkins University, Baltimore, Md. **Experimental physics*. Concord, Mass., May 2, 68. A.B., Harvard, 91; Hopkins, 91-92; Chicago, 92-94; Berlin, 94-96; LL.D., Clark, 09; Birmingham, 13. Instr. physics, Wisconsin, 97-98, asst. *prof.*, 98-00; *prof. exp. physics*, Hopkins, 01- Thomas Young lecturer, London Optical Soc., 10; Ernest Kempton Adams research fellow, Columbia, 12; Guthrie lecturer, London, 14; major, Sig. O.R.C., A.E.F. Rumford medal, Am. Acad., 09; gold medal in physics, Soc. Ital. della Sci., Rome, 18; medals from London Soc. Arts, Franklin Inst., etc. Nat. Acad.; Physical Soc.; Am. Acad.; for. mem. Royal Soc.; cor. mem. British Ass.; hon. mem. Royal Micros. Soc.; London Optical Soc.; cor. mem. Göttingen Königl. Gesell. Physical optics.
- Wood, Dr. Ruth G(oulding)**, Crescent St., Northampton, Mass. *Mathematics*. Pawtucket, R. I., Jan. 29, 75. B.L., Smith, 98; fellow, Yale, 00-01, Ph.D., 01; Göttingen, 08-09. Instr. *math.*, Mt. Holyoke, 01-02; *Smith*, 02-09, assoc. *prof.*, 09-14, *prof.*, 14- Math. Soc. Non-Euclidean geometry.
- Wood, Dr. Thomas D(enison)**, Columbia University, New York, N. Y. *Physical education*. Sycamore, Ill., Aug. 2, 65. A.B., Oberlin, 88, A.M., 91; M.D., Columbia, 91. *Prof. hygiene and org. training*, Stanford, 91-01; *physical educ.*, Teachers Col., Columbia, 01- Mem. Int. Commission Physical Educ., 10. A.A.; Physical Educ. Ass.; Am. Med. Ass.; Nat. Council Educ. (chairman, committee on health problems in educ.). School hygiene.
- Wood, Prof. William P(latt)**, 1340 Wilmot St., Ann Arbor, Mich. *Metallurgy*. Ypsilanti,

- Mich, May 26, 88. A.B., Michigan, 12, B.Ch.E, 14, M.S., 16. Instr. and asst. prof. chem, Mich. Agr. Col., 14-18; *asst. prof. chem. eng., Michigan*, 19- Consulting chem. engineer, Lansing Gas Co., 17; supervisor materials, Bur. Aircraft Production, 18-19. Chem. Soc. Metallurgy of iron and steel; corrosion of lead sheathing; corrosion and rust-proofing of iron and steel; shrinkage of steel under heat treatment.
- Woodbridge, Prof. S(amuel) Homer**, Boylston Chambers, Boston, Mass. *Sanitary engineering*. Perth Amboy, N. J., Dec. 26, 48. A.B., Williams, 73; Mass. Inst. Tech., 79. Asst. physics, *Mass. Inst. Tech.*, 83-84, instr., 84-95, lecturer *heating and ventilation*, 84-90, asst. prof., 95-00, *assoc. prof.*, 00- Consulting engineer, Nat. Cathedral, Washington, D. C. A.A.; Pub. Health Ass; Health League; Am. Civic Ass. Ventilation.
- Woodburn, Prof. W(illiam) L(ogan)**, 1138 Oak Ave, Evanston, Ill. *Cytology*. Bloomington, Ind., Nov. 20, 82. A.B. Indiana, 08. A.M., 09, Ph.D., 12. Teaching fellow *bot.*, Indiana, 07-10; instr., *Northwestern*, 10-13, asst. prof., 13-20, *assoc. prof.*, 20- A.A.; Bot. Soc.; Bot. Cent. States. Spermatogenesis in liverworts and mosses.
- Woodbury, C(harles) G(oodrich)**, National Canners Association, Washington, D. C. *Horticulture*. Portland, Mich., April 30, 84. B.S., Mich. Agr. Col., 04, M.S., 06. Asst. horticulturist, Purdue Exp. Sta., 06-08, *assoc.*, 08, asst. prof. hort., Purdue, 09-11, head, dept. hort., 11-17, director, Exp. Sta., 17-20; *director, bur. raw products research, Nat. Canners Ass.*, 20- A.A.; Soc. Hort. Sci.; Pomol. Soc.; Ind. Hort. Soc. (sec'y and v. pres). Pomology.
- Woodbury, Dwight A(ugustus)**, Ohio State University, Columbus, Ohio. *Physics*. Beverly, Mass., Jan. 11, 87. B.S., Maine, 09; M.S., Dartmouth, 11. Asst. *physics*, Dartmouth, 09-11; *instr. Ohio State*, 11- Physical Soc. Effect of magnetic field on alloys.
- Woodcock, Prof. Edward F(red)**, East Lansing, Mich. *Botany*. Pittsford, Vt., Feb. 13, 85. B.S., Vermont, 09; A.M., Yale, 12, fellow, 13, Ph.D., 17. Head, dept. biol., Juniata, 09-10; asst., Yale, 10-12; instr. *bot.*, West Virginia, 13-14; *Mich. Agr. Col.*, 14-17, *asst. prof.*, 17- Field asst., plant disease surv., summers, 18, 19. A.A.; Bot. Soc.; Mich. Acad. Plant morphology; development and germination of seeds.
- Woodhull, Prof. John F(rancis)**, Teachers College, Columbia University, New York, N. Y. *Physical science*. Westport, N. Y., July 2, 57. A.B., Yale, 80; Ph.D., Columbia, 99. Teacher, high sch., Bloomfield, N. J., 81-82; principal, Chicopee, Mass., 83-85; teacher science, State Nor. Sch., New Paltz, N. Y., 86-87; *prof. physical sciences, Teachers Col., Columbia*, 88- Lecturer, Marthas Vineyard Summer Sch., Nat. Summer Sch. and Chautauque, 87-94. A.A.; fel. N. Y. Acad.; N. Y. State Sci. Teachers Ass. (pres, 06); N. Y. Physics Club (pres, 07). The teaching of physical science in secondary schools.
- Woodman, Prof. A(lpheus) G(rant)**, Massachusetts Institute of Technology, Cambridge, Mass. *Chemistry*. Kingston, Mass., Oct. 30, 73. B.S., Mass. Inst. Tech., 97. Asst. chem., *Mass. Inst. of Tech.*, 97-00, instr., 00-08, asst. prof. *food anal.*, 08-14, *assoc. prof.*, 14- Asst. chemist, State Board of Health, Mass.; scientific asst., U. S. Dept. Agr., 06-07. A.A.; Chem. Soc.; Am. Acad. Water purification; sewage disposal; food economy and analysis.
- Woodman, Prof. J(oseph) Edmund**, New York University, New York, N. Y. *Geology*. Newbury, Mass., July 3, 73. B.S., Harvard, 96, A.M., 00, Sc.D., 02. Asst. geol., Harvard and Radcliffe, 96-02; asst. prof. geol. and miner., Dalhousie, 02-06, *prof.*, 06-09; *geol. and director, geol. museum, N. Y. Univ.*, 09- Instr., summer sch., Harvard, 97-05; geologist, N. S. Dept. Mines, 98; geologist in charge investigations of iron resources of N. S., Dom. Dept. Mines, 06-10; *prof. geol. Vassar*, 19-20. A.A.; Geol. Soc.; Min. Eng.; Meteorol. Soc.; Am. Geog. Soc.; N. Y. Acad. (v. pres, sect. 11); Wash. Acad. Physiography of seacoasts; glacial history of maritime provinces; gold-bearing rocks, iron ores and metallurgical limestones of Nova Scotia; history of the coal basins of Nova Scotia; geology and origin of bedded iron ores; density of iron ores and limestones, and its relation to other properties; origin and history of rocks of southern New York.
- Woodman, Prof. L(eon) E(lmer)**, Missouri School of Mines, Rolla, Mo. *Physics*. Claremont, N. H., Nov. 14, 77. A.B., Dartmouth, 99, A.M., 02; fellow, Columbia, 07-08, Ph.D., 10. Asst. *physics*, Dartmouth, 01-02; instr., high sch., Nashua, N. H., 02-04; Maine, 04-05; asst., Columbia, 05-08; asst. prof., Maine, 08-12, *assoc. prof.*, 12-19; *prof.*, 19; *Mo. Sch. of Mines*, 19- A.A.; Physical Soc. X-ray analysis of crystals.
- Woodring, Dr. Wendell P(hillips)**, U. S. Geological Survey, Washington, D. C. *Geology*. Reading, Pa., June 13, 91. A.B., Albright, 10; fellow, Hopkins, 15-16, Ph.D., 16. Geologic aid, U. S. Geol. Surv., 13-15, junior geologist, 15-16; research asst., Hopkins, 16-19; *assoc. geologist, U. S. Geol. Surv.*, 19- Geologist, Sinclair Cent. Am. Oil Corp., 16-17. A.A.; Paleont. Soc.; Wash. Geol. Soc. Invertebrate paleontology; Miocene Mollusca.
- Woodrow, Prof. Herbert**, University of Minnesota, Minneapolis, Minn. *Psychology*. Chillicothe, Ohio, Feb. 25, 83. A.B., Michigan, 04; Paris, 04-05; Princeton, 07; Ph.D., Columbia, 09. Lecturer exp. psychol., Barnard, Columbia, 07-09; instr., asst. prof. and later *assoc. prof. psychol., Minnesota*, 09- A.A.; Psychol. Ass. Association, learning and intelligence in children; measurement of rhythm, attention and sensation.
- Woodrow, Prof. J(ay) W(alter)**, University of Colorado, Boulder, Colo. *Physics*. Luverne, Minn., April 3, 84. A.B., Drake, 07; Rhodes scholar, Oxford, 07-10, B.A., 10; Illinois, 11-12; fellow, Yale, 12-13, Ph.D., 13. Instr. physics, Illinois, 10-12; research engineer, West. Elec. Co., 13-14; *instr. physics, Colorado*, 14-15; asst. prof., 15-18; *prof.*, 18- A.A.; Physical Soc. Photoelectricity; application of conjugate functions to physical problems; columnar ionization by alpha-particles; high vacua.

- Woodruff, E(mer) G(rant)**, Oklahoma Producing and Refining Corporation, Tulsa, Okla. *Geology*. Bradford Co, Pa, 72. B.S., Nebraska, 01, fellow, 03-04, A.M., 04; Austin fellow, Harvard, 06-07. Instr. miner, Oklahoma, 04, in charge, dept. geol, 05; asst, *U. S. Geol. Surv.*, 04, 05, *geologist*, 07-; chief *geologist*, Texas Co. 14-18; *Okla. Producing and Refining Co.* Wash. Geol. Soc; Nebr. Acad. Coal deposits of Wyoming and Montana; sulphur deposits of Wyoming; the coal and oil fields of the Wind River Basin, Wyoming; oil resources of Utah and Colorado.
- Woodruff, Dr. E(ugene) C(yrus)**, State College, Pa. *Physics*. St. Clair, Mich, April 8, 71. B.S., Michigan, 94, M.S., 96, Ph.D., 00. Teacher science, high sch, Ludington, Mich, 94-95; Coldwater, Mich, 96-97; Chicago, 97-98; chem, Mont. State Col, 00-01; science, high sch, La Grange, Ill, 01-03; physics, Lakeview High Sch, Chicago, 03-04; *prof. physics and elec. eng*, James Millikin, 04-13; *elec. eng*, Pa. State, 13- A.A.; Elec. Eng; Am. St. and Interurban Ry. Ass; Cent. Ass. Sci. and Math. Teachers (treas, 02-04). Organic color reactions with nitric acid; elasticity of metals and temperature; tuning-forks; dissociation in gas batteries; stroboscopic oscillograph; automatic control of electric cars; electrical control of motor cars.
- Woodruff, Frank M(orley)**, Chicago Academy of Sciences, Lincoln Park, Chicago, Ill. *Ornithology*. Leavenworth, Kans, July 17, 67. High sch. Asst. biol, Cook Co. Nor. Sch, 90; ornithologist, Columbian Expos, 93; *curator*, *Chicago Acad*, 95- Assoc. Ornith. Union; Cooper Ornith. Club; Wilson Ornith. Club; Mus. Ass; Ill. Acad; Ill. Audubon Soc. (director); Chicago Acad. (sec'y, ornith. sect). Ornithology; birds of the Chicago area.
- Woodruff, Prof. Lorande Loss**, Yale University, New Haven, Conn. **Zoology*. New York, N. Y, July 14, 79. A.B., Columbia, 01, A.M., 02, Ph.D., 05; hon. A.M., Yale, 15. Asst. biol, Williams, 03-04, instr, 04-07; *biol. Yale*, 07-09, asst. prof, 09-15, *prof*, 15- Instr. zool, Woods Hole, 05-07, *embryol*, 08-14; consulting physiologist, C.W.S., 18-19. A.A.; Soc. Nat; Soc. Zool. (sec'y-treas, east. branch, 08-10, v. pres, 18); *Physiol. Soc*; Soc. Exp. Biol. Life history of Protozoa; rhythms and cycles in the life history of Infusoria; biological cycle of hay infusion; physiology of conjugation; endomixis; history of biology.
- Woods, Pres. Albert F(red)**, Berwyn, Md. **Botany*. Belvidere, Ill. Dec. 25, 66. B.S., Nebraska, 90, A.M., 92, Agr.D, 13. Asst. bot, Nebraska, 90-93; asst. chief, div. veg. physiol. and path, U. S. Dept. Agr, 94-00, chief, 01-10; dean and director, dent. agr, Minnesota, 10-17; *pres*, Md. Col, 17- Pathologist and physiologist and asst. chief, bur. plant indust, U. S. Dept. Agr, 01; exec. officer, Md. State Board Agr, 17-; mem. and officer various committees, Nat. Research Council, 17- U. S. delegate, Int. Conference Agr, Rome, 05; Int. Bot. Cong, Vienna, 05. A.A.; Bot. Soc. (v. pres, 09); Phytopath. Soc. (v. pres, 10); Soc. Prom. Agr. Sci; Wash. Acad; Wash. Bot. Soc. (pres). Plant pathology; plant nutrition; enzymes, especially in relation to pathology; oxidation processes in plant cells; oxidizing enzymes in plant and animal cells; causes of increasing or decreasing resistance of plants to certain diseases.
- Woods, Prof. B(aldwin) M(unger)**, University of California, Berkeley, Calif. *Mathematics, Mechanics*. Lampasas, Tex, Sept. 22, 87. E.E., Texas, 08; M.S., California, 09, Mackay fellow, 08-10, Ph.D., 12; Paris and Munich, 12-13. Instr. and asst. prof. theoret. mech. and later *prof. aerodynamics, California*, 08- Pres. acad. board, sch. mil. aeronautics, California, 17-19. Math. Soc. Logarithms of hyperbolic functions to twelve significant places; aeronautics.
- Woods, Prof. Cha(rles) D(ayton)**, Orono, Maine. *Chemistry*. Brooks, Maine, Sept. 11, 56. B.S., Wesleyan, 80; hon. Sc.D., Maine, 05. Asst. chem, Wesleyan, 80-83; instr. sciences, Wilbraham Acad, 83-88; chemist and v. director, Storrs Exp. Sta, 88-96; prof. agr, Maine, 96-03, director, Maine Exp. Sta. 96-20. Expert in food investigations, U. S. Dept. Agr, 94-07. A.A.; Chem. Soc; Soc. Prom. Agr. Sci. Agricultural and physiological chemistry; food of man; nutrition of animals and plants.
- Woods, Dr. Elizabeth Lindley**, State Department of Public Instruction, Madison, Wis. *Psychology*. Streator, Ill, March 3, 85. A.B., Oregon, 05, A.M., 10; Ph.D., Clark, 13. Instr. psychol, R. I. Nor. Sch, 13-14; Vassar, 14-16, asst. prof, 16; *clin. psychologist*, pub. schools, Pasadena, Calif, 16-17; *Wis. State Dept. Pub. Instr*, 17- Lecturer, Milwaukee Nor. Sch; exten. lecturer, Wisconsin. Psychol. Ass; Ass. Clin. Psychol. Clinical and experimental psychology; memory; recognition; intelligence tests.
- Woods, Dr. F(rederick) Adams**, 4 Newbury St, Boston, Mass. **Biology*. Boston, Mass, Jan. 29, 73. Mass. Inst. Tech; M.D., Harvard, 98. Asst. *histol. and embryol*, Harvard, 98-01, instr, 01-02; *lecturer*, Mass. Inst. Tech, 03- Instr. comp. histol, Harvard Vet. Sch, 99-01; acting ed, 'Jour. Heredity,' 18-19, co-editor, 19- A.A.; Soc. Nat; Ass. Anat; Psychol. Ass; Anthrop. Ass; fel. Am. Acad; Statist. Ass; Am. Hist. Ass; Boston Soc. Nat. Hist. Origin of the germ cells; physical heredity; mental and moral heredity in royalty; heredity of coloration in animals; heredity and sex; relation of heredity to history.
- Woods, Prof. F(rederick) S(henstone)**, Massachusetts Institute of Technology, Cambridge, Mass. **Mathematics*. Monson, Mass, March 8, 64. A.B., Wesleyan, 85, A.M., 88; Ph.D., Göttingen, 94. Asst. physics and astron, Wesleyan, 85-86; teacher *math*, Genesee Sem, Lima, N. Y, 86-90; instr, Mass. Inst. Tech, 90-95, asst. prof, 95-03, assoc. prof, 03-06, *prof*, 06- Lecturer *math*, Harvard, 98-99; ed, 'Annals of Math,' 00-11. Math. Soc; Math. Ass; Am. Acad; Soc. math. de France. Geometry.
- Woods, H(arry) I(rwin)**, Green Forest, Ark. *Astronomy, Agriculture*. New Hamburg, Pa, July, 70. A.B., Lafayette, 95; Columbia, 99-00; Pennsylvania, 00-01. Tutor, *math. and Latin*, Lafayette, 95-99; instr, *math*, Pennsylvania, 01-02; prof. physics and astron, Washburn, 02-18. Observer, U. S. Coast and Geod. Surv. Double star measures.

- Woods, Dr. Hiram**, 842 Park Ave, Baltimore, Md. *Ophthalmology*. Baltimore, Nov. 11, 57. A.B, Princeton, 79; M.D, Maryland, 82. *Practising surgeon*, 90-; prof. eye and ear diseases, Maryland, 94-20. Surgeon, Univ. Hosp. and Union Protestant Infirmary, Baltimore; consulting eye surgeon, various city and state institutions; mem. Md. Board of State Aid and Charities, 14-16. A.A.; Am. Med. Ass. (chairman, sect. ophthal, 13); Ophthal. Soc. (pres, 20); Otol. Soc.; Acad. Ophthal. and Oto-Laryngol; Col. Surg; Md. Med. and Chirurg. Faculty (pres, 06). Clinical ophthalmology.
- Woods, Prof. William C(olcord)**, Wesleyan University, Middletown, Conn. *Entomology*. Middletown, May 9, 93. A.B, Wesleyan, 13; Ph.D, Cornell, 17. Instr. *biol*, Wesleyan, 17-18, *assoc. prof*, 19- Lab. worker, U.S.A., 18-19. A.A; Entom. Soc; Ass. Econ. Entom. Biological and histological entomology.
- Woodward, Dr. Alvalyn E(unice)**, Amherst College, Amherst, Mass. *Physiology*. Niagara, N. Dak, May 29, 84. Ph.B, Rochester, 05, M.S, 11; fellow, Michigan, 12-15, Ph.D, 18. Teacher *biol*, high schools, 05-10; asst, Rochester, 10-11; acting head of dept, Cent. State Nor. Sch, Mich, 11-12; asst, Vassar, 15-16; instr, Simmons, 16-20; *demonstrator*, Amherst, 20- A.A; Mich. Acad. Orthoptera; physiological effects of egg-secretions; parthenogenesis.
- Woodward, Dr. Harold E(dward)**, Box 525, Wilmington, Del. *Chemistry*. Worcester, Mass, July 5, 88. A.B, Amherst, 10; Goldschmidt fellow, Columbia, 11-12, Ph.D, 12. With bur. chem, U. S. Dept. Agr, 12-18; in *Jackson lab*, E. I. duPont de Nemours and Co, 18- Chem. Soc. Surface tension of blood serum; surface tension and hemolytic activity of saponins; volatile amins; azo colors.
- Woodward, Prof. R(obert) S(impson)**, Carnegie Institution of Washington, Washington, D. C. **Physics*. Rochester, Mich, July 21, 49. O.E, Michigan, 72, Ph.D, 92, LL.D, 12; Wisconsin, 04; LL.D, Hopkins, 15. Asst. engineer, U. S. Lake Surv, 72-82; asst. astronomer, U. S. Transit of Venus Commission, 82-84; astronomer, U. S. Geol. Surv, 84-90; asst, U. S. Coast and Geod. Surv, 90-93; prof. mech. and math. physics, Columbia, 93-05; pres, Carnegie Institution, 05-20. Assoc. ed, 'Annals of Math,' 88-99; 'Science,' 94- Nat. Acad; A.A. (v. pres, 89, treas, 94-, pres, 00); Astron. Soc; Physical Soc; Math. Soc. (pres, 97-99); Geol. Soc; Am. Acad; Philos. Soc; fel. N. Y. Acad. (pres, 00-02); Wash. Acad; Wash. Philos. Soc. (pres, 10). Astronomy; geodesy; geophysics; mathematics; mechanics; mathematical physics.
- Woodward, Prof. Sherman M(elville)**, Iowa City, Iowa. *Hydraulics*. Richfield, Minn, May 11, 71. M.S, Washington (St. Louis), 93; A.M, Harvard, 96. Prof. math. and mech, Arizona, 96-04; steam eng, Iowa, 04-05; irrig. and drainage engineer, U. S. Dept. Agr, 05-08; *prof. mech. and hydraulics*, Iowa, 08- Consulting engineer, Miami Conservancy District, Dayton, Ohio, 13-20. A.A; Mech. Eng; Eng. Educ; Civil Eng; Iowa Acad; Iowa Eng. Soc. Pumping machinery; internal combustion engines; hydrodynamics.
- Woodworth, Prof. C(harles) W(illiam)**, University of California, Berkeley, Calif. *Entomology*. Champaign, Ill, April 8, 65. B.S, Illinois, 85, M.S, 86; Harvard, 86-88, 00-01. Asst, Ill. State Lab. Nat. Hist, 84-86; entomologist and botanist, Ark. Exp. Sta, 88-91; asst. prof. *entom*, California, 91-04, *assoc. prof*, 04-13, *prof*, 13- Lecturer, Univ. Nanking, 18. A.A; Ass. Econ. Entom; Entom. Soc; Pacific Slope Ass. Econ. Entom. (pres); Calif. Acad. Economic entomology; wing veins of insects; pathology of insecticide poisoning.
- Woodworth, C(lyde) M(elvin)**, University of Illinois, Urbana, Ill. *Agronomy*. Canton, Ill, Feb. 28, 88. B.S, Okla. Col, 10; M.S, Wisconsin, 14, Ph.D, 20. Asst. agron, S. Dak. Col, 10-12; scientific asst, U. S. Dept. Agr, 12-13; asst. and later instr, genetics, Wisconsin, 13-19; asst. pathologist, bur. plant indust, U. S. Dept. Agr, 19-20; *asst. prof. plant breeding and agron*, Illinois, 20- A.A; Soc. Agron; Bot. Soc. Inheritance in Soy beans and Datura; disease resistance of cabbage.
- Woodworth, Prof. J(ay) B(ackus)**, Harvard University, Cambridge, Mass. **Geology, Seismology*. Newfield, N. Y, Jan. 2, 65. B.S, Harvard, 94. Instr. *geol*, Harvard, 93-01, *asst. prof*, 01-12, *assoc. prof*, 12- Asst, U. S. Geol. Surv, 88-03; N. Y. State Museum, 00-08; in charge, Harvard Seismog. Sta; geologist, U. S. Geol. Surv, 18-; mem. committee on geol. and paleont, Nat. Research Council, 17-18, chairman, subcommittee on use of seismographs in war, 17-18. Mem. Int. Cong. Geol, 00-06; Harvard delegate, Pan-Am. Sci. Cong, Santiago, Chile, 08-09. A.A; Geol. Soc; Seismol. Soc; Am. Acad; Boston Soc. Nat. Hist; Wash. Acad. Structural geology; glacial deposits; shore line changes; Permian glaciation in Brazil; earthquakes of New England.
- Woodworth, Dean Philip B(ell)**, 5809 Race Ave, Chicago, Ill. *Electrical engineering*. Auburn, N. Y, Oct. 19, 65. B.S, Mich. Agr. Col, 86, Sc.D, 20. M.E, Cornell, 90; Berlin, 91-92. Prof. physics, Mich. Agr. Col, 92-99; elec. eng, *Lewis Inst*, 96-06, *dean of eng*, 07- On leave of absence for indust. training of soldiers, war plans div. gen. staff, U.S.A., 18- Elec. Eng. (committee-man, 10-12); Soc. Automotive Eng; West. Soc. Eng. (v. pres, 10); Chicago Elec. Ass. (pres, 03-05). Training men for industry.
- Woodworth, Prof. R(obert) S(essions)**, Columbia University, New York, N. Y. **Psychology*. Belchertown, Mass, Oct. 17, 69. A.B, Amherst, 91; A.B, Harvard, 96, A.M, 97; Ph.D, Columbia, 99; Edinburgh, 00; fellow, Liverpool, 02. Teacher science and math, high sch, Watertown, N. Y, 91-93; instr. math, Washburn, 93-95; asst. physiol. Harvard Med. Sch, 97-98; instr, Univ. and Bellevue Hosp. Med. Col, 99-02; demonstrator, Liverpool, 02-03; instr. *psychol*, Columbia, 03-05, adj. prof, 05-09, *prof*, 09- Ed, 'Archives of Psychol.' A.A. (v. pres, 08); Psychol. Ass. (acting sec'y, 07, pres, 14); fel. N. Y. Acad. Psychology of movement and training; fatigue; physiology of muscle and nerve; racial differences; imagery and thought; association tests; memory; motivation.
- Woody, Dr. McIver**, 897 Madison Ave, Memphis, Tenn. *Surgery*. Louisville, Ky, March 6, 86.

A.B., Richmond, 05; Harvard, 07, M.D., 12. Asst. physician, Butler Hosp, Providence, 12-13; intern, Boston City Hosp, 13-14; Austin teaching fellow surg, Harvard, 14-19, sec'y, faculty of med, 17-18, *dean and prof. surg. sch. med, Tennessee*. Asst. path, Harvard, 16-18; capt, M.R.C., 19-; out-patient surgeon, Boston City Hosp, 19.

Woodyatt, Dr. R(ollin) T(urner), University of Chicago, Chicago, Ill. **Medicine*. Chicago, June 3, 78. B.S., Chicago, 06, M.D., Rush Med. Col., 02. Asst. prof. *internal med, Rush Med. Col.*, 11-; *mem. staff, Sprague Mem. Inst, Chicago*, 11- Attending physician; Presb. Hosp; Harvey lecturer, 16. Major, M.C., 18-19. A.A.; Am. Physicians; Ass. Path. and Bact; Soc. Exp. Path; Soc. Clin. Invest; Soc. Biol. Chem. Carbohydrate metabolism; diabetes; fever.

Woolley, Prof. Paul G(erhardt), Peter Smith Building, Detroit, Mich. *Pathology*. Paris, Ill., April 7, 75. B.S., Chicago, 96; M.D., Hopkins, 00; fellow, McGill, 01-02. Res. house officer, Hopkins Hosp, 00-01; bacteriologist and pathologist, Bur. Science, P. I., 02-04, director, serum lab, 04-06; director, Govt. Serum Lab, Siam, 06-07, chief inspector of health, Siam, 07-08; assoc. prof. path, Nebraska, 08-09; prof. col. med, Cincinnati, 09-20; *director, laboratories, Cincinnati Hosp*, 09-20; *Nat. Path. Lab, Mich.*, 20- Pathologist and mem. board of directors, Kiefer Hosp, and pathologist, Samaritan Hosp, Detroit. Delegate for Siam, Int. Cong. Tuberculosis, 08; assoc. ed, 'Jour. Lab. and Clin. Med.' A.A.; Ass. Path. and Bact; Soc. Bact; Am. Med. Ass; Int. Ass. Med. Mus. Medical education; epidemiology; tropical medicine; parasitology; pathological anatomy.

Woolley, Mrs. Paul G. (Dr. Helen Bradford Thompson), 343 Bryant Ave. Cincinnati, Ohio. **Psychology*. Chicago, Ill., Nov. 6, 74. Ph.B., Chicago, 97, fellow, 97-00, Ph.D., 00, Ass. Col. Alumnae fellow, 00-01. Prof. psychol. and director, psychol. lab, Mt. Holyoke, 01-05, exp. psychologist, Bur. Educ, Philippine Islands, 05-06; instr. philos, Cincinnati, 09-10; *director, vocation bur, pub. schools, Cincinnati*, 11- Psychol. Ass. The mental traits of sex; affective processes; judgment of area on the skin; structure of the cortex; theory of the judgment; peripheral color vision; color perceptions of an infant; mental and physical measurements of working children; vocational guidance.

Woolsey, Dr. George, 117 E. 36th St, New York, N. Y. *Surgery*. New Haven, Conn, May 2, 61. A.B., Yale, 81; M.D., Columbia, 85. *Prof. anat. and clin. surg, med. dept, N. Y. Univ.*, 90-98; *med. col, Cornell*, 98-09, *clin. surg.*, 09- Surgeon, Bellevue Hosp. Surg. Ass; Soc. Clin. Surg; Am. Med. Ass; fel. N. Y. Acad. Med; Int. Surg. Soc. Surgical anatomy.

Woolsey, Theodore S(alisbury), Jr, 242 Prospect St, New Haven, Conn. *Forestry*. New Haven, Conn., Oct. 2, 79. A.B., Yale, 01, M.F., 03. With U. S. Forest Service, 00-07, inspector, 07-08, asst. district forester, 08-15. Mem. advisory board, forest sch, Yale, 08-15; lecturer, 12; assoc. ed, 'Forestry Quarterly', 13- Major and lieut. col, A.E.F. D. S. order, Chevalier Legion d'honneur; Chevalier Order of Leopold.

Ecol. Soc; Soc. Foresters; Am. Geog. Soc. Forest management; silviculture; western yellow pine; French forestry.

Woolson, Prof. Ira H(arvey), 76 William St, New York, N. Y. *Mechanical engineering*. Lewiston, N. Y., Aug. 11, 56. E.M., Columbia, 85. Asst. assaying and drawing, Columbia, 86-90, instr. mech. eng, 91-03, adj. prof, 03-08, civil eng, 08-10; *consulting engineer, Nat. Board of Fire Underwriters*, 10- Official investigator of building materials, N. Y. City; delegate, Int. Fire Prevention Cong, London, 03. Mech. Eng; Soc. Test. Mat; Fire Protection Ass; Concrete Inst. Physical testing of structural materials; fire resisting properties of treated woods, plain and reinforced concrete, brick and stone, and fireproof constructions; effect of heat on the strength of steel and iron; fire prevention; building codes.

Wooster, Prof. L(yman) C(hild), 1017 Union St, Emporia, Kans. *Geology, Biology*. Hammond, N. Y., Aug. 1, 49. Milton, 65-67, hon. Ph.D., 98; State Nor. Sch, Whitewater, Wis, 70-73; Beloit, 73-75; Yale, 81-82; Chicago, summer, 97. Asst. geologist, Wis. Geol. Surv, 73-79; prof. nat. science, State Nor. Sch, Whitewater, Wis, 78-81; asst. geologist, U. S. Geol. Surv, 81-84; *prof. nat. science, State Nor. Sch, Mayville, N. Dak.*, 93-95; *biol. and geol, Kansas State Nor. Sch.*, 97- Supt. Kans. educ. exhib, Columbian Expos, 93. A.A.; Kans. Acad. (pres, 05). Drift; Potsdam sandstone; coal measures; geology of Kansas; plant and animal instincts; science in education.

Wooton, Dr. E(imer) O(ttis), U. S. Department of Agriculture, Washington, D. C. *Biology*. Kokomo, Ind., Sept. 19, 65. B.S., Earlham, 89, A.M., 96; Columbia, 96-98. Prof. bot, New Mex. Col, 90-96, 98-00, biol, 00-11; asst. agriculturist and agriculturist, *office of farm management, U. S. Dept. Agr.*, 11-20, *asst. agr. economist*, 20- Botanist, New Mex. Exp. Sta, 90-96, 98-11; agent and expert, bur. forestry, U. S. Dept. Agr, summers, 00, 01, 02, special agent, summers, 09, 10. A.A.; Farm Econ. Ass; Wash. Bot. Soc; Wash. Biol. Soc; Wash. Acad. Utilization of arid grazing lands.

Worcester, Dean C(onant), 50 Broad St, New York, N. Y. *Zoology*. Thetford, Vt., Oct. 1, 66. A.B., Michigan, 89; Sc.D., 15. Asst. bot, Michigan, 87, 88, instr. zool, 93-95, asst. prof. zool. and curator, museum, 95-98; mem. U. S. Philippine Commission, 99-01; Sec'y of the Interior, Philippine Govt, 01-13; asst. to pres, Visayan Refining Co; *v. pres. and gen. manager, Philippine Refining Corporation*; *gen. manager, Agusan Coconut Co.* Mem. Steere science exped. to Philippine Islands, 88, 89; Menage scientific exped, 90-93. A.A.; cor. fel. Ornith. Union; Wash. Acad; fel. Royal Geog. Soc. Geographical distribution of mammals; distribution of the birds and mammals of the Philippine Islands.

Worden, Edward C(hauncey), 2 Rector St, New York, N. Y. *Chemistry*. Ypsilanti, Mich., April 17, 75. Ph.C., Michigan, 96; B.S., N. Y. Univ, 06, A.M., 08. Chemist, N. Y. Exp. Sta, Geneva, 96-98; mem. firm, Crane and Worden, 99-00; chemist, Celluloid Zapon Co, and Boston Artificial Leather Co, 00-02; Clark Thread Co, and

- J. and P. Coats, 03-13; *consulting chemist, explosive industry*, 13- Asst. ed, 'Kunststoffe,' Soc. Chem. Indust.; Chem. Eng.; Chem. Soc.; fel. London Chem. Soc.; Soc. chim. de France; Chem. Verein; Chem. Gesell. Analytical chemistry; explosives; nitrocellulose industry; technology cellulose esters; carbohydrate carboxylates.
- Work, Paul**, 223 Linden Ave, Ithaca, N. Y. *Horticulture*. Kerrmoor, Pa, June 18, 86. A.B, Tennessee, 07; B.S, Pa. State, 10; M.S.A, Cornell, 13. Instr. hort, Cornell, 10-13, *veg. gardening* and supt. of dept, 13-17, acting prof, 17-20, *prof*, 20- With engineers, U.S.A., 17-19. A.A.; Soc. Hort. Sci. Celery; tomato nutrition.
- Worrall, Prof. David E(lbridge)**, Tufts College, Mass. *Chemistry*. Westerly, R. I, Aug. 2, 86. B.S, R.I. Col, 10; A.M, Harvard, 11, Ph.D, 19. Austin teaching fellow, Harvard, 12-13; instr. chem, Smith, 14-18; *asst. prof. org. chem*, Tufts, 19- Lieut. C.W.S., 18-19. A.A.; Chem. Soc. Addition reactions of organic chemistry.
- Worsham, Prof. E(rnest) Lee**, 332 State Capitol, Atlanta, Ga. *Entomology, Plant pathology*. Forsyth, Ga, March 27, 80. B.S, Georgia, 04; Cornell, 06-07. Instr. biol, Georgia, 04-06; special agent, bur. entom. U. S. Dept. Agr, 07; *state entomologist, Ga*, 07- A.A.; Ass. Econ. Entom.; Entom. Soc.; Ass. Hort. Inspectors. The codling moth; the Hessian fly; peach leaf curl; the plum curculio; the cotton red spider; black root diseases of cotton; cotton anthracnose.
- Worsham, Prof. W(illiam) A(rcher)**, Jr, Athens, Ga. *Chemistry*. Monroe Co, Ga, March 9, 78. B.S, Georgia, 03; A.M, Harvard, 08. Teaching fellow, Harvard, 08-09; asst. state chemist, Ga, 09-10; asst. prof. *agr. chem, Georgia*, 10-11, *prof*, 11- A.A. (sec'y, council, 13, gen. sec'y, 14); Chem. Soc.; Soc. Agron. Atomic weight of lead; type soils of Georgia.
- Worstall, Robert A(rthur)**, 2500 W. Railroad Ave, Evanston, Ill. *Chemistry*. Zanesville, Ohio, April 18, 75. B.S, Case, 97, M.S., 98. Instr. chem, Purdue, 97-00; supt, Glidden Varnish Co, 00-01; Chicago Varnish Co, 01-08; *varnish specialist*, 08- Chem. Soc.; Soc. Chem. Indust. Varnishes; nitration and sulphonation of paraffines, resins and oils.
- Worthen, Prof. E(dmund) L(ouis)**, College of Agriculture, Ithaca, N. Y. *Agronomy*. Wilcox Township, Ill, Oct. 5, 82. B.S, Illinois, 04; M.S.A, Cornell, 08. Asst, Illinois, 04-06; scientist, soil surv, bur. soils, U. S. Dept. Agr, 06-09, in charge soil investigations in N. C, 09-12; asst. prof. and later assoc. prof. agron, Pa. State, 12-19; *prof. soil technol, N. Y. State Col. Agr, Cornell*, 19- Soil extension and improvement.
- Worthing, Dr. A(rchie) G(arfield)**, 15006 Terrace Road, East Cleveland, Ohio. **Physics*. Le Roy, Wis, Feb. 6, 81. A.B, Wisconsin, 04, 04-06; Iowa, 08-09; Ph.D, Michigan, 11. Asst. physics, Wisconsin, 04-06; instr, Iowa, 06-09; asst. physicist, Nat. Elec. Lamp Ass, 10-12, *physicist*, 12-14; *Nela Research Lab*, 14- A.A.; Physical Soc. Thermodynamic properties of gases; vapor tension; cosine law for tungsten and carbon; brightness measurements; temperature distribution in an incandescent lamp filament; thermal conductivities of tungsten, tantalum and carbon; Thomson effect at incandescent temperatures; ballistic galvanometers; emissive powders of tungsten; true temperature scale of tungsten; atomic heats at incandescent temperatures.
- Worthington, Dr. Euphemia R.**, 11460 N. Chester Ave, Pasadena, Calif. *Mathematics*. Troy, N. Y, Dec. 22, 81. A.B, Wellesley, 04; Ph.D, Yale, 08. Instr. math, Wellesley, 09-18; in *eng. dept, Gallaudet Aircraft Corp*, 18- Math. Soc.
- Wrather, W(illiam) E(mbry)**, 6044 Bryan Parkway, Dallas, Tex. *Geology*. Brandenburg, Ky, 83. Ph.B, Chicago, 08. Geologist, Gulf Production Co. and J. M. Guffey Petrol. Co, 08-16; *consulting geologist*, 16- A.A.; Min. and Metal. Eng.; Ass. Petrol. Geol. (sec'y-treas, 18); Southwest. Geol. Soc. (chairman, Dallas sect.). Oil geology; Permian stratigraphy of the southwest; geology of northern Texas oil fields.
- Wren, Dean Frank G(eorge)**, Tufts College, Mass. *Mathematics*. Sharon, Mass, March 15, 74. A.B, Tufts, 94, A.M. 97. Instr. math, Tufts, 94-99, asst. prof, 99-04, *Walker prof*, 04-, *dean, dept. arts and sciences*, 07-
- Wrenshall, Prof. Richard**, 313 Saratoga Road, Honolulu, Hawaii. *Chemistry*. Edgeworth, Pa, May 30, 89. Ph.B, Yale, 11, Ph.D, 15. Instr. chem, Yale, 14-16; chief chemist, Sterling Varnish Co, 16, v. pres, 16-17; *prof. chem, Univ. of Hawaii*, 19- Chem. Soc. Hydantoins; synthesis of alpha-amino-delta-phenylvalerianic acid; chaulmoogric and hydnocarpic acids in the treatment of leprosy.
- Wright, Dr. A(lbert) H(azen)**, Ithaca, N. Y. *Zoology, Ecology*. Hilton, N. Y, Aug. 15, 79. A.B, Cornell, 04, A.M, 05, Ph.D, 08. Asst. *vert. zool, Cornell*, 05-08, instr, 08-15, *asst. prof*, 15- A.A.; Soc. Zool; Ecol. Soc.; mem. Ornith. Union; Soc. Ichthyol. and Herp; Fisheries Soc.; Wash. Biol. Soc. Distribution of fish; life histories of Amphibia; primitive North American fauna; vertebrates of the Cayuga Lake Basin; life histories of North American Anura; migration of birds; biology and history of Okefinokee Swamp; North American reptiles.
- Wright, Prof. Charles Allen**, Ohio State University, Columbus, Ohio. *Electrical engineering*. Vicksburg, Miss, Sept. 13, 84. B.E, Tulane, 06, E.E, 09; M.E.E, Harvard, 10. Inspector, U. S. Engineers, 06-07; tester, Gen. Elec. Co, 07-08; instr. elec. eng, Harvard, 08-09; engineer, Am. Telephone and Telegraph Co, 10-15; assoc. prof. *elec. eng, Iowa State*, 15-18; *prof, Ohio State*, 18- A.A.; Elec. Eng.; Radio Eng.; Eng. Educ. Telephone transmission; inductive interference.
- Wright, Charles W(ill)**, 28 Via Parlamento, Rome, Italy. *Geology*. Marquette, Mich, May 15, 79. Heidelberg, 97-98; Bergakad, Freiberg, 98-00; B.S, Mich. Col. Mines, 02, E.M, 03. Instr. miner, Mich. Col. Mines, 01-03; geologic aid, U. S. Geol. Surv, 03-05, asst. geologist, 05-09; gen. manager mines, *Soc. di Pertusola, Sardinia*, 09-19, in *eng. and mines management office, Rome*, 19- Major, A.R.C, 17-19. Geologic aid, Can. Geol. Surv, summer, 02. A.A.; Geol. Soc.; Min. Eng.; Wash. Geol. Soc.; British Inst.

Min. and Metal. Geology of southeastern Alaska.

Wright, Dr. Douglas, Jr. 2333 Channing Way, Berkeley, Calif. *Chemistry*. Virginia, Ill, May 20, 91. B.S. Illinois, 16; fellow, California, 18-19, Ph.D., 19. *In charge culture media work, Cutter Lab.*, 19- Soil chemistry; bacteriology; biochemistry; decomposition of minerals by bacteria.

Wright, Prof. Frank J(ames), Bridgewater, Va. *Physiography*. Bridgewater, Nov. 22, 88. A.B., Bridgewater, 08; A.M., Virginia, 11; Ph.D., Columbia, 18. Prof. geol. and biol., Bridgewater, 11-16; assoc. geol., Bryn Mawr, 18; *prof.*, *Bridgewater*, 19- From field asst. to asst. geologist, Va. Geol. Surv., 12- Fel. Am. Geog. Soc. Physiography of Upper James River Basin and the Appalachians.

Wright, Dr. Fred(erick) E(ugene), Geophysical Laboratory, Carnegie Institution, Washington, D. C. **Geology*. Marquette, Mich., Oct. 16, 77. Ph.D., Heidelberg, 00. Instr. petrog., Mich. Col. Mines, 01-04; asst. state geologist, Mich., 02-04; asst. geologist, *U. S. Geol. Surv.*, 04-06, *geologist*, 06-; *petrologist*, *geophys. lab.*, *Carnegie Institution*, 06- Capt., ordnance dept., O.R.C., 17-18, major, ordnance dept., 18-19, lieut. col., O.R.C., 19-; army representative, mil. optical glass and instrument sect., W.I.B., 18-19. A.A.; Geol. Soc.; Min. Eng.; Chem. Soc.; Physical Soc.; Philos. Soc.; Optical Soc. (pres., 18-19); Wash. Acad. (cor. sec'y, 16); Wash. Geol. Soc.; Wash. Philos. Soc. Physical crystallography; experimental petrology.

Wright, Prof. G(eorge) Frederick, 145 Elm St., Oberlin, Ohio. *Geology*. Whitehall, N. Y., Jan. 22, 38. A.B., Oberlin, 59, A.M., 62; D.D. Brown, 87; LL.D., Drury, 87. Pastor, Congregational Church, Bakersfield, Vt., 62-72; Andover, Mass., 72-81; prof. language and lit. of New Testament, *Oberlin Theol. Sem.*, 81-92, *harmony of science and revelation*, 92-07, *emer. prof.*, 07- Asst. geologist, Pa. Geol. Surv., 81-82; U. S. Geol. Surv., 84-92; ed., 'Bibliotheca Sacra,' 84-; 'Records of the Past,' 05-13; lecturer, Lowell Inst., 87, 92, 96; Peabody Inst., 88; Brooklyn Inst., 89; Stone lecturer, Princeton, 04. A.A.; Geol. Soc.; Anthropol. Ass.; Archeol. Inst.; Boston Soc. Nat. Hist.; Essex Inst.; Ohio Acad.; Ohio Archeol. and Hist. Soc. (pres., 07-18). Archeology; glacial phenomena; loess deposits; antiquity of man; esker terraces.

Wright, Pres. Harry Noble, 533 Earlham Drive, Whittier, Calif. *Mathematics*. Shelbyville, Ind., Oct. 3, 81. B.S., Earlham, 04; M.S., California, 11, fellow, 12-13, Ph.D., 13. *Prof. math.*, Pacific (Oregon), 04-05; Whittier, 08-10; asst., Calif., 10-12, instr., 13-17; *prof.*, *Whittier*, 17-, dean, 17-18, *pres.*, 18- Math. Ass.; Astron. Soc. Number theory; analytical geometry; synthetic projective geometry.

Wright, Dr. James H(omer), Massachusetts General Hospital, Boston, Mass. **Pathology*. Pittsburgh, Pa. A.B., Hopkins, 90; M.D., Maryland, 92, hon. Sc.D., 07; fellow, Pennsylvania, 92-93; A.M., Harvard, 95, hon. Sc.D., 05. Asst. path., *Harvard*, 93-96, instr., 96-07, *asst. prof.*, 07-; *director*, *path. lab.*, *Mass. Gen. Hosp.*, 96- Gross prize, Phila. Acad. Surg., 05; Boylston

med. prize, Harvard, 03. Emer. mem. Am. Physicians. Pathological anatomy, histology and bacteriology.

Wright, Dr. J(ames) R(emus), Standard Oil Co., Whiting, Ind. *Physics*. Carrollton, Ohio. B.S., Westminster (Pa.), 05; fellow, Chicago, 08-09, Ph.D., 11. Asst., Chicago, 10-11; prof. physics and chief of dept., Univ. Philippines, 11-19; *chief physicist*, *Standard Oil Co. of Ind.*, 19- A.A. Emission of electrons from metals; radium emanation content of the atmosphere and of soil gas; ionization of the atmosphere; radioactivity of water.

Wright, John S(hepard), Care Eli Lilly and Co., Indianapolis, Ind. *Botany*, *Pharmacognosy*. Clermont, Ind., Oct. 17, 70. B.S., Purdue, 92. Field asst., N. Dak. Bot. Surv., 91; botanist, Eli Lilly and Co., 92-04. Lecturer bot., Med. Col. of Ind., 96-04. A.A.; Ind. Acad. (sec'y, 95-04, pres., 04). Histology of crude drugs and of vegetable articles of diet; microscopy of powders, starches and other vegetable commodities; pharmacology of drugs of vegetable origin.

Wright, Dr. Jonathan, Pleasantville, N. Y. *Medicine*. Springboro, Ohio, Feb. 2, 60. Grad., Miami Valley, 78; M.D., Columbia, 83. Director, path. lab., Manhattan Eye, Ear and Throat Hosp., 02-11; director, laboratories, N. Y. Post-Grad. Med. Sch., 11-15; prof. laryngol., Woman's Med. Col., N. Y.; surgeon, Manhattan Eye, Ear and Throat Hosp.; Brooklyn Eye and Ear Hosp.; out-patient dept., Roosevelt Hosp. A.A.; Ass. Path. and Bact.; Laryngol. Ass.; Am. Med. Ass.; Anthropol. Ass.; Archeol. Inst.; Am. Geog. Soc.; fel. N. Y. Acad.; N. Y. Acad. Med.; cor. mem. Royal Soc. Med. Laryngology; pathology; history of medicine.

Wright, Dr. Orville, 15 N. Broadway, Dayton, Ohio. *Aeronautics*. Dayton, Aug. 19, 71. Hon. Sc.D., Royal Tech. Col., Munich, 09; hon. M.S., Earlham, 09; LL.D., Oberlin, 10; hon. Sc.D., Trinity (Conn.), 15; Cincinnati, 17; hon. M.S., Yale, 19. Pres., Wright Co., 12-15. Mem. nat. advisory committee for aeronautics. Gold medal, French Aero Club, 08; British Aero Club, 08; French Acad. Sports, 08; Aeronaut. Soc. Gt. Britain, 08; U. S. Cong., 09; State of Ohio, 09; Aero Club, 09; French Acad., 09; Chevalier Légion d'honneur, 09; Langley medal, Smithsonian Inst., 10; Cresson medal, Franklin Inst., 14; John Fritz medal, 20; Albert medal, Royal Soc. Arts, 17; bronze medal, Int. Peace Soc. Hon. mem. Mech. Eng.; Automotive Eng.; hon. mem. Aero Club; Aeronaut. Soc.; Franklin Inst.; hon. mem. Flying Club; hon. mem. Aeronaut. Soc. Gt. Britain; hon. mem. British Aero Club; hon. mem. Verein. Flügtech; hon. mem. Oester. Flügtech. Verein; hon. mem. Sarthe Aero Club, France. Construction and development of the airplane.

Wright, Dr. Ralph G(arrigue), Bishop Place, New Brunswick, N. J. *Chemistry*. St. Louis, Mo., April 29, 75. B.S., Columbia, 99; Polytech., Zürich, 99-02; Ph.D., Basel, 02. Private asst., Columbia, 04-05; *prof. chem.*, Washington and Jefferson, 05-07; *Rutgers*, 07- Chem. Soc. Structure of dyestuffs; fluorescence of certain carbon compounds; oxidation.

- Wright, Prof. (Robert) Ramsay**, 9 Moreton Road, Oxford, England. *Biology*. Alloa, Scotland, Sept. 23, 52. M.A. Edinburgh, 71, B.S., 73; LL.D., Toronto. Prof. nat. hist, Univ. Col. Toronto, 74-87, biol, Toronto, 87-12, v. pres, 01-12. Mem. board trustees, biol. stations, Can. Marine and Fisheries Dept; mem. Int. Commission on Zool. Nomenclature. Soc. Nat; Soc. Zool; fel. Royal Soc. Can; fel. London Zool. Soc; fel. Royal Micros. Soc; hon. mem. Moscow Nat. Hist. Soc. Anatomy of fishes; plankton of the Nova Scotian coast.
- Wright, Dr. Sewall**, U. S. Department of Agriculture, Washington, D. C. *Genetics*. Melrose, Mass, Dec. 21, 89. B.S. Lombard, 11; M.S., Illinois, 12; Sc.D., Harvard, 15. *Senior animal husbandman, animal genetics, bur. animal indust, U. S. Dept. Agr.*, 15- Soc. Nat; Soc. Zool; Soc. Animal Production; Wash. Acad. Coat color inheritance in animals; inbreeding and cross-breeding.
- Wright, Prof. W(alter) L(ivingston)**, Lincoln University, Pa. *Mathematics*. Juliustown, N. J., Feb. 3, 72. A.B. Princeton, 92, fellow, 92-93, A.M., 95. *Prof. math, Lincoln*, 93- With Army Educ. corps, 19. A.A; Math. Soc; Math. Ass; Astron. Soc. Astronomy.
- Wright, Prof. W(illiam) H(ammond)**, Lick Observatory, Mt. Hamilton, Calif. *Astronomy*. San Francisco, Calif, Nov. 4, 71. B.S., California, 93, fellow, 94-96; fellow, Chicago, 96-97. Asst. astronomer, *Lick Observatory*, 97-08, acting astronomer, in charge D. O. Mills exped. to south. hemisphere, 03-06, astronomer, 08-A.A; Astron. Soc; Pacific Astron. Soc; assoc. Royal Astron. Soc. Spectroscopic study of stellar motions; new stars and nebulae.
- Wright, Prof. William Harmon**, 1905 W. Lawn Ave, Madison, Wis. *Bacteriology*. Bartholomew Co, Ind, July 8, 85. B.S., Purdue, 08; M.S., Wisconsin, 09; Cornell, 16. Asst. agr. bacter, *Wisconsin*, 09-12, instr, 12-15, asst. prof, 15- Field asst, plant disease sury, U. S. Dept. Agr, summers, 18-19. A.A; Soc. Bact. (abstractor, 'Jour'); Anti-Tuber. League. Agricultural and dairy bacteriology; farm sewage; food and water supply; milk tests.
- Wright, Prof. W(illiam) J(oseph)**, Cornell University, Ithaca, N. Y. *Horticulture*. Plainfield, Mich, June 6, 81. B.S. Mich. Agr. Col, 04; M.S., Pa. State, 12. Practical horticultural work, 04-07; asst. to the pres, Mich. Agr. Col, 07-09; asst. prof. hort, Pa. State, 09-12; director, N. Y. State Col. Agr, Alfred, 12-18; *extens. prof. rural educ, Cornell*, 18- A.A; Soc. Hort. Sci; Ass. Agr. Teaching; Pomol. Soc. The injurious effects of lime on small fruits; greenhouse construction and equipment.
- Wright, Dr. W(illiam) J(osiah)**, Care Alliance Bank of Simla, Calcutta, India. *Geology*. Bear River, N. S., Feb. 4, 81. B.Sc. Acadia; A.B., Yale, 08, A.M., 12, Ph.D., 15. Asst. geologist, Can. Geol. Surv, 12-15; prof. geol, Acadia, 18-19; assoc. geologist, Can. Geol. Surv, 19; *geologist, Whitehall Petrol. Corp.*, 20- Officer, C.E.F., 16-18. Geology of the New Ross and Moncton map areas; oil shale of Canada.
- Wright, Prof. Winthrop R(obins)**, Swarthmore, Pa. *Physics*. Trenton, N. J., May 11, 88. A.B., Michigan, 09, Ph.D., 17; Tyndall fellow, Columbia, 13-15. Instr. physics, Ga. Tech, 09-12; Michigan, 15-17; asst. physicist, Bur. Standards, 17-19; *asst. prof. physics, Swarthmore*, 19- Physical Soc. Magnetic properties of iron.
- Wrinch, Dr. F(rank) S(idney)**, Skyland, Calif. *Psychology*. Essex, England, Sept. 17, 68. M.A., Toronto, 97, Young Memorial fellow, 00; Ph.D., Würzburg, 01. Asst. psychol. lab, Toronto, 97-99; demonstrator psychol, Princeton, 01-02; *instr. in charge, psychol. lab, California*, 02-A.A; Psychol. Ass. Time-relations of mental phenomena; comparison of equality of equally observable differences; the mind in modern psychology.
- Wulling, Prof. Frederick J(ohn)**, University of Minnesota, Minneapolis, Minn. *Pharmacology*. Brooklyn, N. Y., Dec. 24, 66. Ph.G., N. Y. Col. Pharmacy, 87; Munich, Berlin, Paris and Göttingen, 88-89; Pharm.D., Minnesota, 94, LL.B., 96, LL.M., 98; Edinburgh, Cambridge and Oxford, 93-94; hon. Pharm.M., Phila. Col. Pharmacy, 17. Asst. prof. and quiz master, N. Y. Col. Pharmacy, 87-91; prof. pharmacodynamics, Brooklyn Col. Pharmacy, 91-92; *dean of faculty and prof. pharmacol, col. of pharmacy, Minnesota*, 92- Assoc. ed, 'Pharm. Record,' 86-90; managing chemist, Dr. S. F. Speir's Laboratories, Brooklyn, 87-91; mem. U. S. Pharmacop. Revision Convention (mem. board of trustees, 20-). A.A; Chem. Soc; Pharmaceut. Ass. (pres. northwest. branch, 07-10, pres, 17); Conference Pharmaceut. Faculties (pres, 15); Minn. Pharmaceut. Ass; fel. London Soc. Sci. Medical and pharmaceutical inorganic and organic chemistry.
- Wulzen, Dr. Rosalind**, 2447 Carlton St, Berkeley, Calif. *Physiology*. Oakland, Calif, 82. M.S., California, 10, Ph.D., 14. Head, dept. biol, Mills, 09-13; *instr. physiol, California*, 14- Physiol. Soc. Internal secretion; tropic reactions.
- Wurts, Prof. A(lexander) J(ay)**, 1164 Shady Ave, Pittsburgh, Pa. *Electrical engineering*. Carbondale, Pa, March 3, 62. Ph.B., Yale, 83; M.E., Stevens, 84; Polytech, Hanover, 86. On technical staff, Westinghouse Elec. and Mfg. Co, 87-98; manager, Nernst Lamp Co, 98-04; elec. engineer, Westinghouse Elec. and Mfg. Co, 04-05; *prof. applied elec. and head of dept, Carnegie Inst. Tech.*, 05- John Scott medal, 94. Elec. Eng; Philos. Soc; Pittsburgh Acad. The non-arcing metals; lightning arresters; the Nernst lamp.
- Wyant, Prof. L(ydia) Z(ae) Northrup**, Michigan Agricultural College, East Lansing, Mich. *Bacteriology*. Thompsonville, Mich, June 24, 84. B.S. Mich. Agr. Col, 06, M.H.E., 13; A.M., Michigan, 14. Instr. bacter, *Mich. Agr. Col.*, 07-13, asst. prof, 13-18, *research assoc*, 18- Soc. Bact; Mich. Acad. Dairy food fermentation and soil microbiology; bacterial diseases of insects.
- Wyatt, Prof. F(rank) A(rchibald)**, University of Alberta, Edmonton, Alta. Can. *Agronomy*. Wellsville, Utah, Feb. 22, 86. B.S., Utah Col, 10; M.S., Illinois, 13, fellow, 13-15, Ph.D., 15. Asst. exten. Utah Col, 10-11; soil fertility, Illinois, 15-16, assoc, 16-17, asst. prof, 17-18; *prof. soils, Alberta*, 18- Soc. Agron. Soils; agricultural chemistry.

- Wyckoff, Dr. John**, 11 E. 48th St, New York, N. Y. *Medicine*. Tindivanam, India, Nov. 12, 81. M.D., Bellevue Med. Col, 07. Mem. house staff, Bellevue Hosp, 07-10; res. physician, Minturn Hosp, 10; instr. therapeut. and med, *Univ. and Bellevue Hosp. Med. Col*, 11-19, *clin. prof. med*, 19- Asst. visiting physician, Bellevue Hosp, 16- Fel. N. Y. Acad. Med.
- Wyckoff, Dr. Ralph W(alter) G(raystone)**, Geophysical Laboratory, Washington, D. C. *Physical chemistry*. Geneva, N. Y, Aug. 9, 97. B.S., Hobart, 16; Ph.D., Cornell, 19. Instr. anal. chem, Cornell, 17-19; *physical chemist, geophys. lab, Carnegie Institution*, 19- Chem. Soc; Wash. Philos. Soc. Structure of crystals.
- Wyer, Samuel S**, 360 W. Ninth Ave, Columbus, Ohio. *Engineering*. Wayne Co, Ohio, Feb. 18, 79. M.E., Ohio State, 03. *Consulting engineer*, 05- Chief, nat. gas conservation, Fuel Ad; consulting engineer, Bur. Standards, 18; U. S. Bur. Mines, 20. A.A.; Mech. Eng; Min. Eng; Am. Gas Inst. Public utilities; manufacture and production of producer gas.
- Wyeth, Dr. John A(llan)**, 242 Lexington Ave, New York, N. Y. *Surgery*. Missionary Station, Ala, May 26, 45. M.D., Louisville, 69; Bellevue Med. Col, 73; LL.D., Alabama, 01; Maryland, 09. Asst. demonstrator anat, Bellevue Med. Col, 73-76; *prof. surg, N. Y. Polyclinic*, 82- Surgeon, St. Elizabeth Hosp, 78-97; Mt. Sinai Hosp, 80-98; founder and pres, med. faculty, N. Y. Polyclinic. Am. Med. Ass. (pres, 01); N. Y. State Med. Ass. (pres, 00); N. Y. Acad. Med. (pres, 07-); N. Y. Path. Soc. (pres, 85, 86); N. Y. Co. Med. Soc. Occlusion of arteries by cell proliferation; ligation of the external carotid artery; amputation of the ankle joint; control of hemorrhage; cure of vascular tumors by injection of boiling water; correction of deformities of the alveolar arch; dextral preference in man; general surgery; biography.
- Wylie, Dr. A(rthur) R(ufus) T(rego)**, Grafton, N. Dak. *Psychology*. Condit, Ohio, 71. A.B., Harvard, 93; Ph.D., Wooster, 94; fellow, Clark, 01-02; M.D., Minnesota, 06. Instr. science, Hiawatha Acad, Kans, 96-98; psychologist, Minn. Sch. for Feeble-Minded, 98-02, first asst. physician, 06-10; *supt, Inst. for Feeble-Minded, Grafton, N. D*, 10- A.A.; Ass. Study Feeble-Minded (v. pres, 09, pres, 11); Am. Med. Ass; Medico-Psychol. Ass. Psychology of the feeble-minded; pedagogy of the blind.
- Wylie, C(harles) C(layton)**, University of Illinois Observatory, Urbana, Ill. *Astronomy*. Idana, Kans, June 18, 86. A.B., Park, 08; A.M., Missouri, 12. Prof. math, Buena Vista, 09-11; asst, Laws Observatory, Missouri, 11-13; U. S. Naval Observatory, 13-19; *Observatory, Illinois*, 20- U. S. eclipse exped. to Oregon, 18. Astron. Soc; Math. Ass. Variable stars; orbits of asteroids; longitude and latitude; transit circle observations of sun, planets and standard stars.
- Wylie, Prof. C(larence) R(aymond)**, 77 Parkhurst Place, Detroit, Mich. *Electrical and mechanical engineering*. Saginaw, Mich, May 18, 83. M.E., Cornell, 05. Mech. engineer, Am. Window Glass Co, 05; designing elec. and mech. engineer, Commonwealth Edison Co, 06-07; instr. elec. eng, Cincinnati, 07-11, asst. prof, 11-18; director, research lab, Remy Elec. Co, 18; *sec'y-treas, United Eng. Corp*, 19-; *indust. engineer, Brigg Mfg. Co*, 20- A.A. Centrifugal blowers; thermal expansion of piping; high tension switching and transmission; search lights; sound proofing qualities of building materials; transmission design; control of sub-stations; color harmony; automotive research; D. C. armatures.
- Wylie, Dr. Harry H(anes)**, 3116 Fifth Ave, Beaver Falls, Pa. *Psychology*. New Concord, Ohio, July 3, 79. A.B., Muskingum, 05; A.M., Harvard, 12; Ph.D., Chicago, 17. Principal, high sch, Bellaire, Ohio, 05-08; *prof. psychol, Geneva*, 19- Capt, Sanit. C, 18-19. Psychol. Ass. Learning.
- Wylie, Prof. R(obert) B(radford)**, State University of Iowa, Iowa City, Iowa. *Botany*. Maquoketa, Iowa, March 28, 70. B.S., Upper Iowa, 97; Minnesota, 98; Chicago, summer, 99, fellow, 00-01, 02-04, Ph.D., 04. Prof. biol, Morningside, 97-06; asst. prof. bot, Iowa, 06-08, prof. morphol. bot, 08-19, *head, dept. bot*, 19- Instr. biol, Eastern Ill. State Nor. Sch, summer, 01; asst. bot, Chicago, 02-04; instr. bot, Woods Hole, summer, 05; marine sta, Washington (Seattle), Friday Harbor, Wash, 08, 13; mem. U. S. kelp exped. to Alaska, summer, 13; director, Iowa Lake Lab, 19- A.A.; Bot. Soc; fel. Iowa Acad; Int. Ass. Bot. Morphology of seed plants.
- Wysor, Prof. Henry**, Easton, Pa. *Chemistry, Metallurgy*. Dublin, Va, April 20, 80. B.S., Va. Polytech. Inst, 02. Asst. chemist, Carnegie Steel Co, Duquesne, Pa, 01-04; asst. prof. chem. and metal, Lafayette, 04-10, prof. metal, 10-18; *research engineer and director educ, Bethlehem Steel Co*, 19- Chem. Soc. Elimination of impurities in the basic open hearth process; metallurgy; slag reactions.

Y

- Yamanouchi, Dr. Shigéo**, 8 Otsanka Kubomachi, Koishikawa-Ku, Tokyo, Japan. **Botany*. Tokyo, Japan, Sept. 7, 78. M.S., Tokyo Teachers' Col, 98; Ph.D., Chicago, 07. Asst. bot. and instr. biol, *Tokyo Teachers' Col*, 98-00, asst. prof. bot, 00-04, *prof, 04-*; asst, Chicago, 07. A.A.; Bot. Soc; Bot. Gesell. Cytology; the life history of Polysiphonia; centrosome in Lilium; apogamy in Nephrodium; mitosis in Fucus; cytology of thallopytes.
- Yampolsky, Cecil, A. V. R. O. S**, Medan, Sumatra, Dutch East Indies. *Botany*. Kiev, Russia, April 21, 86. B.S., Wisconsin, 13; Columbia, 14-17; Ph.D., Zurich, 20. Research asst. bot, Columbia, 14-16; asst. prof. biol, Toledo, 17-18; botanist and plant pathologist, N. Dak. Col, 18-19; *botanist, Exp. Sta, A. V. R. O. S, Medan, Sumatra*, 20- A.A.; Bot. Soc; Phytopath. Soc. Genetics; cytology; plant pathology.
- Yanney, Prof. B(enjamin) F(ranklin)**, Wooster, Ohio. *Mathematics*. Dundee, Ohio, Sept. 11, 59. A.B., Mt. Union, 85, A.M., 88; Michigan, 85-86; Chicago, 09-10, summer, 02, 14-17; Harvard, summer, 03. Instr. Mt. Union, 86-88, *prof. Latin*, 88-92, *math*, 94-11; *Wooster*, 11-

- A.A.; Math. Soc; Math. Ass; Ohio Teachers Math. and Sci. (pres, 08); Circolo Mat. di Palermo. Pedagogy of mathematics; modular invariants.
- Yarrow, Dr. Harry Crècy**, 814 17th St. N. W., Washington, D. C. *Medicine*. Philadelphia, Pa., Nov. 19, 40. Geneva; M.D., Pennsylvania, 61. Prof. dermat., George Washington; surgeon, U.S.A.; curator herp., U. S. Nat. Museum. Wheeler exploring exped, 72-77. A.A. Anthropology; ethnology; mortuary customs of North American Indians; biology; herpetology.
- Yates, Dr. Anna Baker**, Bryn Mawr College, Bryn Mawr, Pa. *Physiology*. Jamestown, N. Y., Jan. 11, 91. A.B., Mt. Holyoke, 13; A.M., Columbia, 15, Ph.D., 20. Instr. physiol., Wellesley, 19-20; *assoc. biol.*, Bryn Mawr, 20- Biochemistry; metabolism; central nervous system.
- Yates, Prof. J(ames) A(nderson)**, State Manual Training Normal, Pittsburg, Kans. *Chemistry, Geology*. Bush, Ky., Oct. 24, 65. B.S., Kentucky, 90, M.S., 99. Principal, Laurel Sem., 90-92; prof. nat. science, Williamsburg Inst., 92-97; Ottawa, 97-07; *head, dept. physical science and director chem, elec. and mining eng.*, State Manual Training Nor., Kans., 07- Mem. Union Pacific fossil field exped, summer, 99; chairman, Board of Pub. Welfare, Pittsburg, Kans., 14-16. A.A.; Chem. Soc; Am. Geog. Soc; Kans. Acad. (pres, 07); Industrial engineering; Lawrence shales; changes in Cottonwood limestones south of Cottonwood Falls, Kansas; the composition of stereotype and linotype alloys.
- Yates, Dr. J(ohn) L(awrence)**, 141 Wisconsin St., Milwaukee, Wis. *Medicine*. Milwaukee, Feb. 27, 73. Ph.B., Yale, 94; B.S., Wisconsin, 95; M.D., Hopkins, 99. Asst. path., Hopkins, 01-02; asst. demonstrator path., Pennsylvania, 02-03. Senn medal, 05; Gross prize, 15. Ass. Path. and Bact; Surg. Ass; Am. Med. Ass; Chicago Surg. Soc. Pathologic physiology of the peritoneum; Hodgkins disease; pathologic physiology of pleura.
- Yensen, T(rygve) D(ewey)**, Westinghouse Electric and Manufacturing Co., Pittsburgh, Pa. *Metallurgy*. Drammen, Norway, Jan. 30, 84. B.S., Illinois, 07, M.S., 12, E.E., 13. Engineer, Gen. Elec. Co., 07-08; instr. elec. eng., Illinois, 08-09; elec. engineer, Shawnigan Water and Power Co., 09-10; research asst., eng. exp. sta., Illinois, 10-15, research asst. prof., 15-16; *research engineer, Westinghouse Elec. and Mfg. Co.*, 16- Elec. Eng; Min. and Metal. Eng. Metallurgy of magnetic materials; magnetic iron and iron alloys.
- Yerkes, Prof. Robert M(earns)**, National Research Council, Washington, D. C. **Psychology*. Bredysville, Pa., May 26, 76. A.B., Ursinus, 97; A.B., Harvard, 98, A.M., 99, Ph.D., 02. Asst. psychol., Harvard, 99-01, teaching fellow, 01-02, instr. comp. psychol., 02-08, asst. prof., 08-17; psychologist, Psychopathic Hosp., Boston, 13-17; prof. psychol. and director, psychol. lab., Minnesota, 17-19; *chairman, research information service, Nat. Research Council*, 19- Major, div. psychol., Sanit. C., 17-19; chairman, psychol. committee, Nat. Research Council, 17-19; mem. committee on classification of personnel, War Dept., 17-18; ed., 'Jour. Animal Behavior.'
- Bowdoin prize, Harvard; Boylston prize, Harvard Med. Sch; Cartwright prize, Columbia. A.A.; Soc. Nat; Psychol. Ass. (pres, 16); Physiol. Soc; Soc. Zool; Soc. Exp. Biol; Soc. Mammal; Am. Acad; Galton Soc. Reactions of lower organisms to light; physiology of the nervous system; sense psychology; behavior of vertebrates; mental measurements; biology of primates.
- Yerzley, Prof. W(illiam) A(lfred)**, 26-28 Boylan St., Newark, N. J. *Mechanical engineering*. Forrest City, Ark., Aug. 7, 68. M.E., Cornell, 92; Pd.B., N. Y. State Nor. Col., 95; Columbia, 97-98. In charge machine shop and drafting dept., Miller Sch., Va., 95-97; instr., Madison Sch., N. Y. City, 98-99; asst. lab. of Thomas A. Edison, 99-00, 01; engineering work with several industrial companies, 00-07; director, Eng. Sch., Buffalo, N. Y., 03-05; prof. mech. eng., Clarkson Mem. Sch. Tech., 07-09; with Remington Arms Co., Pratt and Whitney Co. and Gray Telephone Pay Sta. Co., 09-11; sec'y and chief engineer, Nagle Reblade Knife Co., 11-14; with Sloane and Chase Co., Crocker-Wheeler Co., Colt's Pat. Firearms Co., Westinghouse Co. and Edison Lab; *consulting engineer*. A.A.; Mech. Eng; Eng. Educ; London Soc. Arts.
- Yoakum, Dr. Clarence S(tone)**, Carnegie Institute of Technology, Pittsburgh, Pa. *Psychology*. Leavenworth Co., Kans., Jan. 11, 79. B.S., Campbell, 01, A.B., 02; fellow, Chicago, 06-08, Ph.D., 08. Asst. English, Campbell, 01-02, instr. philos. and educ., 02-03; science, Hiawatha Acad., 03-05; psychol., Texas, 08-17; major, div. psychol., Sanit. C., 17-19; *prof. applied psychol. and director, bur. personnel research, Carnegie Inst. Tech.*, 19- A.A.; Psychol. Ass. Applied psychology; industrial research; mental fatigue; complication experiment; persistent complexes; behavior of squirrels.
- Yocom, Prof. H(arry) B(arclay)**, University of Oregon, Eugene, Oregon. *Zoology*. Pennsville, Ohio, July 12, 88. A.B., Oberlin, 12; A.M., California, 16, Ph.D., 18. Instr. zool., Wabash, 12-13; asst., Kansas State, 13-14, instr., 14-15; asst., California, 15-17; prof., Washburn, 17-18; *asst. prof. biol.*, Col. City of N. Y., 19-20; *zool.*, Oregon, 20- Lieut., Sanit. C., 18. A.A.; Soc. Zool. Cytology; protozoology.
- Yoder, Dr. P(eter) A.**, 2503 Hall Place, N. W., Washington, D. C. *Chemistry*. Shipshewana, Ind., Aug. 21, 67. A.B., Indiana, 94, A.M., 96; Chicago, 96-97; Ph.D., Göttingen, 01. Asst. chem. and physics, Ind. State Nor. Sch., 91-93; instr. chem., Indiana, 94-96; teacher physical sciences, State Nor. Sch., Mankato, Minn., 97-98; chem., high sch., Duluth, Minn., 98-99; *assoc. prof. chem.*, Utah Col., 01-05, *prof.*, 05-07, *assoc. chemist*, Exp. Sta., 01-05, *director and chemist*, 05-07; *research chemist*, La. Sugar Exp. Sta., 08-10; *asst. chemist, bur. chem.*, U. S. Dept. Agr., 10-13, *sugar cane technologist*, 18- Silver medal, La. Purchase Expos., 04. A.A.; Chem. Soc; Soc. Agron; Bot. Soc. Delydromucic acid and its derivatives; centrifugal soil elutriator; incubation of chickens in a dry climate; formaldehyde in sugar house products; polariscopic methods for estimating malic acid; acid constituents of sugar cane and sugar house prod-

ucts; effect of environmental influences on composition of cereals; determination of cholin in wheat and cottonseed meal; sugar cane culture for sirup; improvements in sirup evaporator; cane-stripping comb.

York, Prof. Harlan H(arvey), University of West Virginia, Morgantown, W. Va. *Botany*. Plainfield, Ind, Sept. 8, 75. B.S., DePauw, 03; A.M., Ohio State, 05; fellow, Columbia, 05-06; Ph.D., Hopkins, 11. Asst. bot., Ohio State, 03-05; instr., Texas, 06-11; assoc. prof. and in charge of dept., Brown, 11-20; *West Virginia*, 20- Assoc. bot., Cold Spring Harbor, 06-15. A.A.; Bot. Soc.; Phytopath. Soc. Morphology; anatomy; histological technique; North American Malvaceae; embryology of Nelumbolutea; the flora of Texas; anatomy and biological aspects of the American mistletoe; the wintering over of Cronartium ribicola; late aecia of Cronartium ribicola.

Yothers, Prof. M(errill) A(rthur), U. S. Department of Agriculture, Medford, Oregon. *Entomology*. Ashton, Ill, Dec. 18, 83. B.S., Idaho, 07; M.S., Wash. State, 14. Asst. entom., Mich. Agr. Col., 08-10; instr. entom., Wash. State, and asst. entomologist, Exp. Sta., 10-17; *specialist, apple insect investigations, bur. entom., U. S. Dept. Agr.*, 17- A.A.; Entom. Soc.; Ass. Econ. Entom. Economic entomology; Rhyncophora; the physiological effects of endoparasitism on the host insect; apple insect control.

Yothers, W(illiam) W(alter), Orlando, Fla. *Entomology*. Ashton, Ill, Sept. 15, 79. B.S., Idaho, 03; A.B., Cornell, 04. District hort. inspector, Idaho, 01-03; special field agent and entom. asst., bur. entom., U. S. Dept. Agr., 04- A.A.; Entom. Soc.; Ass. Econ. Entom.; Tex. Acad.; Wash. Entom. Soc. Hibernation of the boll weevil; fumigation with hydrocyanic gas for controlling the citrus white fly; spraying of citrus trees; mites attacking citrus trees in Florida.

Young, Prof. A(ram) V(an) E(ps), Evanston, Ill. **Chemistry*. Sheboygan, Wis, June 5, 53. Ph.B., Ph.C., Michigan, 75; fellow, Hopkins, 78-80. **Asst. chem.*, Michigan, 75-77; Harvard, 84-85; prof., *Northwestern*, 85-20, *prof. emeritus*, 20- A.A.; Chem. Soc.

Young, Prof. Anne S(ewell), Mt. Holyoke College, South Hadley, Mass. *Astronomy*. Bloomington, Wis, Jan. 2, 71. B.L., Carleton, 92, M.S., 97; Chicago, 98, 02; Ph.D., Columbia, 06. Instr. math, Whitman, 92-93, *prof.*, 93-95; *astron., Mt. Holyoke, and director, Williston Observatory*, 99- A.A.; Astron. Soc.; Ass. Var. Star Observers; Ass. Prof. Variable stars; measurement of astronomical photographs.

Young, Dr. A(rcher) E(verett), Tallawanda Road, Oxford, Ohio. *Mathematics*. Haddam Neck, Conn, March 12, 73. A.B., Wesleyan, 98; Ph.D., Princeton, 03. Instr., Shady Side Acad., Pittsburgh, 98-01; *math.*, Purdue, 03-08; *prof.*, Miami, 08-, *dean*, 13- Math. Soc. Differential geometry; isothermic surfaces; isothermal asymptotic surfaces; the spherical representation and the characteristic equation of certain classes of surfaces; orthogonal systems of lines and the determination of surfaces referred to them.

Young, Prof. B(enjamin) P(ercy), 209 Eddy St, Ithaca, N. Y. *Entomology*. Kansas City, Kans, Feb. 27, 87. B.S., Kansas, 08; Ph.D., Cornell, 19. Principal, high sch. and city supt. schools, 08-15; instr. entom., Kansas, 15-17; *Cornell*, 17-19, *asst. prof. zool.*, 19- A.A. Spring canker worm; embryology of the honey bee; attachment of the thorax to the abdomen in Diptera.

Young, Dr. Charles O(tis), Clendenin Gasoline Co, Clendenin, W. Va. *Chemistry*. Mexico City, Mex, June 21, 92. B.S., Haverford, 13; Ph.D., Pittsburgh, 18. Chemist, bur. chem., U. S. Dept. Agr., 15-17; instr. chem., Pittsburgh, 17-18; fellow, Mellon Inst., 19. Chem. Soc. Organic chemistry.

Young, Prof. C(linton) M(ason), University of Kansas, Lawrence, Kans. *Mining engineering*. Hiram, Ohio, 76. B.S., Hiram, 98; Case, 04, E.M., 09. Chemist, Gates Co, 04-05; assoc. prof. mining eng., Kansas, 05-14; specialist, corps engineers, 14; ed., 'Colliery Engineer,' 15; assoc. ed., 'Coal Age,' 16; asst. prof. mining research, Illinois, 16-19; *prof. mining eng., Kansas*, 19- Min. Eng.; Eng. Educ.; Kans. Acad. Causes of coal mine explosions; decomposition products of explosives; metallurgy of copper and nickel; detection of methane in mine air; percentage of coal extracted in mining; surface subsidence.

Young, Dr. G(eorge) A(lbert), Geological Survey, Ottawa, Can. *Geology*. Montreal, Can, March 6, 78. B.S., McGill, 98, M.S., 01; Ph.D., Yale, 04. *Geologist, Can. Geol. Surv.*, 07- A.A.; Geol. Soc. Petrography and areal geology.

Young, Prof. Geo(rge) J(oseph), 827 Guerrero St, San Francisco, Calif. *Mining*. San Francisco, Oct. 3, 76. B.S., California, 99. Anal. asst., dept. mining, California, 99-00; asst. prof. metal, Nevada, 00-03, prof. mining and metal, 03-08, in charge Mackay Sch. Mines, 08-13; prof. mining, Minnesota, 13-16; *metal, Colo. Sch. Mines*, 16-17; asst. ed-in-chief, 'Eng. and Min. Jour,' 18-19, *west, ed.*, 19- Min. Eng.; Min. and Metal. Soc. Metallurgy; mine ventilation; cyanid process; geology of Nevada mining districts.

Young, Harry C(urris), Michigan Agricultural College, East Lansing, Mich. *Botany*. Millersburg, Ohio, Nov. 14, 88. B.S., Ohio (Athens), 13; M.S., N. C. Col., 15; Lackland fellow, Washington (St. Louis), 15-16. Instr. bot., N. C. Col., 13-15; *Mich. Agr. Col.*, 16-18, *research asst. plant physiol.*, 18- Serologist, U.S.A. Hosp., New Haven, Conn, 18-19. A.A.; Bot. Soc.; Mich. Acad. Fungicidal coefficients; seed sterilization; complement fixation tests for tuberculosis; Wasserman reaction in tuberculosis; nutritive deficiencies in plants.

Young, Dr. Herman H., Children's Service Bureau, Youngstown, Ohio. *Psychology*. Lake, Ohio, Nov. 12, 87. A.B., Ohio (Athens), 13, A.M., 14; Harrison fellow, Pennsylvania, 14-16, Ph.D., 16. Instr. paidol. and psychol., Ohio (Athens), 13-14; psychologist, Ind. Reformatory, 15; juvenile court, Cincinnati, Ohio, 16; examiner, Ky. Surv., Nat. Commission for Mental Hygiene, 17; *director, child direction dept., Children's Service Bur., Youngstown*, 17- A.A.;

- Psychol. Ass; Ass. Clin. Psychol. Educational and clinical psychology; mental tests.
- Young, Dr. Hugh Hampton**, Johns Hopkins Hospital, Baltimore, Md. *Surgery*. San Antonio, Tex, Sept. 18, 70. A.B, A.M, Virginia, 93, M.D, 94. *In charge, dept. urol, Hopkins, 97-*, *clin. prof. and visiting urologist, Hopkins Hosp, 14-* Pres, Md. State Lunacy Commission, 08-; senior consultant urol, A.E.F.; col, M.C, retired. A.A; Urol. Ass. (pres, 09); Ass. Genito-Urinary Surg. (pres, 10); Md. Med. and Chirurg. Faculty (pres, 13); Ass. Int. d'Urol; hon. mem. Urol. Gesell; hon. mem. Ass. française d'Urol; hon. mem. Soc. Ital. d'Urol. Bacteriology; pathology; urological surgery; chronic cystitis; pathology of the prostate gland; prostatectomy.
- Young, Prof. J(acob) W(illiam) A(lbert)**, 5422 Blackstone Ave, Chicago, Ill. **Mathematics*. York, Pa, Dec. 28, 65. A.B, Bucknell, 87, A.M, 90; Berlin, 88-89; Ph.D, Clark, 92. Instr. math, Bucknell Acad, 87-88; assoc, Chicago, 92-94, instr, 94-97, asst. prof. *pedag. of math, 97-08, assoc. prof, 08-* Studied schools of Prussia, 97-98; of France, 01, 03-04; of Italy and Austria, 06, 08; mem. Int. Commission on Teaching of Math. Math. Soc; Math. Ass. The theory of groups; teaching of mathematics in European schools and in American secondary schools and colleges.
- Young, Dr. J(ames) H(oward)**, Mellon Institute, Pittsburgh, Pa. *Chemical engineering*. Kansas City, Kans, 92. B.S, Kansas State, 14; M.S, Ohio State, 16, Ph.D, 18. Asst. eng. exp. sta, Kansas State, 12-14; instr. chem, Ohio State, 16-18; fellow, Mellon Inst, 18- Chem. Soc. Bituminous products; building materials.
- Young, Prof. J(ames) K(elly)**, 222 S. 16th St, Philadelphia, Pa. *Medicine*. Trenton, N. J, April 29, 62. M.D, Pennsylvania, 83; Vienna, 88. Res. physician, Phila. Gen. Hosp, 84-85; *assoc. prof. orthop. surg, Phila. Polyclinic, 95-*; *Pennsylvania, 99-*, *prof, grad. sch. med, 18-* Clin. prof. orthop. surg, Woman's Med. Col. of Pa, 96-15. Orthop. Ass; Col. Surg; Am. Med. Ass; fel. Phila. Acad. Surg; fel. Phila. Col. Physicians. Orthopedic surgery; anatomy; physical development of children; tuberculosis of bones and joints; arthritis deformans; scoliosis.
- Young, Prof. J(ohn) W(esley)**, Hanover, N. H. **Mathematics*. Columbus, Ohio, Nov. 17, 79. Ph.B, Ohio State, 99, fellow, 99-00; A.M, Cornell, 01, fellow, 01-02, Ph.D, 04. Asst. math, Cornell, 02-03; instr, Northwestern, 03-05; preceptor, Princeton, 05-08; asst. prof, Illinois, 08-10; prof. and head, dept. math, Kansas, 10-11; *prof, Dartmouth, 11-* Collaborator, 'Bul. des sci. math.'; chief examiner geometry, Col. Entrance Exam. Board, 13-15; chairman, Nat. Committee on Math. Requirements, 16- Math. Soc. (ed, 'Bul'); Math. Ass. (v. pres, 18); Math. Verein; Circolo Mat. di Palermo. Automorphic functions; group theory; foundations of geometry; theory of approximations; *n*-dimensional chains; application of synthetic methods to analysis; geometry associated with Cremona groups; projective geometry; fundamental concepts of algebra and geometry.
- Young, Dr. Paul Thomas**, University of Minnesota, Minneapolis, Minn. *Psychology*. Los Angeles, Calif, May 26, 92. A.B, Occidental, 14; A.M, Princeton, 16; Ph.D, Cornell, 18. *Instr. psychol, Minnesota, 19-* Experimental psychology of feeling.
- Young, Dr. Reynolds K(enneth)**, Dominion Astrophysical Observatory, Victoria, B. C. *Astrophysics*. Binbrook, Ont. B.A, Toronto, 09; Lick Observatory, fellow, California, 09-12, Ph.D, 12. Instr. astron, Kansas, 12-13; observer, Dominion Observatory, 13-18; *astronomer, Dominion Astrophysical Observatory, 18-* A.A; Astron. Soc; Royal Astron. Soc. Can. Spectroscopy.
- Young, Prof. Robert T(hompson)**, University, N. Dak. *Zoology*. Philadelphia, Pa, Feb. 14, 74. B.S, Pennsylvania, 96; fellow, Nebraska, 04-06, Ph.D, 06. Field asst, U. S. Biol. Surv, 97; asst, U. S. Fish Commission, 98; asst. zool, Michigan, 98; science teacher, high sch, Cripple Creek, Colo, 03; instr. zool, North Dakota, 06-09, asst. prof, 09-14, *prof, 14-*, asst. director, N. Dak. Biol. Sta, 09-14, *director, 14-* A.A; Soc. Zool. Histogenesis of cestodes; nuclei of Paramecium; protective coloration.
- Young, Prof. S(tewart) W(oodford)**, Stanford University, Calif. **Chemistry*. Orient, N. Y, March 14, 69. B.S, Cornell, 90; Leipzig, 99-00. Asst. chem, Cornell, 90-91; Swarthmore, 91-93; asst, later instr. and asst. prof, Stanford, 99-00, assoc. prof, 00-04, *prof. physical chem, 04-* A.A; Chem. Soc; San Francisco Mechanics Inst. Complex tin compounds; inhibition of rate of oxidation; modifications of sodium thiosulphates; spontaneous crystallization of supercooled solutions and fusions; mechanical stimulus to crystallization; recovery of sulphur from smelter fumes; passivity of iron; colloidal solutions; fractional distillation; artificial enrichment of copper sulphid ores.
- Young, Prof. V(ive) H(all)**, University of Idaho, Moscow, Idaho. *Botany*. Whitewater, Wis, Dec. 5, 87. Ph.B, Wisconsin, 13, fellow, 15-16, Ph.M, 14, Ph.D, 16. Asst. bot, Wisconsin, 13-15; asst. prof, Iowa, 16-18; asst. pathologist, bur. plant indust, U. S. Dept. Agr, 18; *prof. bot, Idaho, and plant physiologist, Exp. Sta, 18-* A.A; Bot. Soc; Phytopath. Soc; Iowa Acad. Plant physiology; mycology; enzymes in fungi.
- Young, Prof. W(alter) J(orgensen)**, State Normal School, Fredericksburg, Va. *Psychology*. Owensboro, Ky, June 27, 83. A.B, Richmond, 07; B.D, Crozer Theol. Sem, 10; A.M, Pennsylvania, 10, Ph.D, 11; Columbia. Prof. philos. and educ, Hampden-Sidney, 11-13; Richmond, 13-18; acting supt. schools, Suffolk, Va, 18-19; *prof. biol, State Nor. Sch, 19-* Philosophy; education; practise and habit; genetic ethics.
- Youngblood, B(onney)**, College Station, Tex. *Agriculture*. Milano, Tex, July 31, 81. B.S, Tex. Col, 02, M.S, 07; Wisconsin, 18, 20. Principal, high sch, Henderson, Tex, 03-05; Mineola, 05-06; supt. city schools, Paul's Valley, Okla, 06-07; asst. agriculturist, office farm management, U. S. Dept. Agr, 07-11; *director, Tex. Exp. Sta, 11-* Soc. Prom. Agr. Sci; Soc. Agron; Farm Management Ass; Ass. Agr. Col; Ass. Agr. Exp.

Sta. Farm and ranch economics; farm management; farm housing; grazing.

Youngken, Prof. Heber W(ilkinson), 145 N. Tenth St, Philadelphia, Pa. *Botany, Pharmacognosy*. Bucks Co, Pa, Oct. 31, 85. Ph.G, Medico-Chirurg. Col, Phila, 05, 09-11; A.B, Bucknell, 09, A.M, 12; M.S, Pennsylvania, 14, Ph.D, 15; Ph.M, Phila. Col. Pharmacy, 19. Demonstrator biol, pharmacog. and bacter, Medico-Chirurg. Col, Phila, 09-11, instr. bot. and pharmacog, 11-12, asst. prof, 12-15, adj. prof, 15-16, prof, 16; asst. prof, *Phila. Col. Pharmacy*, 16-17, *prof. and director, micros. laboratories*, 17- Prof. biol, Ursinus, 18-19. A.A; Bot. Soc; Pharmaceut. Ass; Phila. Acad; Phila. Bot. Club. Pharmaceutical botany.

Youtz, Prof. Lewis A(ddison), 463 South St, Appleton, Wis. *Chemistry*. Canton, Ohio, July 21, 64. Ph.B, Simpson, 90, Ph.M, 93, M.S, 02; Ph.D, Columbia, 02. Instr. nat. science, high sch, Des Moines, Iowa, 91-93; assoc. prof. science, Simpson, 93-99; *prof*, Mont. Wesleyan, 99-00; *chem, Lawrence*, 02- Chem. Soc; Soc. Chem. Indust; Wis. Acad. The determination of antimony; antimony compounds; the purity and volatility of precipitated antimony sulphid.

Yowell, Dr. Everett I(rving), Corbett and Griest Aves, Cincinnati, Ohio. *Astronomy*. Cincinnati, Jan. 2, 70. C.E, Cincinnati, 91, M.S, 93, Ph.D, 11; Göttingen, 94-95. Instr. math, Cincinnati, 91-94, 95-97; asst. Cincinnati Observatory, 95-01; computer, U. S. Naval Observatory, 01-06; instr. math, U. S. Naval Acad, 06-09; *first asst, Cincinnati Observatory*, 09- Mem. U. S. Naval Observatory eclipse exped, 05; int. latitude observer, 10-16. A.A; Math. Soc; Astron. Soc. Meridian circle observations; variation of latitude; proper motion of stars; orbits of comets and asteroids.

Yunker, Prof. T(ruman) G(eorge), Greencastle, Ind. *Botany*. Carson City, Mich, March 20, 91. B.S, Mich. Agr. Col, 14; A.M, Nebraska, 15; fellow, Illinois, 19, Ph.D, 19. Asst. bot, Illinois, 17-18; asst. prof. *biol, DePauw*, 19-20, assoc. prof, 20, *prof*, 21- A.A; Bot. Soc. North American and West Indian species of Cuscuta.

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Zahm, Prof. A(lbert) F(rancis), Catholic University, Washington, D. C. **Mechanics*. New Lexington, Ohio. A.M, Notre Dame, 85; M.E, Cornell, 92; Ph.D, Hopkins, 98. *Prof. math*, Notre Dame, 85-89, math. and mech, 90-92; *mech, Catholic Univ*, 95- Int. Conf. Aerial Navigation (gen. sec'y, 93, official delegate, 00). Mech. Eng; Wash. Philos. Soc. Resistance of air below 1,000 feet per second; a chronograph for small intervals of time; aerodynamics; aerial navigation; skin friction of air up to 30 miles an hour; absolute measurement of air velocity; absolute pressure of air on normal standard plane; lift and drift of arched surfaces; law of interference of superposed planes.

Zahm, Dr. J(ohn) A(ugustine), Holy Cross College, Brookland, D. C. *Physics*. New Lexington, Ohio, June 14, 51. A.B, A.M, Notre Dame, 71; Ph.D. (from Pope Leo XIII), 95. Entered Order of Holy Cross, 71; in charge, scientific dept, Notre Dame, 74-95. Pres, board of trus-

tees, Notre Dame. Soc. de Physique; Soc. Sci. de Bruxelles; Arcadia Rome; Soc. Dantesca, Florence; N.Y. Authors Club. Evolution and dogma; sound and music; Bible science and faith; scientific theory and Catholic doctrine; science and the church; following the conquistadores; woman in science.

Zanetti, Prof. J(oaquin) Enrique, Columbia University, New York, N. Y. *Chemistry*. Santo Domingo, W. I, Jan. 20, 85. A.B, Harvard, 06, A.M, 07, Ph.D, 09. Austin teaching fellow org. chem, Harvard, 07-09; instr. chem, Columbia, 09-12; director, Lab. Indust. Chem, Montevideo, Uruguay, 12-13; *asst. prof. chem, Columbia*, 13- Capt, ordnance dept, A.E.F, 17-18; major, C.W.S, 18, lieut. col, 18-19; sec'y for the U. S. Interallied Commission for Chem. Warfare Supplies, 18-19. Légion d'honneur; D. S. order; officer, Order Crown of Italy. A.A; Chem. Soc; Soc. Chem. Indust. Hydrocarbons; furoyl acetic ester; action of silicon tetrachlorid on fatty acids; thermal decomposition of natural gas condensate, benzene, propane-butane and ethane-butane.

de Zeeuw, Prof. Richard, East Lansing, Mich. *Botany*. Alton, Iowa, March 15, 80. A.B, Hope, 06, hon. A.M, 09; A.B, Michigan, 07, Ph.D, 09. Instr. bot, *Mich. Agr. Col*, 09-10, asst. prof, 10-13, *assoc. prof*, 13- A.A; Bot. Soc; Mich. Acad. (sec'y, 11). Comparative viability of seeds; seed sterilization; botanical technique.

Zehring, Prof. W(illiam) A(rthur), Purdue University, La Fayette, Ind. *Mathematics*. Germantown, Ohio, Dec. 6, 76. A.B, Otterbein, 98, A.M, 03; A.B, Harvard, 03. *Prof. math*, Eastern, 98-02; Campbell, 03-05; *assoc. prof, Purdue*, 05- Math. Soc; Ind. Acad.

Zeisberg, Fred(eric) C(lemens), E. I. duPont de Nemours and Co, Wilmington, Del. *Chemistry*. Jefferson City, Mo, May 13, 88. Virginia. Chemist, Mathieson Alkali Works, 07-08; *E. I. duPont de Nemours and Co*, 09-17, manager, intelligence div. and later elementary process div, chem. dept, 19- Chem. Soc. (sec'y, Del. sect, 19); Electrochem. Soc; Chem. Eng. Oxidation of ammonia; sulphuric acid manufacture; explosives; nitric acid manufacture and concentration; fixation of nitrogen.

Zeit, Prof. F(rederick) Robert, 4016 Vincennes Ave, Chicago, Ill. *Pathology*. Switzerland, March 13, 64. Gymnasium, Elberfeld, Cologne, Düsseldorf; M.D, Western Reserve, 87. Asst. and instr. path. and bacter, Northwestern, 99-00, *prof*, 00-01; Post-Grad. Med. Sch, Chicago, 00-18; *path, Northwestern*, 02- Asst. and later collaborator of Prof. Edwin Klebs, 97-00; pathologist, Wesley, Mercey, Provident, Alexian Brothers and Grant Hospitals. A.A; Ass. Path. and Bact; Am. Med. Ass; Soc. Med. Hist; Chicago Path. Soc. (pres, 04). Pathology of tumors; effect of electric currents on bacteria; longevity of typhoid bacilli in lake and river water; pathology and bacteriology of uretero-intestinal anastomosis; congenital atresia of esophagus; acute glanders in man; etiology of syphilis; histogenesis of endothelial tumors.

Zeleny, Prof. Anthony, University of Minnesota, Minneapolis, Minn. **Physics*. Racine,

- Wis, April 20, 70. B.S., Minnesota, 92, M.S., 93, Ph.D., 07; Chicago, 00; Göttingen, 12; Princeton, 15-16. Instr. *physics*, Minnesota, 97-06, asst. prof., 06-09, *prof.*, 09- A.A. (v. pres, 14); Physical Soc. Electric condensers; induction; moving coil galvanometer; thermoelectric couples; low temperatures; moisture in materials.
- Zeleny, Prof. Charles**, University of Illinois, Urbana, Ill. **Zoology*. Hutchinson, Minn., Sept. 17, 78. B.S., Minnesota, 98, M.S., 01; Ph.D., Chicago, 04. Instr. *zool.*, Indiana, 04-05, asst. prof., 06-07, assoc. prof., 07-09; asst. prof., Illinois, 09-10, assoc. prof., 10-15, *prof.*, 15- A.A.; Soc. Nat.; Soc. Zool. Regeneration; experimental embryology; internal factors controlling regeneration; ontogenetic and regenerative development; localization of developmental factors in the egg; dimorphism of spermatozoa; effect of selection; character of germinal changes.
- Zeleny, Prof. John**, 44 Cold Spring St., New Haven, Conn. **Physics*. Racine, Wis., March 26, 72. B.S., Minnesota, 92, Ph.D., 06; B.A., Cambridge, 99; Berlin, 97. Instr. *physics*, Minnesota, 92-96, asst. prof., 96-00, assoc. prof., 00-08, *prof.*, 08-15, acting dean, grad. sch., 12-13; *prof.*, Yale, 15- A.A. (sec'y, B, 01, sec'y, council, 10, gen. sec'y, 11); Physical Soc. (assoc. ed., 'Review,' 13, counselor, 11-14); Philos. Soc.; Am. Acad. Conduction of electricity through gases; photo-electric effect; mobilities of ions; properties of ionized gases; vapor pressures of solid and liquid carbonic acid and some mixtures; propagation of smell; electrical discharges from pointed conductors; instability of electrified liquids; electrical discharges from liquid surfaces; sensitive points.
- Zeller, Dr. Sanford M(yron)**, Oregon Agricultural College, Corvallis, Oregon. *Botany*. Coldwater, Mich., Oct. 19, 85. B.S., Greenville, 09; A.B., Washington (Seattle), 12, A.M., 13; fellow, Washington (St. Louis), 14-17, Ph.D., 17. Instr. science, Pacific (Wash.), 09-12; asst. bot., Washington (Seattle), 12-13, instr., 13-14; special investigator dendro-pathology, Mo. Bot. Garden, 17-19; asst. *prof. plant path.*, Oregon Col., and asst. plant pathologist, *Exp. Sta.*, 19-20, *assoc. prof. and assoc. plant pathologist*, 20- Mem. kelp investigation exped. to Alaska, bur. soils, U. S. Dept. Agr., summer, 13. A.A.; Bot. Soc.; Phytopath. Soc. Forest pathology; plant physiology; mycology; pathology of fruit trees.
- Zerban, Dr. F(rederick) W(illiam)**, 4623 S. Priour St., New Orleans, La. *Chemistry*. Oppenheim, Germany, Oct. 20, 80. Ph.D., Munich, 03. Asst. chem., Col. City of N. Y., 04-06; chemist, La. Sugar Exp. Sta., 06-08; director, Sugar Exp. Sta., Lima, Peru, 08-09; subdirector, Agr. Exp. Sta., Tucuman, Arg. Rep., 09-10; research chemist, P. R. Sugar Planters Exp. Sta., 11-12; manager, agr. office, Potash Syndicate, 13-17; *research chemist*, La. Sugar Exp. Sta., 17- Asst. ed., 'Chem. Abstracts.' A.A.; Chem. Soc.; Ass. Chim. de Suer. et de Dist. de France. Carbohydrate chemistry; decolorizing carbons; rare earths; radioactivity.
- Zern, E(dward) N(athan)**, 29 Lincoln Ave., Crafton, Pa. *Mining*. Coaldale, Pa., March 11, 79. B.S., Pa. State, 03; E.M., Pittsburgh, 12. Instr. mining and miner, Pa. State, 03-05; mining engineer and supt. of mines in Ky, Pa., and W. Va., 05-11; asst. prof. coal mining, Pittsburgh, 11-12; prof. mining eng., West Virginia, 12-17; ed., 'Min. Catalog,' and 'Coal Catalog,' 17- Eng. Educ.; Coal Min. Inst.; Mino Safety Ass.; W. Va. Coal Min. Inst. (sec'y-treas.). Coal mining; mine lighting; explosions; welfare movements in mining.
- Zetek, James**, Box 245, Ancon, C. Z. *Entomology*. Chicago, Ill., Dec. 12, 86. A.B., Illinois, 11. Entomologist, Isthmian Canal Commission, 11-13; entomologist, Panama Govt., 14-15, director, Nat. Expos., Panama, 15-16; prof. biol. and hygiene, Nat. Inst., 16-18; entomologist, Panama Canal, 18-20; *specialist, bur. entom.*, U. S. Dept. Agr., 20- Gold medal, Nat. Inst., Panama, 15, 16, 17; grand prize, Nat. Expos., 16. A.A.; Entom. Soc.; Ass. Econ. Entom.; Ecol. Soc.; Ill. Acad. Medical and sanitary entomology; behavior; ecology; Anopheles and malaria; forest-inhabiting mollusks; Mollusca of Panama.
- Ziegler, Prof. Victor**, Golden, Colo. *Geology*. Beverungen, Germany, Nov. 2, 86. A.B., Iowa, 08; fellow, Columbia, 09-10, A.M., 10; Ph.D., Denver, 16. Instr. geol., Pa. State, 10-11; asst. prof. petrol. and miner, S. Dak. Sch. Mines, 11-13, *prof.*, 13-14; assoc. and later prof., Colo. Sch. Mines, 14-19; *consulting geologist*, 19- A.A.; Geol. Soc.; Min. Eng.; Seismol. Soc. Mineralogy; petrography; oil and gas; oil shales; ore deposits.
- Zies, Dr. Emanuel G(eorge)**, Geophysical Laboratory, Washington, D. C. *Chemistry*. Baltimore, Md., Sept. 26, 83. A.B., Hopkins, 06, fellow, 08-09, Ph.D., 09. *Chemist*, Standard Lime and Stone Co., 09-13; *geophys. lab.*, Carnegie Institution, 13- Mem. Nat. Geog. Soc. exped. to Mt. Katmai, Alaska, 19. A.A.; Chem. Soc.; Wash. Acad. Osmotic pressure; secondary copper sulphid enrichment; mineralogical chemistry.
- Zimm, Louis A(rthur)**, 1344 Lumpkin St., Athens, Ga. *Forestry*. New York, N. Y., Jan. 15, 94. B.S., Cornell, 16, M.F., 18. Instr. plant path., Cornell, 16-18; exten. forester, Georgia, 19; *timber estimator*, South. Pine Ass., 19- Field asst. forest path., U. S. Dept. Agr., summer, 17. A.A.; Phytopath. Soc.; Okefinokee Soc. Forest pathology; wilt disease of maples; timber decay.
- Zimmer, John T(odd)**, Department of Agriculture, Port Moresby, Papua. *Zoology*. Bridgeport, Ohio, Feb. 28, 89. B.S., Nebraska, 10, A.M., 11. Field expert entom., Nebr. Exp. Sta., 10-13; collaborator, bur. entom., U. S. Dept. Agr., 13; asst. entomologist, Bur. Agr., P. I., 13-17; *agr. expert, dept. agr.*, Papua, 17- Mem. Ornith. Union; Nebr. Ornith. Union (sec'y-treas., 12); Wash. Biol. Soc. General biology; systematic and economic entomology; ornithology; mammalogy.
- Zimmerli, Dr. William F(rederick)**, Howe Rubber Corporation, New Brunswick, N. J. *Chemistry*. New York, N. Y., Jan. 2, 88. B.S., Brooklyn Polytech., 09; Ph.D., Heidelberg, 12. Research chemist, B. F. Goodrich Co., 12-14; asst. prof. chem., Akron, 14-16; *chief chemist*, Pfaunder Co., 16-19; *Howe Rubber Corp.*, 20- Chem. Soc. (chairman, Rochester sect., 19); Chem. Eng. Rubber chemistry.

- Zimmerman, R(ufus) E(icher)**, American Sheet and Tin Plate Co, Pittsburgh, Pa. *Chemistry*. Ph.B, Franklin and Marshall, 08; B.S, Mass. Inst. Tech, 11. Instr. theoret. chem, Mass. Inst. Tech, 13-14; asst. director, *research lab*, *Am. Sheet and Tin Plate Co*, 15-17, director, 18- Chem. Soc. (chairman, Pittsburgh sect, 19, councilor, 20); Electrochem. Soc. (chairman, Pittsburgh sect, 18, mem. board, 19-21); Am. Iron and Steel Inst; Min. and Metal. Eng.
- Zingher, Dr. Abraham**, Foot of E. 16th St, New York, N. Y. *Bacteriology*. Roumania, April 21, 85. M.D, Cornell, 08; D.P.H., N. Y. Univ, 17. Asst. director, *research lab*, Dept. Health, N. Y. City, 13-; instr. bacter. Univ. and Bellevue Hosp. Med. Col, 15- Asst. visiting physician, Willard Parker Hosp, N. Y. City, 16- Ass. Path. and Bact; Soc. Exp. Biol; Pub. Health Ass; fel. N. Y. Acad. Med. Serology; immunity; diphtheria; poliomyelitis; scarlet fever; blood transfusion.
- Zinn, Prof. John B(rown)**, 10 Dean St, Worcester, Mass. *Chemistry*. Gettysburg, Pa, Aug. 20, 88. B.S, Pennsylvania Col, 09; Ph.D, Hopkins, 13. Instr. chem, Amherst, 13-16, assoc. prof, 16-19; prof, Worcester, 19- Chem. Soc. Osmotic pressure.
- Zinsser, Dr. Frederick George**, Hastings-on-Hudson, N. Y. *Chemistry*. New York, N. Y., March 20, 68. Columbia; Göttingen; A.M, Ph.D, Heidelberg, 91. Chemist and works manager, *W. Zinsser and Co*, 91-97, chem. manufacturer, 97- Major, C.W.S, 18-19; asst. food anal. to Prof. Chas. Blas, Lourvain, and Belgian Board of Health. Chem. Soc; Soc. Chem. Indust; Soc. de Chim. indust. Photographic chemicals; intermediates; dyes.
- Zinsser, Dr. Hans**, 437 W. 59th St, New York, N. Y. **Bacteriology*. New York, N. Y., Nov. 17, 78. A.B, Columbia, 99, A.M, M.D, 03. Mem. house staff, Roosevelt Hosp, 03-05, bacteriologist, 05-06; asst. bacter, Columbia, 05-06; asst. pathologist, St. Luke's Hosp, 07-10; instr. bacter, Columbia, 08-10; assoc. prof, Stanford, 10-11, prof, 11-13; Columbia, 13- Bacteriologist, Presb. Hosp, 13-; Red Cross exped. to Serbia, 15; major, lieut. col. and col, M.C, A.E.F, 17-19. Soc. Bact; Ass. Path. and Bact; Soc. Exp. Path; Soc. Exp. Biol; Soc. Immunol. (pres, 19); Soc. Cancer Research; Harvey Soc; N. Y. Path. Soc. (pres, 15). Epidemiology; immunology; serology; precipitin reactions; anaphylaxis; syphilis; streptococcus infections.
- Ziwet, Prof. Alexander**, Tappan Ave, Ann Arbor, Mich. **Mathematics, Mechanics*. Breslau, Germany, Feb. 8, 53. C.E, Polytech, Karlsruhe, 80. Asst. U. S. Lake Surv, 80-82; U. S. Coast and Geod. Surv, 82-87; instr, later asst. prof, junior prof. and prof. math, Michigan, 88- A.A; Math. Soc. (assoc. ed, 'Bul'); Math. Ass.
- Zobel, Dr. Otto Julius**, 195 Broadway, New York, N. Y. *Physics*. Ripon, Wis, Oct. 20, 87. A.B, Ripon, 09; A.M, Wisconsin, 10, fellow, 11-12, Ph.D, 14. Asst. physics, Wisconsin, 10-11, instr, 13-15; Minnesota, 15-16; with *Am. Telephone and Telegraph Co*, 16- A.A; assoc. Physical Soc. Mathematical physics; theory of heat conduction; thermal radiation.
- Zoller, Harper F(ylar)**, Central Station No. 2, Washington, D. C. *Chemistry*. Sand Springs, Iowa, April 13, 89. B.S, Lenox, 10; M.S, Illinois, 13. Research asst, Illinois, 11-13; prof. physical sciences, Puget Sound, 13-15; asst. prof. chem, Kansas State, 15-17; org. chemist, dairy div, bur. animal indust, U. S. Dept. Agr, 17- A.A; Soc. Biol. Chem; Chem. Soc. Bromin in kelp; caramel; constituents of grape fruit; indole; milk by-products.
- Zon, Raphael**, U. S. Forest Service, Washington, D. C. *Forestry*. Simbirsk, Russia, Dec. 1, 74. A.B, Gymnasium, Simbirsk, 92; B.S, Univ. of Kazan, 96; Brussels, 97-98; F.E, Cornell, 01. Forest asst, U. S. Forest Service, 01-07, chief, forest investigations, 07- Ed, 'Jour. Forestry'; mem. Nat. Research Council. A.A; Soc. Foresters (v. pres); Forestry Ass; Bot. Soc; Ecol. Soc; Ass. Geog; Wash. Acad. Forest ecology; light in relation to forest trees; forest meteorology; forests and stream flow; forest resources of the world.
- Zons, Dr. Frederick W(illiam)**, 505 W. 164th St, New York, N. Y. *Chemistry*. A.B, Columbia, 07, A.M, 10, fellow, 10-11, Ph.D, 11. Instr. physics, Col. City of N. Y, 07-09, chem, 09-10; chief chemist, Westinghouse Lamp Co, 11-16; chemist and manager, New Process Gas Mantle Co, 16-19; research chemist, 19- Chairman, dept. science, evening high sch, N. Y. City, 14-16; director, Newark Sci. Research Lab, 14-16; capt, U.S.R.C. A.A; Chem. Soc. (abstractor); Electrochem. Soc; N. J. Chem. Soc. (chairman, pub. committee, ed, 'Bull.' and 'Year Book', 20-, mem. committee on public affairs). Determination of rare earths; manufacture of rare earth and rare metal products; carbon and tungsten lamps.
- Zowski-Zwierzchowski, Prof. S(tanislaus) J(an)**, University of Michigan, Ann Arbor, Mich. *Mechanical engineering*. Srem, Poland, April 27, 80. Dipl. Ing, Charlottenburg, Germany. Designer, Dayton Globe Iron Works Co, 05; Allis Chalmers Co, 06; Allis Chalmers Bullock Co, 07; instr. mech. eng, Michigan, 08-09, asst. prof, 09-10, junior prof, 11-12, prof, 13- Mech. Eng; Eng. Educ; Turbinentechn. Gesell. Applied hydromechanics; water turbines; centrifugal pumps.
- Zuber, N(eill) D(aniel)**, American Refrigerator Transit Co, Little Rock, Ark. *Botany*. Bryan, Tex, Nov. 10, 94. B.S, Tex. Col, 15, fellow. Deputy nursery and orchard inspector, Tex. Dept. Agr, 16, asst. entomologist and plant pathologist, 16-17, chief plant pathologist, 17-20; horticulturist, *Am. Refrigerator Transit Co*, 20- Chief nursery inspector, Tex, 18; collaborator, bur. plant indust, U. S. Dept. Agr, 18-19. A.A; Bot. Soc; Ry. Dev. Ass; Tex. Ry. Dev. Ass. Plant pathology; citrus culture in Texas.
- Zwillinger, Max**, 1020 Potomac Ave, S. E, Washington, D. C. *Optics*. Troppau, Silesia, May 7, 78. C.E, Polytech, Vienna, 02. Railroad engineer, 03-09; bridge designer, 09-10; designer of optical instruments and systems, 10-; in charge, scientific dept, optical shop, Navy Yard. Optical Soc. Telescopic optics applied to the construction of military instruments.

AMERICAN MEN OF SCIENCE WHO DIED BETWEEN JANUARY 1, 1903, AND DECEMBER 31, 1920.

- Abbe, Cleveland. *Meteorology*. 38-16.
 Abbott, Arthur Vaughan. *Elec. eng.* 54-06.
 Abbott, Charles Conrad. *Zool. Archeol.* 43-19.
 Abbott, Samuel Warren. *Medicine*. 37-04.
 Abert, Sylvanus Thayer. *Civil engineering*. 28-03.
 Acker, Charles Ernest. *Electrochemistry*. 68-20.
 Adams, Arthur Kinney. *Geology*. 83-20.
 Adler, Isaac. *Medicine*. 49-18.
 Agassiz, Alexander. *Zoology*. 35-10.
 Alden, Charles Henry. *Medicine*. 36-10.
 Alden, John. *Chemistry*. 56-?
 Aldrich, Charles. *Ornithology*. 28-09.
 Alexander, William De Witt. *Ethnology*. 33-13.
 Allen, William Frederick. *Metrol. Ry. econ.* 46-15.
 Allin, Arthur. *Psychology*. 69-03.
 Alpers, William Charles. *Pharmaceut. chem.* 51-17.
 Alvord, Henry Elijah. *Agriculture*. 44-04.
 Anderson, Malcolm Playfair. *Zoology*. 79-19.
 Andrews, Edmund. *Surgery, Archeology*. 24-04.
 Anthony, William Arnold. *Physics*. 35-08.
 Apgar, Austin Craig. *Natural history*. 38-08.
 Apple, Andrew Thomas Gelger. *Astronomy*. 58-18.
 Ashley, Harrison Everett. *Chemistry*. 76-11.
 Ashmead, William Harris. *Entomology*. 55-08.
 Atkinson, Edward. *Economics*. 27-05.
 Atkinson, George Francis. *Botany*. 54-18.
 Atwater, Wilbur Olin. *Chemistry*. 44-07.
 Aubert, Alfred Bellamy. *Chemistry*. 53-?
 Austen, Peter Townsend. *Chemistry*. 52-08.
 Ayres, Brown. *Physics*. 56-19.
 Bailey, Bert Heald. *Ornithology*. 75-17.
 Bailey, William Whitman. *Botany*. 43-14.
 Bailly, Jules. *Natural history*. 31-08.
 Bain, Samuel McCutchen. *Botany*. 69-14.
 Baird, John Wallace. *Psychology*. 73-19.
 Baker, Frank. *Zool. Anat.* 41-18.
 Baker, Marcus. *Mathematics, Geography*. 49-04.
 Baldwin, David Dwight. *Conchol. Bot.* 31-12.
 Bandelier, Adolph F. A. *Archeology*. 40-14.
 Bannister, Henry Martyn. *Medicine, Geology*. 44-20.
 Barber, Edwin AtLee. *Archeol. Bot.* 51-16.
 Barker, Franklin Luther. *Economic geology*. 71-20.
 Barker, George Frederick. *Physics, Chem.* 35-10.
 Barlow, Alfred Ernest. *Geology*. 61-14.
 Barnard, Edith Ethel. *Chemistry*. 80-?
 Barnes, Charles Reid. *Botany*. 58-10.
 Barrell, Joseph. *Geology*. 69-19.
 Bartlett, John Russell. *Physical geography*. 43-04.
 Bates, Oric. *Archeology*. 83-18.
 Baumgarten, Gustav. *Medicine*. 37-10.
 Beach, Henry Harris Aubrey. *Anatomy*. 43-10.
 Beal, Foster E. L. *Ornithology*. 40-16.
 Bean, Tarleton Hoffman. *Zoology*. 46-16.
 Beardsley, Arthur. *Engineering*. 67-20.
 Beck, Carl. *Surgery*. 56-11.
 Becker, George Ferdinand. *Geology*. 47-19.
 Beebe, William. *Math, Astron.* 51-17.
 Beecher, Charles Emerson. *Paleontology*. 56-04.
 Behr, Hans Hermann. *Entomology*. 18-04.
 Belding, Lyman. *Ornithology*. 29-17.
 Belknap, George Eugene. *Hydrography*. 32-03.
 Bell, Agrippa Nelson. *Medicine*. 20-?
 Bell, Albert Thomas. *Botany*. 68-19.
 Bell, Alexander Melville. *Phonetics*. 19-05.
 Bell, Charles J. *Chemistry*. 54-03.
 Bell, Robert. *Geol. Forestry, Ethnology*. 41-17.
 Benecke, Adelbert Oswald. *Electrical eng.* 55-?
 Benton, Frank. *Entomology*. 52-19.
 Berg, Walter Gilman. *Civil engineering*. 58-08.
 Bergen, Joseph Young. *Botany*. 51-17.
 Bergström, John Andrew. *Psychology*. 67-10.
 Bessey, Charles Edwin. *Botany*. 45-15.
 Beyer, Henry Gustav. *Physiology*. 50-18.
 Bickmore, Albert Smith. *Geology*. 39-14.
 Billings, John Shaw. *Medicine*. 38-13.
 Birkinbine, John. *Mining eng.* 44-15.
 Bishop, Irving Prescott. *Geology*. 49-12.
 Bishop, Sereno Edwards. *Geology*. 27-09.
 Blackford, Eugene Gilbert. *Ichthyology*. 39-04.
 Blake, Clarence John. *Otology*. 43-19.
 Blake, Francis. *Physics*. 50-13.
 Blake, Lucien Ira. *Physics*. 54-16.
 Blake, William Phipps. *Geology*. 26-10.
 Blanchard, Frederick. *Entomology*. 43-?
 Bôcher, Maxime. *Mathematics*. 67-18.
 Bodine, Donaldson. *Geol. Zool.* 66-?
 Bogue, Ernest Everett. *Forestry*. 64-07.
 Bolton, Henry Carrington. *Chemistry*. 43-03.
 Booth, Bradford Allen. *Medicine*. 78-19.
 Boss, Lewis. *Astronomy*. 46-12.
 Bouscaren, Louis F. G. *Engineering*. 40-04.
 Bowditch, Henry Pickering. *Physiol.* 40-11.
 Bowser, Edward Albert. *Engineering*. 45-10.
 Boyè, Martin Hans. *Chemistry, Medicine*. 12-09.
 Brace, DeWitt Bristol. *Physics*. 58-05.
 Brackett, Cyrus Fogg. *Physics*. 33-15.
 Bradford, Royal Bird. *Naval science*. 44-14.
 Brainerd, Wolter Kirk. *Dairy husbandry*. 73-?
 Brashear, John Alfred. *Physics*. 40-20.
 Brewer, William Henry. *Bot. Geol.* 28-10.
 Brewster, William. *Ornithology*. 51-19.

- Brickner, Samuel Max. *Gynecology*. 67-16.
 Brinckerhoff, Walter Remsen. *Medicine*. 74-11.
 Broadhead, Garland Carr. *Geology*. 27-12.
 Brodie, Thomas Gregor. *Physiology*. 66-7.
 Brodie, William. *Biology*. 31-09.
 Brooks, William Keith. *Zoology*. 48-08.
 Brower, Jacob Vradenberg. *Archeology*. 44-05.
 Brown, Amos Peaslee. *Geology*. 64-17.
 Brown, Arthur Erwin. *Zoology*. 50-10.
 Brown, Benjamin G. *Mathematics*. 37-03.
 Brown, William George. *Chemistry*. 53-20.
 Browne, John Joseph. *Mathematics*. 66-7.
 Brownell, Walter Abner. *Geology*. 38-04.
 Brumback, Arthur Marion. *Chemistry*. 69-16.
 Brush, George Jarvis. *Mineralogy*. 31-12.
 Bryan, Albert Hugh. *Chemistry*. 74-20.
 Buchanan, Roberdeau. *Astronomy*. 39-16.
 Buckhout, William A. *Botany*. 46-12.
 Buckley, Ernest Robertson. *Geology*. 72-12.
 Bull, Charles Stedman. *Ophthalmology*. 45-11.
 Bull, Storm. *Steam engineering*. 56-07.
 Bull, William Tillinghast. *Surgery*. 50-09.
 Burbank, John Emerson. *Physics, Geol.* 72-19.
 Burrill, Thomas Jonathan. *Botany*. 39-16.
 Burton, George Dexter. *Electrical eng.* 55-18.
 Busch, Frederick Carl. *Physiology*. 73-14.
- Cairnes, DeLorme Donaldson. *Geology*. 79-17.
 Caldwell, Eugene Wilson. *Medicine*. 70-18.
 Caldwell, George Chapman. *Chemistry*. 34-07.
 Call, Richard Ellsworth. *Zoology*. 56-17.
 Calvin, Samuel. *Geology*. 40-11.
 Campbell, John Lyle. *Physics, Astronomy*. 27-04.
 Campbell, John Pendleton. *Physiology*. 63-18.
 Campbell, Roland Playfair. *Surgery*. 76-16.
 Carhart, Henry Smith. *Physics*. 44-20.
 Carmalt, Churchill. *Anatomy*. 66-05.
 Carpenter, Franklin Reuben. *Geology*. 48-10.
 Carpenter, Rolla Clinton. *Mech. eng.* 52-19.
 Carroll, Charles Geiger. *Chemistry*. 75-16.
 Carroll, James. *Pathology*. 54-07.
 Carter, James Madison Gore. *Medicine*. 43-19.
 Carter, Oscar Charles Sumner. *Geology*. 57-17.
 Case, Willard Erastus. *Electricity*. 57-18.
 Catlin, Charles Albert. *Chemistry*. 49-16.
 Chaille, Stanford Emerson. *Physiology*. 30-11.
 Chalmers, Robert. *Geology*. 34-08.
 Chamberlain, Alexander Francis. *Anthrop.* 65-14.
 Chandler, Charles Henry. *Mathematics*. 40-12.
 Chandler, Seth Carlo. *Astronomy*. 46-13.
 Chandler, William Henry. *Chemistry*. 41-06.
 Chanute, Octave. *Engineering*. 32-10.
 Chapman, Edward John. *Mineralogy*. 21-04.
 Chapman, Henry Cadwalader. *Medicine*. 45-09.
 Chapman, Robert Hollister. *Topography*. 68-20.
 Charles, Fred Lemar. *Zoology*. 72-11.
 Cheesman, Timothy Matlack. *Medicine*. 53-19.
- Cheever, David Williams. *Medicine*. 31-15.
 Chester, Albert Huntington. *Chemistry*. 43-03.
 Chittenden, Hiram Martin. *Civil eng.* 58-17.
 Christie, James. *Mech. eng.* 40-11.
 Christy, Samuel Benedict. *Mining eng.* 53-14.
 Churchill, William. *Anthropology*. 59-20.
 Churchill, William Wilberforce. *Mech. eng.* 67-10.
 Cilley, Frank Harvey. *Mechanics*. 69-05.
 Clark, Admont Halsey. *Pathology*. 88-18.
 Clark, Gaylord Parsons. *Physiology*. 56-07.
 Clark, William Bullock. *Geology*. 60-17.
 Clarke, Benjamin Franklin. *Mech. eng.* 31-08.
 Clarke, Cora Huidekoper. *Botany*. 51-16.
 Claypole, Edith Jane. *Physiol, Path.* 7-15.
 Cleghorn, Allen Mackenzie. *Physiol, Med.* 72-16.
 Coe, Howard Sheldon. *Agriculture*. 88-18.
 Coffin, Selden Jennings. *Math, Meteorol.* 38-15.
 Cole, Aaron Hodgman. *Biology*. 56-14.
 Coleman, Clarence. *Civil eng.* 7-18.
 Collin, Henry Alonzo. *Physics, Chem.* 37-18.
 Collingwood, Francis. *Civil eng.* 34-11.
 Collins, Frank Shipley. *Botany*. 48-20.
 Collins, Joseph William. *Ichthyology*. 39-04.
 Colson, Harold Roy. *Astronomy*. 76-13.
 Colton, Buel Preston. *Biology*. 52-06.
 Compton, Alfred George. *Physics, Astron.* 35-13.
 Comstock, Cyrus Ballou. *Engineering*. 31-10.
 Comstock, Theodore Bryant. *Geology*. 49-15.
 Conant, Levi Leonard. *Mathematics*. 57-16.
 Condon, Thomas. *Geology*. 32-07.
 Congdon, Ernest Arnold. *Chemistry*. 66-17.
 Conn, Herbert William. *Biology*. 59-17.
 Cook, Albert John. *Biology*. 42-16.
 Cooley, LeRoy Clark. *Physics*. 33-16.
 Coquillet, Daniel William. *Entomology*. 56-11.
 Corning, James Leonard. *Neurology*. 55-03.
 Cornwall, Henry Bedinger. *Chemistry*. 44-17.
 Cowles, Edward. *Medicine*. 37-19.
 Cox, Charles Finney. *Biology*. 46-12.
 Cox, Ulysses Orange. *Biology*. 64-20.
 Crafts, James Mason. *Chemistry*. 39-17.
 Cragin, Edwin Bradford. *Obstetrics*. 59-19.
 Craig, John. *Horticulture*. 64-12.
 Crampton, Charles Albert. *Chemistry*. 58-15.
 Crandall, Charles Lee. *Civil eng.* 50-17.
 Craw, Albert. *Entomology*. 50-08.
 Croes, John James Robertson. *Civil eng.* 34-06.
 Crouch, H. Chester. *Engineering*. 71-03.
 Cummings, Clara Eaton. *Botany*. 55-06.
 Curtin, Jeremiah. *Anthropology*. 40-07.
 Curtis, John Green. *Physiology*. 44-13.
 Curtiss, Allen Hiram. *Botany*. 45-07.
- Cushing, Sumner Webster. *Geography*. 79-20.
 Daggett, Frank Slater. *Ornithology*. 55-20.
 Daniells, William Willard. *Chemistry*. 40-11.
 Daniels, Archibald Lamont. *Mathematics*. 49-18.

- Daugherty, Lewis Sylvester. *Zoology*. 57-19.
 Davenport, George Edward. *Botany*. 33-08.
 Davidson, George. *Geog, Astron.* 25-11.
 Davidson, Robert James. *Chemistry*. 62-15.
 Davis, Charles Albert. *Geol, Bot.* 61-16.
 Davis, Ellery Williams. *Math.* 57-18.
 Davis, Grant Train. *Chemistry*. 77-20.
 Davis, Gwilym George. *Medicine*. 57-18.
 Davis, Joseph Baker. *Civil eng.* 45-20.
 Davis, Nathan Smith. *Medicine*. 17-04.
 Davis, Noah Knowles. *Psychology*. 30-10.
 Davison, Alvin. *Zoology*. 68-15.
 Dawbarn, Robert H. M. *Surgery*. 60-15.
 Day, Fisk Holbrook. *Natural history*. 26-03.
 Day, William Cathcart. *Chemistry*. 57-05.
 Delafield, Francis. *Medicine*. 41-15.
 Denison, Charles Simeon. *Stereotomy*. 49-11.
 Dennis, David Worth. *Biology*. 49-16.
 Derby, Orville Adelbert. *Geology*. 51-15.
 Dernehl, Paul Herman. *Zoology*. 78-19.
 Dixon, Samuel Gibson. *Bacteriology*. 51-18.
 Dod, Frederic Hova Wolley. *Entomology*. 72-?
 Dolbear, Amos Emerson. *Physics*. 37-10.
 Dole, Richard Bryant. *Chemistry*. 80-?
 Doolittle, Charles Leander. *Astron, Math.* 43-19.
 Doolittle, Eric. *Astronomy*. 70-20.
 Doremus, Robert Ogden. *Chemistry*. 24-06.
 Doubleday, Neltje DeGraff. *Ethnol, Bot.* 65-18.
 Douglas, James. *Metallurgy*. 37-18.
 Drown, Thomas Messinger. *Chemistry*. 42-04.
 DuBois, Augustus Jay. *Civil eng.* 49-15.
 Dubois, Howard Weidener. *Astronomy*. 68-?
 Du Chaillu, Paul Belloni. *Exploration*. 38-03.
 Duckwall, Edward Wiley. *Chemistry*. 66-16.
 Dudley, Charles Benjamin. *Chemistry*. 42-09.
 Dudley, William Lofland. *Chemistry*. 59-14.
 Dudley, William Russell. *Botany*. 49-11.
 Duncan, Louis. *Elec. eng.* 62-16.
 Duncan, Robert Kennedy. *Chemistry*. 68-12.
 DuPont, Francis Gurney. *Chemistry*. 50-10.
 Dutcher, William. *Ornithology*. 46-20.
 Dutton, Clarence Edward. *Geology*. 41-12.
 Dwight, Thomas. *Anatomy*. 43-11.
 Dwight, William Buck. *Geology*. 33-06.
 Dyche, Lewis Lindsay. *Zoology*. 57-15.
 Dyer, Isadore. *Dermatology*. 65-20.
- Eastman, Charles Rochester. *Geology*. 68-18.
 Eastman, John Robie. *Astronomy*. 36-13.
 Eaton, Alvah Augustus. *Botany*. ?-08.
 Edson, Arthur Woodbury. *Botany*. ?-05.
 Edwards, Arthur Mead. *Geology*. 36-?
 Edwards, William Henry. *Entomology*. 22-09.
 Ehrenfeld, Augustus Clemens. *Chemistry*. 68-?
 Einbeck, William. *Mathematics*. 41-10.
 Elder, William. *Chemistry*. 43-03.
 Eldridge, George Homans. *Geology*. 54-05.
- Elliot, Daniel Giraud. *Zoology*. 35-15.
 Ellis, Job Bicknell. *Mycology*. 29-05.
 Ellis, William Hodgson. *Chemistry*. 45-20.
 Ely, Achsah Mount. *Mathematics*. 48-04.
 Ely, Theodore Newel. *Engineering*. 66-16.
 Emerson, Frederick Valentine. *Geology*. 71-19.
 Emmons, Samuel Franklin. *Geology*. 41-11.
 Emory, Frederick Lincoln. *Mechanics*. 67-19.
 Endemann, Samuel Theodor H. C. *Chemistry*. 42-09.
 Engelmann, George Julius. *Gynecology*. 47-03.
 Engler, Edmund Arthur. *Mathematics*. 56-18.
 Esty, William Cole. *Mathematics*. 38-16.
 Evans, Edgar G. *Chemistry*. 84-14.
 Evans, Thomas. *Chemistry*. 63-07.
 Ewell, Ervin Edgar. *Chemistry*. 67-05.
- Fairbanks, Henry. *Numismatics, Mechanics*. 30-18.
 Fanning, John Thomas. *Mechanics*. 37-11.
 Fargis, George Aloysius. *Astronomy*. 54-16.
 Farlow, William Gilson. *Botany*. 44-19.
 Faxon, Charles Edward. *Botany*. 46-18.
 Faxon, Walter. *Zoology*. ?-20.
 Ferry, John Farwell. *Ornithology*. 77-10.
 Fielde, Adele Marion. *Biology*. 39-16.
 Finlay, Charles John. *Medicine*. 33-15.
 Firmstone, Frank. *Metallurgy*. 46-17.
 Fisher, George Egbert. *Mathematics*. 63-20.
 Fitz, Reginald Heber. *Medicine*. 43-13.
 Fleming, Mrs. Williamina Paton. *Astron.* 57-11.
 Fletcher, Horace. *Dietetics*. 49-19.
 Fletcher, Hugh. *Geology*. 48-10.
 Fletcher, James. *Entomology, Botany*. 52-08.
 Fletcher, Robert. *Medicine*. 23-12.
 Flint, Austin. *Physiology*. 36-15.
 Flint, James Milton. *Medicine*. 38-19.
 Folsom, Charles Follen. *Medicine*. 42-?
 Fontaine, William Morris. *Paleobotany*. 35-13.
 Forbes, Charles Noyes. *Botany*. 83-20.
 Forbes, William Smith. *Anatomy*. 31-05.
 Forchheimer, Frederick. *Medicine*. 53-13.
 Foster, Horatio Alvah. *Elec. eng.* 58-?
 Fowler, Edwin Horatio. *Geodesy*. 56-04.
 Francis, William. *Chemistry*. 19-04.
 Frary, Hobart Dickinson. *Mech. eng.* 87-20.
 Frazer, Persifor. *Geology, Chemistry*. 44-09.
 Frazier, Benjamin West. *Mineralogy*. 42-05.
 Freer, Paul C. *Chemistry*. 62-12.
 Frizell, Joseph Palmer. *Engineering*. 32-10.
 Fuertes, Estevan Antonio. *Civil eng.* 38-03.
 Fuller, Homer Taylor. *Geology*. 38-08.
 Fulmer, Elton. *Chemistry*. 64-16.
 Fulton, Robert Burwell. *Physics, Astron.* 49-19.
- Gable, George Daniel. *Mathematics*. 63-11.
 Gage, Mrs. Susanna Phelps. *Embryology*. 57-15.
 Gallivan, Frank Bernard. *Chemistry*. 72-?
 Gallup, Anna B. *Museum administration*. 72-?

- Gannett, Henry. *Geog. Statistics*. 46-14.
 Ganz, Albert Frederick. *Elec. eng.* 72-17.
 Garber, John Frederick. *Botany*. 68-?
 Gardiner, Edward Gardiner. *Zoology*. 54-07.
 Gardiner, Frederic. *Embryology*. 58-17.
 Garriott, Edward Bennett. *Meteorology*. 53-9.
 Gatling, Richard Jordan. *Physics*. 19-03.
 Gatschet, Albert Samuel. *Anthropology*. 32-07.
 Gattinger, Augustine. *Botany*. 25-03.
 Gayley, James. *Metallurgy*. 55-20.
 Gehrman, Adolph. *Bacteriology*. 68-20.
 Gelston, Louis Merwin. *Bacteriology*. 79-05.
 Genthe, Frederick Augustus. *Chemistry*. 55-10.
 Gerrish, Frederic Henry. *Anatomy*. 45-20.
 Gibbs, Josiah Willard. *Physics*. 39-03.
 Gibbs, Oliver Wolcott. *Chemistry*. 22-08.
 Gilbert, Grove Karl. *Geology*. 43-18.
 Gildersleeve, Nathaniel. *Bacteriology*. 71-19.
 Gill, Theodore Nicholas. *Zoology*. 37-14.
 Gillman, Henry. *Archeology*. 33-15.
 Gilman, Daniel Coit. *Educ. Geog.* 31-08.
 Girdwood, Gilbert Prout. *Chemistry*. 32-18.
 Glenn, William. *Chemistry*. 40-07.
 Goessmann, Charles Anthony. *Chemistry*. 27-10.
 Gold, Theodore Sedgwick. *Agriculture*. 18-06.
 Goode, Richard Urquhart. *Topography*. 58-03.
 Gordy, J. P. *Psychology*. 52-09.
 Gorgas, William Crawford. *Medicine*. 54-20.
 Gottheil, William S. *Dermatology*. 59-20.
 Gow, James Ellis. *Botany*. 77-14.
 Gradle, Henry. *Medicine*. 55-11.
 Graham, Robert Orlando. *Chemistry*. 53-12.
 Grant, James Alexander. *Surgery*. 31-20.
 Gratacap, Louis Pope. *Conchol. Mineral*. 51-17.
 Gray, Thomas. *Physics*. 50-08.
 Greely, Arthur White. *Zoology*. 75-04.
 Green, Arthur Lawrence. *Chemistry*. 57-?
 Green, Bernard Richardson. *Engineering*. 43-14.
 Green, Gabriel Marcus. *Mathematics*. 91-19.
 Green, Samuel Bowdlear. *Horticulture*. 59-10.
 Greene, Charles Ezra. *Civil engineering*. 42-03.
 Greene, Edward Lee. *Botany*. 43-17.
 Gregg, William Henry. *Zoology*. 30-15.
 Griffith, Herbert Eugene. *Chemistry*. 66-20.
 Grimes, James Stanley. *Geology*. 07-03.
 Grossbeck, John Arthur. *Entomology*. 83-14.
 Gulick, Luther Halsey. *Physical Education*. 65-18.
 Gully, Alfred Gurdon. *Horticulture*. 48-17.
 Gulliver, Frederic Putnam. *Geology*. 65-19.
 Guthe, Karl Eugen. *Physics*. 66-15.
 Hague, Arnold. *Geology*. 40-17.
 Hague, James Duncan. *Geology*. 36-08.
 Hahn, Walter Louis. *Zoology*. 79-?
 Hall, Asaph. *Astronomy*. 29-07.
 Hall, Charles Martin. *Electrochem.* 63-14.
 Hall, Christopher Webber. *Geology*. 45-11.
 Hall, James Pierre. *Astronomy*. 49-19.
 Hallock, William. *Physics*. 57-13.
 Hallowell, Susan Maria. *Botany*. 35-11.
 Halsted, Byron David. *Botany*. 52-18.
 Hamilton, Allan McLane. *Neurology*. 48-19.
 Hammond, Howard Spurr. *Botany*. 85-18.
 Hanchett, George Tilden. *Electrical eng.* 71-?
 Hancock, Edward Lee. *Mechanics*. 73-11.
 Hanks, Henry G. *Geology, Chemistry*. 26-07.
 Hardin, Mark Bernard. *Chemistry*. 38-10.
 Hardy, Joseph Johnston. *Mathematics*. 44-15.
 Harkness, William. *Astronomy*. 37-03.
 Harrington, Bernard James. *Mineralogy*. 48-07.
 Harrington, Charles. *Hygiene*. 56-08.
 Harris, Elijah Paddock. *Chemistry*. 32-20.
 Harris, Joseph S. *Astronomy*. 36-10.
 Harris, Rollin Arthur. *Math. Physics*. 63-18.
 Harris, William Torrey. *Psychology*. 35-09.
 Hart, Charles Arthur. *Entomology*. 59-18.
 Hartman, R. N. *Chemistry*. 9-03.
 Hartwell, George Wilber. *Mathematics*. 81-17.
 Haskins, Caryl Davis. *Elec. and mil. eng.* 67-11.
 Hatcher, John Bell. *Paleontology*. 61-04.
 Hayes, Charles Willard. *Geology*. 59-16.
 Haynes, Arthur Edwin. *Mathematics*. 49-15.
 Hazen, John Vose. *Engineering*. 50-19.
 Heidemann, Otto. *Entomology*. 42-?
 Heilprin, Angelo. *Geography*. 53-07.
 Heimrod, George William. *Chemistry*. 76-?
 Henck, John B. *Engineering*. 16-03.
 Hendrickson, William Woodbury. *Math.* 44-20.
 Henry, Frederick Porteous. *Medicine*. 44-?
 Herdman, William James. *Neurology*. 48-06.
 Herrick, Clarence Luther. *Neurology*. 58-04.
 Herter, Christian Archibald. *Pathology*. 65-10.
 Hesse, Conrad E. *Meteorology*. 66-10.
 Hewitt, Charles Gordon. *Zoology*. 85-20.
 Hidden, William Earl. *Mineralogy*. 53-18.
 Higgins, Milton Prince. *Mech. eng.* 42-12.
 Higginson, Thomas W. *Natural science*. 23-11.
 Hilgard, Eugene Woldemar. *Geol. Agr. chem.* 33-16.
 Hill, Ellsworth Jerome. *Botany*. 33-17.
 Hill, George William. *Math. astronomy*. 38-14.
 Hill, Hampden. *Chemistry*. 86-18.
 Hill, Henry Barker. *Chemistry*. 43-03.
 Himes, Charles Francis. *Physics*. 38-?
 Hind, Henry Youle. *Geology*. 23-08.
 Hinton, Charles H. *Mathematics*. 44-07.
 Hirschfelder, Joseph Oakland. *Medicine*. 54-20.
 Hirsh, Jose Lewis. *Pathology*. 71-?
 Hiss, Philip Hanson. *Bacteriology*. 68-13.
 Hitchcock, Charles Henry. *Geology*. 36-19.
 Hitchcock, Edward. *Physical educ.* 23-11.
 Hoch, August. *Psychiatry*. 68-19.
 Hodenpyl, Eugene. *Pathology*. 63-10.
 Hodgson, Richard. *Psychical research*. 55-05.
 Hoeve, Heikobus Johannes H. *Anatomy*. 82-18.

- Hoffmann, Friedrich. *Pharmacy*. 9-04.
Hoffmann, George Christian. *Mineralogy*. 37-9
Holden, Edward Singleton. *Astronomy*. 46-14.
Holmes, Edmund Wales. *Anatomy*. 51-05.
Holmes, Joseph Austin. *Geology*. 59-15.
Hooper, Franklin William. *Zool. Geol.* 51-14.
Hooper, William Leslie. *Elec. eng.* 55-18.
Hoopes, Josiah. *Botany, Ornithology*. 32-04.
Hopkins, Cyril George. *Chemistry*. 66-19.
Hornung, Christian. *Mathematics*. 45-18.
Hoskins, Elmer Ray. *Anatomy*. 90-20.
Hough, George Washington. *Astronomy*. 36-09.
Hough, Williston Samuel. *Philosophy*. 60-12.
Houston, Edwin James. *Elec. eng.* 47-14.
Hovey, Horace Carter. *Geology*. 33-14.
Howell, Edwin Eugene. *Geology*. 45-11.
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FAMILIES OF AMERICAN MEN OF SCIENCE¹

IN a series of articles entitled "A Statistical Study of American Men of Science," printed in *Science* in 1906 and 1910 and as an appendix to the second edition of "The Biographical Directory of American Men of Science," methods were explained by which the thousand leading scientific men of the United States had been selected and arranged in the order of the merit of their work. Studies were made of the measurement of scientific performance, of the origin and distribution of scientific men, and of the changes which occurred during an interval of several years. Data have now been gathered in regard to the families of the men of science previously selected. In our present state of ignorance a statistical study of any homogeneous and objectively chosen group should be of value, both as a contribution to psychological and vital statistics in general and for comparison with other groups which may be similarly studied. Scientific men form a desirable group for such study as, on the one hand, they may be assumed to be willing and competent to supply the information and, on the other hand, knowledge concerning the conditions favorable to scientific performance may have important practical applications.

Of one thousand one hundred and fifty-four scientific men from whom information in regard to their families was requested 1,036 replied and 118 did not. Of the replies 16 were blank, sometimes accompanied by the explanation that the information was not readily attainable or the like, 7 were to the effect that the information would be sent later or the like, 13 were received too late, 25 were very im-

perfect, 975 were usable and in most cases complete. This is an unusually full reply to a questionnaire. For example, in answer to an inquiry in regard to noteworthy relatives addressed to 467 fellows of the Royal Society, Sir Francis Galton received 207 useful replies, and the completely available returns "scarcely exceeded 100." In such cases it is desirable that returns should be complete in order to avoid the selection of a special class. Thus, when people are asked whether they have noteworthy relatives, those having them are more likely to reply than others, and the percentage of positive replies may give no definite information in regard to the frequency. In the present case it appears, from examination of the names of the ten per cent, who failed to reply, that there was no group that would affect appreciably the result of the inquiry.

I. ORIGIN, HEREDITY AND PERFORMANCE

In the previous articles statistics were given in regard to the birthplace of the scientific men, and data are now at hand

TABLE I. NATIONALITY OF THE PARENTS OF AMERICAN MEN OF SCIENCE

	Both Parents	Father Only	Mother Only	Total Families
American.....	628	23	42	660.5
English.....	48	36	28	80
Scotch.....	9	13	15	23
Irish.....	4	10	12	15
Canadian.....	14	3	7	10
German.....	54	23	12	71.5
Norwegian.....	6	0	0	6
Swedish.....	6	0	0	6
Danish.....	1	2	1	2.5
Russian.....	6	0	0	6
Dutch.....	3	3	5	7
French.....	6	6	2	10
Swiss.....	6	4	0	8
Italian.....	0	1	0	0.5
Japanese.....	2	0	0	2
• Total.....	793	124	124	917

¹ Reprinted from *The Popular Science Monthly*, May, 1915, and from *The Scientific Monthly*, March and October, 1917.

in regard to the nationality and race of their parents. Of the thousand scientific men first selected 126 were born abroad—34 in Canada, 38 in Great Britain and 19 in Germany. Table I. gives the nationality of the parents of 917 leading scientific men. Six hundred and twenty-eight, or more than two thirds, have both parents of native American (United States) birth, 23 others have an American father and 42 an American mother, foreign men having married American women more frequently than the reverse. In 165 cases both parents are foreign born and of the same nationality. Including Americans there are 124 marriages in which the nationality of the parents was mixed, but they were largely British. The American-born parents are mainly of British and New England descent; of foreign-born parents, 137 fathers and an equal number of mothers are English, Scotch, Irish or Canadian. Germany contributes 77 fathers and 66 mothers. Other nations contribute in all 52 fathers and 44 mothers—fairly equally distributed among Norwegians, Swedes, Russians, Dutch, French and Swiss, with several from Denmark, Italy and Japan. The parents of American men of science are thus predominantly British-American, with an admixture of nearly 8 per cent. of Germans and about 5 per cent. from other nationalities.

Twelve and six tenths per cent. of our leading scientific men are foreign born, 12.6 per cent. are native born of foreign-born parents, and 7.1 per cent. have one foreign-born parent. In the general population of the United States 14 per cent. of the people are foreign born, 13.5 have both parents foreign born and 6.7 have one parent foreign born. The foreign born and those of foreign-born parentage thus contribute less, but only slightly less, than the native population to scientific productivity. There is a great difference in the different nationalities. Those born in Great Britain contribute 1.2 per cent.

to the population and 3.4 per cent. to our scientific men; Germany contributes 2.7 per cent. to the population and 1.9 per cent. to the scientific men; Russia 1.7 to the population and 0.6 to the scientific men; Italy 1.5 to the population and 0.1 to the scientific men. These differences are not, however, necessarily due to any racial superiority of the British and Germans. Men have been called from these countries to scientific positions here or have come to seek them, and in general a larger proportion of their immigrants have been from the educated class. In my own science men so distinguished as Professor Münsterberg from Germany and Professor Titchener from England have accepted chairs of psychology in our universities. It is most unfortunate for us that this movement appears to have ceased. Between 1903 and 1910 only one scientific man of high distinction was called to this country, whereas nine leading scientific men returned to their native countries.

We could and should see to it that the foreigners coming to the United States contribute their share of men of performance. From the point of view of national selfishness nothing could be more profitable than to add to the community as many foreign men of distinction as would come for five or ten thousand dollars a year, and as many young men of promise as would come for one or two thousand dollars a year. Such men are already selected and their education is paid for. We have paid for the education of some 150,000 physicians to obtain at most 1,000 who are competent to advance medical science. The services of this thousand are probably worth as much as those of all the others combined, so if we divide equally the cost of bringing up and educating these physicians, the cost of a man competent to advance science is perhaps \$500,000 and his value is far greater. Such men we can obtain from abroad free of

cost beyond the payment for their living, which must be paid equally to those who are educated and selected at our own expense. Not only the men themselves, but their descendants also are assets to the country of incalculable value. From the point of view of the world at large, it is probably an advantage to bring men of distinction and of promise to this country, as this tends to promote friendly international relations and good-will, and because, the wealth being greater here and the competition less, we should be able to give better opportunity to the men. The war has placed on us great responsibility; we should provide for those debarred from advancing science, scholarship and art at home.

TABLE II. THE PERCENTAGE OF THE SCIENTIFIC MEN IN EACH OF FOUR GRADES ACCORDING TO THE NATIONALITY OF THEIR PARENTS

	No.	Percentage of Each Grade.			
		I	II	III	IV
American.....	652.5	7.7	18.3	57.9	16.0
British.....	137	6.6	17.9	56.9	18.7
German.....	73.5	10.2	20.4	57.1	12.2
Others.....	48	8.3	20.8	56.3	14.6
Total.....	911	71	169	525	146
Per cent.....		7.8	18.6	57.6	16.0

While it is comparatively easy to determine the nationality of scientific men and of their parents, it is almost impossible to determine their race. Indeed, a consideration of the subject leads to a realization of the complexity of the racial descent of the peoples forming the nations of western Europe and America. There are 13.5

families stated to be Jews. Of 71.5 German families, 8 are Jews; of 6 Russian families, 5 are Jews; among 660.5 native American families, there is only one Jewish parent. There may be some unrecorded cases; the number of native-born scientific men of Jewish family is smaller than might have been anticipated. Two families are Japanese; none is known to be of Negro or of North American Indian descent.

The scientific men have been divided into four groups in accordance with the merit of their performance. These are: I. those among the leading hundred of our scientific men; II. those among the second and third hundreds; III. those below this rank in the thousand; and IV. those who in the second arrangement fell below the thousand. As shown in the previous paper, the first three groups cover about equal ranges of merit, and this also holds in a general way for the fourth group. In Table II. is given the nationality of the parents of the scientific men in accordance with these grades. Those of American parentage are of average standing; those of British parentage are below and those of German parentage are above the average. Those of other nationalities are slightly above the average. Among the leading hundred men of science seven are of Jewish family. The Jewish race thus appears to show superior intellectual ability. The differences in the other nationalities and races are so small as to indicate practical equality. The slight

TABLE III. THE OCCUPATIONS OF THE FATHERS OF THE SCIENTIFIC MEN

	No.	Per Cent.	Percentage of Each Grade.			
			I	II	III	IV
Professions.....	381	43.1	8.9	18.4	57.5	15.2
Clergymen.....	89	10.1	5.6	19.1	60.7	14.6
Physicians.....	66	7.5	9.1	18.2	59.0	22.7
Lawyers.....	58	6.6	10.3	24.2	51.7	13.8
Teachers.....	74	8.3	10.8	18.9	59.5	10.8
Others.....	94	10.6	9.6	13.8	61.7	14.9
Agriculture.....	188	21.2	3.7	20.7	56.4	19.2
Manufacture and trade....	316	35.7	7.9	17.4	61.1	13.6
Total.....	885		7.5	18.5	58.5	15.5

superiority of the Germans is due to several men who have come to this country to fill scientific positions, half of whom are of Jewish descent.

The occupations of the fathers of 885 scientific men are given in Table III. Forty-three per cent. belong to the professional classes; 21.2 per cent. to the agricultural classes and 35.7 per cent. to the manufacturing and business classes. In the United States in 1850, 3.1 per cent. of white men having occupations were in the professions; 44.1 were engaged in agriculture, and 34.1 in trade, transportation, manufacturing and mechanical pursuits. The professional classes have thus contributed in proportion to their numbers about fourteen times as many scientific men as the others, the agricultural classes only half as many as the manufacturing and trading classes. The farm not only produces relatively fewer scientific men, but a smaller proportion of them are of high distinction and a larger proportion are in the lowest group. This traverses a common belief, as voided, for example, by Dr. Charles W. Eliot, when he writes:

The country breeding gives a vigor and an endurance which in the long run outweigh all city advantages, and enable the well-endowed country boys to outstrip their city-bred competitors.²

The writer showed, however, in the previous paper that in proportion to their population cities have produced twice as many scientific men as the country.

The four professions of divinity, medicine, law and teaching, with a fifth group composed of the remaining professions—engineering, fine arts, journalism, the government service, etc.—contribute numbers of scientific men not far from equal. According to the census of 1850, the numbers of the four learned professions were: Clergymen, 26,842; lawyers, 23,939; physicians, 40,765; men teachers, 30,530.

² "Family Stocks in a Democracy," American Contributions to Civilization, 1898.

For each thousand of their members, they contributed scientific men as follows:

Clergymen	3.3
Lawyers	2.5
Teachers	2.4
Physicians	1.6

Clergymen, therefore, have the best record, and physicians the worst. Yet at that period there was supposed to be a conflict between science and theology, and the work of the physician is, or should be, allied to, if not identical with, that of the man of science. But in the middle of the last century the clergymen were likely to be better educated and more closely identified with the colleges than the physicians. The lawyers and the teachers were equally productive, but college professors—of whom there were only 943 in 1850—are far before any other class. The group of "other professions" is too ill defined to permit statistical treatment. In the census of 1850, mechanics who ran engines were called engineers and included among the professions. It will be noted from the table that lawyers and teachers have contributed the largest percentage of scientific men of high distinction, but the differences are not so large as to be significant.

As it is much easier to determine nationality than race, so occupation can be stated more readily than social position. It would be desirable to know the social connections and incomes of the fathers of scientific men at the period when their sons were educated, but such information is not at hand. Men in the same profession have very different social environments; in manufacturing and trade a man may be an artisan or a multi-millionaire. It is, however, clear that a majority of scientific men come from the so-called middle and upper classes. Not very far from half of them are supplied by the professional classes, forming about one thirtieth of the population, and undoubtedly they tend to be sons of the more

successful professional men. Under manufacturing and trade all sorts of occupations are included, but only a small part of the fathers belong to the class of artisans and still fewer to the class of clerks. Most of them own their own business, which may be anything from a small shop in a university town³ to the control of a railway system. Not a single scientific man is recorded as coming from the class engaged in domestic service, nor is any known to be the son of a day laborer, even of the higher grades. Agriculture includes agricultural laborers, but the fathers of the scientific men usually owned their own farms, and were probably in the main the farmers of the better class with relatives among professional men. Our farming population belongs chiefly to a yeoman class, not to a peasant class such as forms nine tenths of the population of Russia.

The earlier studies of scientific men made by De Candolle and Galton and the groups treated by Odin and Ellis yield results in regard to the origin of men of performance comparable with those here given. De Candolle⁴ found that of 100 foreign associates of the Paris Academy of Sciences, 41 came from noble and wealthy families, 52 came from the middle class and 7 from the working class. Galton⁵ found that of 96 contemporary leading men of science none came from the artisan and peasant classes. Odin⁶ found that of 823 French men of letters, 65 per cent.

³ A notable case is of three brothers who have attained scientific distinction. They obviously had inherited ability, but the opportunity to exhibit it in scientific research was probably due to the fact that their father's shop was in a university town.

⁴ "Histoire des Sciences et des Savants depuis deux Siècles," Genève, 1873.

⁵ "English Men of Science," London, 1874; New York, 1875.

⁶ "Genèse des Grands Hommes," Paris et Lausanne, 1895. An excellent account of Odin's researches is given in Lester F. Ward's "Applied Sociology," Boston and New York, 1906.

came from the nobility and governing classes, 23 per cent. from the professions, 12 per cent. from the commercial and middle classes and 16 per cent. from the lower classes. Ellis⁷ found that of 829 British men of genius 18.5 per cent. came from the nobility and upper classes, 41.3 per cent. from the professions, 31.2 from the manufacturing and commercial classes, 6 per cent. from the yeomen and farmers and 2.5 from the artisan and laboring classes.

The working classes outnumbered the nobility a hundredfold, but produce only one quarter as many men of performance. If the working classes have equal ability and if they had been given equal opportunity, instead of a hundred scientific men of the rank of the foreign associates of the Paris Academy there would have been forty thousand. It may be that the peasant and artisan classes in European countries are separated from the upper classes by an inferior heredity; but that is scarcely the case in America. Five or ten generations back most of us have ancestors of nearly the same average physical, intellectual and social condition; any selection for ability within this short period must be slight and transient.

It is evident that what a man can do depends on his congenital equipment. How far what he does do depends on his environment and how far on his congenital equipment, or how far his congenital equipment depends on that of his parents and his family line of descent, we do not know. Most sociological writers and some biologists are confused in their use of the concept of heredity. When there is discussion of the relative influence on performance of heredity and environment, by heredity there is sometimes understood the original constitution of the individual and sometimes his resemblance to parents and other relatives. It

⁷ "A Study of British Genius," London, 1904.

is conceivable that the original constitution of son and father might be exactly the same and yet the individual be so plastic to environment that under different conditions there would be but slight similarity between their performances. It is also conceivable that there might be no similarity between the original constitutions of son and father, and yet the performance of each be determined by his original constitution almost without influence from environment. Under which of these extreme hypotheses would the current sociologist call heredity strong or weak? The word heredity should be reserved for resemblance due to a common germ plasm and some other word found for the constitution of the fertilized ovum or zygote; perhaps the best that can be done is to use this uncouth word. We can then discriminate between the two distinct questions: What is the resemblance between the zygotes of two brothers? How far does the zygote of an individual determine his performance as an adult?

The distinctions are of vast importance for the organization of society. If men of performance could only come from superior family lines, this would be a conclusive argument for a privileged class and for a hereditary aristocracy. If the congenital equipment of an individual should prescribe completely what he will accomplish in life, equality of opportunity, education and social reform would be of no significance. Such an extreme position, though it is approached by men with so much authority as Sir Francis Galton, Professor Karl Pearson, Dr. F. A. Woods, Dr. C. B. Davenport and Professor E. L. Thorndike, is untenable. Equally extreme in the opposite direction is M. Odin's aphorism "Genius is in things not in men," or the not uncommon opinion that almost anything can be done with a child by training and education. It is a problem of degree and of circumstance, a scientific question that could

probably be solved within a reasonable time if as much intelligence and money were devoted to it as to one of the bureaus of the Department of Agriculture.

In the meanwhile we must do the best we can with the material at hand, even though the interpretation is in nearly all cases ambiguous. It is here shown that 43 per cent. of our leading scientific men have come from the professional classes. We may conclude that more than one half of our men of science come from the one per cent. of the population most favorably situated to produce them. The son of a successful professional man is fifty times as likely to become a leading scientific man as a boy taken at random from the community. My data also show that a boy born in Massachusetts or Connecticut has been fifty times as likely to become a scientific man as a boy born along the southeastern seaboard from Georgia to Louisiana. They further show that a boy is fifty times as likely to do scientific work as a girl. No negro in this country has hitherto accomplished scientific work entitling him to be included among our leading thousand scientific men. A boy from the professional classes in New England has a million chances to become a scientific leader as compared with one chance for a negro girl from the cotton fields.

These great differences may properly be attributed in part to natural capacity and in part to opportunity. When it is asked how far the result is due to each of these factors, the question is in a sense ambiguous. It is like asking whether the extension of a spiral spring is due to the spring or to the force applied. Some springs can not be extended a foot by any force; no spring can be extended without force. The result depends on the relation between the constitution of the spring and the force applied. If the 174 babies born in Massachusetts and Connecticut who became leading scientific men had been exchanged with babies born in the south, it

seems probable that few or none of them would have become scientific men. It may also be the case that few or none of the babies from the south transplanted to New England would have become scientific men, but it is probably true that a nearly equal number of scientific men would have been reared in New England. It is certain that there would not have been 174 leading scientific men from the extreme southern states and practically none from Massachusetts and Connecticut. If the stock of the southern states remains undiluted, it may, as social conditions change, produce even more scientific men per thousand of its population than New England has hitherto produced. In the first list of the thousand leading scientific men, Massachusetts produced 109 and Connecticut 87 per million of their population. Of the younger men added to the list in the second arrangement under comparable conditions, Massachusetts produced 85 and Connecticut 57. The other North Atlantic states failed in like measure, while the central states show a gain—Michigan from 36 to 74, Minnesota from 23 to 59, etc. These changes must be attributed to an altered environment, not to an altered racial stock. Japan had no distinguished scientific men a generation ago and China has none now, but it may be that in a few years their contributions to science will rival ours.

A Darwin born in China in 1809 could not have become a Darwin, nor could a Lincoln born here on the same day have become a Lincoln had there been no civil war. If the two infants had been exchanged there would have been no Darwin in America and no Lincoln in England. Darwin was a member of a distinguished family line possessing high natural ability and the advantages of opportunity and wealth. Lincoln had no parental inheritance of ability or wealth, but he too had innate capacity and the opportunity of circumstance. If no infants had been

born with the peculiar natural constitutions of Darwin and Lincoln, men like them could not have been made by any social institutions, but none the less the work they did might have been accomplished by others and perhaps their fame would have been allotted to others. There may have been in England other family lines equal in natural ability to the Darwins and in this country other individuals as well constituted as Lincoln, but undistinguished from lack of opportunity. It is still more probable that such conditions obtain in Russia and in China, in whose graveyards there may lie innumerable "mute inglorious" Miltons, Lincolns and Darwins.

The most exceptional ability may be suppressed by circumstances; but it can sometimes deal with them on equal or perhaps superior terms. Thus the writer has pointed out how widely distributed in race, age and performance are the most distinguished men who have lived.⁸ When we turn from the most eminent men to those next in rank, we may doubt whether their natural ability has not been equaled by thousands who have not attained distinction. Among the two hundred most eminent men who have lived in the history of the world are: Napoleon III., Nero, Fox, Julian, Fénelon, Clive, Alberoni, Bentley and Gerson. It is quite conceivable that there are at present living in the United States hundreds or thousands of men having as great natural ability as these. There may be a hundred thousand men and women having the natural and specific ability of the thousand in this country who have accomplished the best scientific work.

President A. Lawrence Lowell has remarked that we have a better chance of rearing eaglets from eagles' eggs placed under a hen than from hen's eggs placed in an eagle's nest. But it is also true that

⁸ "A Statistical Study of Eminent Men," *The Popular Science Monthly*, 1903.

we have a better chance of raising tame eaglets in a chicken coop than in an eyrie. The difference between a man uninterested in science and a scientific man is not that between a chicken and an eagle, but that between an untrained chicken and a trick cock. Some cockerels can be trained better than others, but there are innumerable cockerels that might be trained and are not.

The son of a scientific man may on the average have the inherited ability which would make him under equally favorable circumstances twice, or ten times, or a hundred times, as likely to do good scientific work as a boy taken at random from the community. The degree of advantage should be determined. It surely exists, and the children of scientific men should be numerous and well cared for. But we can do even more to increase the number of productive scientific men by proper selection from the whole community and by giving opportunity to those who are fit. Galton finds in the judges of England a notable proof of hereditary genius. It would be found to be much less in the judges of the United States. It could probably be shown by the same methods to be even stronger in the families conducting the leading publishing and banking houses of England and Germany. As I write, the death is announced of Sir William White, the distinguished naval engineer, chief constructor of the British navy, president of the British Association. If his father had been chief constructor of the navy, he would have been included among Galton's noteworthy families of fellows of the Royal Society. The fact that his father-in-law was chief constructor of the British navy throws, if only by way of illustration, a light on the situation in two directions.

On the one hand, the specific character of performance and degree of success are determined by family position and privilege as well as by physical heredity; on

the other hand, marriage, chiefly determined by environment, is an important factor in maintaining family lines. The often-quoted cases of the Juke and Edwards families are more largely due to environment and intermarriage within that environment than to the persistence of the traits of one individual through several generations. The recently published "Kallikak Family" by Dr. H. H. Goddard demonstrates once again the heredity of feeble-mindedness. It would, however, have been a stronger argument for the omnipotence of heredity if the original ancestor had left by a healthy mother illegitimate children who established prosperous lines of descent, and a child by a feeble-minded wife who left degenerate lines of descent. Two experiments have been made on a large scale which seem fairly definite even though quantitative results can not at present be reached. The mulattoes may be assumed to have a heredity midway between negroes and whites, but their social environment is that of the negroes, and their performance corresponds with their social environment rather than with their heredity. Illegitimate children have perhaps a heredity as good as the average, but their performance falls far below the average. If performance were determined by heredity alone there might be expected to be among our thousand leading scientific men some forty mulattoes and some forty of illegitimate birth, whereas there is probably not one of either class.

At nearly the same time Agassiz came from abroad to Harvard and Brinnow to Michigan. We all know the list of distinguished naturalists trained under Agassiz—Brooks, Hyatt, Jordan, Lyman, Minot, Morse, Packard, Putnam, Seudder, Shaler, Verrill, Whitman, Wilder and many more, directly and indirectly. From Michigan have come, as is not so well known, one fourth of our most distinguished astronomers, including Abbe,

Campbell, Comstock, Curtis, Doolittle, Hall, Hussey, Klotz, Leuschner, Payne, Schaeberle, Watson and Woodward. Certainly the coming of Agassiz and Brünnow was the real cause of greatly increased scientific productivity in America. Some, but not all, of those who worked under Agassiz would have become naturalists apart from his influence. The astronomers from Michigan must in the main be attributed to their environment. The men had the necessary ability, but if Brünnow had not gone to Michigan, they would not have become astronomers; if they had gone to the University of Pennsylvania, they would have been more likely to become physicians than astronomers; if they had not gone to a university they would not have become scientific men.

It is certainly satisfactory if we can attribute the inferiority of scientific performance in America as compared with Germany, France and Great Britain to lack of opportunity rather than to lesser racial ability. In Germany scientific research has been made by the university rather than the reverse. In Great Britain also the universities have been potent, and, in addition, its leisure class has contributed greatly. Here prior to 1876 we had no university in which research work was adequately encouraged, and we have had no amateurs comparable to those of Great Britain. Professor Pickering found^o that of the 87 scientific men who were members of at least two foreign academies, 6 were Americans as compared with 17 from Prussia, 13 from England and 12 from France. In so far as our scientific production is so measured, the reference is to a generation ago, when our universities were only beginning to develop and research work was only beginning to be appreciated. But it is a striking fact that of the six distinguished Americans, three are astronomers; and astronomy is the

only science in which thirty years ago the facilities for research work in this country were equal to those of the leading European nations. Of the remaining three, two have not been engaged in teaching, and the third has been practically freed from teaching for his research work. We may hope that when conditions become as favorable for other sciences as they have been for astronomy, the United States will assume leadership in scientific productivity.

In order to answer questions such as the extent to which the scientific work accomplished in America is due to native endowment, whether such endowment is general or specific, how far it occurs in family lines, what part of those endowed are able to prove their ability, the influence of education and example, the effects of opportunity, encouragement and rewards, it is necessary to make a study of individual cases. A large mass of material is at hand concerning the relatives of scientific men who have shown scientific productivity or have attained distinction, but these data are not in order for publication and should be supplemented by answers to many enquiries. In the meanwhile the writer may say that it is his opinion that while we should welcome and support a eugenic movement tending to limit the birth of feeble-minded and defective children and encouraging the birth of those that are well endowed, it appears that under existing conditions of knowledge, law and sentiment, we can probably accomplish more for science, civilization and racial advance by selecting from the thirty million children of the country those having superior natural ability and character, by training them and giving them opportunity to do the work for which they are fit. We waste the mineral resources of the country and the fertility of the soil, but our most scandalous waste is of our children, most of all of those who

^o *The Popular Science Monthly*, October, 1908, and January, 1909.

might become men and women of performance and of genius.

Eugenics may become the most important of all applied sciences, but at present its scientific foundations must be laid by the study of comparative genetics, on the one side, and the study of human conduct, on the other. There is more immediate prospect of improving our civilization than our germ plasm. It is easier to decrease or eliminate typhoid fever by hygienic measures than to attain racial immunity, although this is not equally the case for tuberculosis and still less for cancer. We can increase to any desired extent from the existing population by proper selection and training the number of scientific workers in the United States. The number capable of exhibiting genius is limited, but many of them are lost through lack of opportunity. It is our business, it should be our principal business, to improve our civilization by giving opportunity to those who are fit, while at the same time investigating the conditions which will give us a better race.

II. MARRIAGE AND NUMBER OF CHILDREN

There are thousands of volumes containing vital statistics, but exact studies of definite groups of individuals have scarcely been made. It is often assumed that we must have vast numbers of cases, such as are obtained by a national census, in order to secure valid statistics, but in some directions better scientific results can be obtained by applying more careful methods to a limited number of cases. The difficulty in obtaining correct statistics is not the variable error, which decreases with the number of cases, but the constant errors, which can only be eliminated by proper methods. Thus, for example, I find that the parents of 871 scientific men had families of the average size of 4.65 children, with a probable error of 0.05. The chances are even that increasing indefinitely the number of cases

would give a figure varying only between 4.6 and 4.7, and this is as close a determination as is needed. But a serious mistake would be made if it were assumed that the average family of the class from which the scientific men come was as large as 4.65. The fathers of 865 scientific men died at the average age of 70.6 years and their mothers at the average age of 70.2 years. The chances are even that this figure is correct within one third of a year, and this is all we need to know. It would, however, be incorrect to use these figures to prove that people of that class and generation lived to the age of seventy years or that the men lived longer than the women. In the census of 1880 there were found to be in the United States 170,000 more children in their second than in their first year. As over one tenth of all the children died in their first year, this result is incredible, and the large number of cases only makes the absurdity more obvious.

TABLE IV. NUMBERS AND PERCENTAGES OF SCIENTIFIC MEN WHO ARE UNMARRIED IN ACCORDANCE WITH THEIR AGES

	Ages of Scientific Men					Total
	-39	40-49	50-59	60-69	70-	
Number . . .	150	402	269	131	48	1,000
Unmarried .	27	42	19	12	3	105
Per cent . . .	18.00	10.45	7.06	9.16	6.25	10.5

The table shows that of just one thousand leading scientific men for whom the information is at hand 105 are unmarried. Eighteen per cent. of those under 40 years of age are single, 10.5 per cent. of those between 40 and 50, and 7.5 per cent. of those over 50. According to the census of 1900, 17.1 per cent. of men 35 to 44 years old are single, 10.4 per cent. of those from 45 to 54, and 7.8 per cent. of those from 55 to 64. There is thus a tolerably close correspondence between the marriages of scientific men and of the general population, but the age groups of the census

being five years older, a scientific man is more likely to be married than a man taken at random from the community. This is perhaps contrary to general opinion. A tradition of celibacy for the scholar has been inherited from the Roman Catholic Church, it being only within the time limits of these statistics that fellows of the colleges of the English universities have been permitted to marry. Professor Thorndike¹ found that only 12 per cent. of those in "Who's Who in America" over forty years of age are unmarried. On the other hand, President Eliot² found 28 per cent. of Harvard graduates 20 to 25 years out of college to be unmarried. There is a lack of satisfactory statistics of marriage conditions in different classes of the community. For different nations M. Bertillon³ states the percentage of unmarried men over fifty years of age to vary from 16.3 in Belgium to 3.6 in Hungary, it being 7.5 in Germany and 10.1 in France.

Contrary to a wide-spread opinion, the marriage rate and the age at marriage have not varied considerably in the course of the past thirty years. The number of persons married annually for each thousand of the population in several countries has been as follows:⁴

	1881-1885	1910 (or 1909)
France.....	15	15.8
German Empire.....	15.4	15.5
Italy.....	16.1	15.5
England and Wales.....	15.2	15
Sweden.....	12.8	12

In England and Germany the rate was highest in the quinquennial period 1896-1900, reaching 16.1 and 18.8, respectively. The percentage of women between 15 and 49 years of age who are married has been:

¹ "Marriage among Eminent Men," *The Popular Science Monthly*, 1902.

² Annual Report of the President of Harvard College for 1901-02.

³ "La Dépopulation de la France," Paris, 1911.

⁴ Report of the Registrar-General (England and Wales) for 1910.

	1880 (or 1881)	1909 (or 1901)
France.....	54.9	57.7
Italy.....	55.2	56.1
German Empire.....	51.9	52.8
England and Wales.....	51.4	49.2
Sweden.....	41.4	44.2

There has thus been no decrease in marriage corresponding to the decreasing birth rate which has occurred during this period. In France, where the birth rate is the lowest, the marriage rate and the percentage of women married are the highest.

The marriage rate varies from year to year with economic and social conditions, but the percentage of women of child-bearing age who are married proves that marriage is as usual now as it was a generation ago. The conditions, however, are extremely complicated, being influenced by birth rates, death rates, the age constitution of the people and immigration. The European nations with the exception of France have supplied great numbers of immigrants during the past thirty years; these are largely people of marriageable age with an excess of unmarried men. This circumstance makes it more significant that there has been no decrease in marriage in these nations. It explains in large measure the relations in France and England, the latter country having been left with an excess in its population of over a million women above fifteen years of age. The comparatively high birth rates and death rates of a generation ago, followed by the decreasing birth rates and death rates which have obtained in nearly all nations for the past forty years, give a large percentage of the population between twenty and forty years of age, and are favorable to a high marriage rate and to a large proportion of married people. It is significant of improved conditions regarding the health of married women that among 900 scientific men only 15 are stated to have children by a second wife

and the number of children is only 29. The data also show that successive polygamy through divorce is unusual among scientific men.

the age of twenty-nine, 298 of the fathers and 328 of the mothers between twenty and twenty-nine. The scientific men themselves married at the average age of 29.5

TABLE V. AGES AT MARRIAGE AND THE SIZES OF FAMILY

Age.....	15-19	20-24	25-29	30-34	35-39	40-	Av.	Med.
Mother								
Number.....	85	229	99	21	6		22.88	22.29
Size.....	5.56	4.90	4.47	2.71	2.50		4.74	
Father								
Number.....	5	123	175	88	27	22	27.98	26.85
Size.....	6.40	5.27	4.57	4.60	3.96	4.00	4.74	
Wife								
Number.....	15	158	165	69	22	11	26.63	25.65
Size.....	2.00	2.59	2.44	1.62	0.59	0	2.23	
Scientific Man								
Number.....	2	67	196	108	39	28	29.50	28.40
Size.....	2.00	2.27	2.56	2.14	1.62	1.18	2.23	

In Table V. data are given in regard to the age at marriage and the size of family of our leading scientific men and of their parents.⁵ The fathers married at the average age of 28 years and the mothers at the average age of 22.9 years. The median ages are naturally lower than the averages ages, as marriage can be postponed beyond the average longer than it can precede this average. The distribution of ages is also shown in the table. Five of the fathers and 85 of the mothers married under the age of twenty, 137 of the fathers and 27 of the mothers beyond

⁵ The data are for the 440 cases in which the families of the scientific men were "completed" and in which there were no remarriages either of the scientific men or of their fathers. The families were taken as completed when the wife was 45 or older, when there had been ten years of married life without a child or when the period since the birth of the last child added to the mother's age is at least 45. Some of the families are then not absolutely completed, but the births would be very few. None of the 11 women who were more than 39 at marriage had children, although newly married women of this age are more likely than others to bear them. A larger error is due to the selection of families, as those having few or no children would be more likely to be completed. The 211 incomplete families have on the average 1.90 children, which is about the same as for the completed families of parents of the same age.

years and their wives were on the average 26.6 years old. The sons married about one and a half years later than their fathers and their wives nearly four years later than the mothers. There is a statistical anomaly in this comparison, especially as regards the mothers, for women who married late would have few children or none, and the average age of the mothers would thus be reduced as compared with the wives. The differences are partly due to the fact that all the scientific men and only part of the fathers belong to the professional classes; and there has probably been an increase in the age of marriage of the professional classes in this country; but the figures show that any such increase must be small.

Bertillon gives the following figures for the average age at marriage in the period 1896-1900:

	First Marriages		All Marriages	
	Men	Women	Men	Women
England.....	26.6	25.1	28.4	26.2
France.....	27.9	23.5	29.6	25.2
Italy.....	27.5	23.8	29.8	24.8
Prussia.....	—	—	29.3	26.2
Austria.....	—	—	30.9	26.8
Sweden.....	28.7	26.7	30.2	27.2
Norway.....	29.2	27.2	31.0	28.1

The age at marriage is highest in the Scandinavian nations; it is lowest in the Slav nations; it is as low in France, with its small birth rate, as elsewhere. In England in the case of first marriages the husband is one and a half years older than the wife, in France, nearly four and a half years older. The age at marriage for first marriages has increased in England by about three fourths of a year since 1896, before which date the registrar-general regards the records as inaccurate. The ages of the consorts at first marriages have increased from 26.59 and 25.08 in 1896 to 27.46 and 25.81 in 1911. The average age at which widowers marry has increased from 44.49 to 46.42; for widows from 40.58 to 41.74. In the quinquennial period 1876-80, 7.8 per cent. of the husbands and 21.7 per cent. of the wives were under twenty-one, in 1911 these percentages had decreased to 3.9 and 13.3. The professional and well-to-do classes marry later than the average; thus in England, the ages of the men and women are, respectively, about 32 and 27 years, as compared with about 26 and 24.5 years for the artisan and laboring classes. It thus appears that American scientific men marry at a somewhat earlier age than the professional classes in England and their wives are of about the same age.

The table shows that the size of family of the parents of the scientific men—the fraternity of the scientific men—decreases decidedly as the age of the mother at marriage increases. It is about five and a half when the mother is under twenty; it decreases to four and a half when she is between twenty-five and thirty and to scarcely over two and a half when she is between thirty and forty. The decrease would be somewhat greater if barren marriages were included; but it is altered in the opposite direction by the fact that the larger family has the better chance of giving birth to the scientific man. The decrease in the size of family with the

advancing age of the father is less, and depends mainly on the fact that older husbands are likely to have older wives. The age of the wife tends to increase about one year as the age of the husband increases by two years. According to the New South Wales statistics, admirably compiled by T. A. Coghlan,⁶ the size of the family is five when the mother marries at 21, and as the age at marriage increases to 24, 28 and 32, the size of the family decreases to approximately four, three and two. In the case of the scientific men the family is 2.59 when the mother was 20 to 24 years old at marriage and 2.44 when she was 25 to 29. It is only two in the fifteen cases when she was under twenty. A comparison of these figures with those for the larger families of the preceding generation is significant, as they seem to show the condition when the family is small and limited. Under these circumstances there is but slight difference in the number of children when a woman marries at ages from 15 to 29. After thirty, however, there is a marked decrease, the size of family being 1.6 for women marrying between 30 and 34 and only 0.6 for those marrying between 35 and 39. Less than half of those marrying between 35 and 39 had children and none of those who married at the age of 40 or older had children.

The families from which our scientific men come had on the average 4.7 children, and those scientific men who are married and whose families are complete have on the average 2.3 children, these figures including all the children born. Sir Francis Galton⁷ found that a group of about 100 English scientific men (excluding barren marriages) had, on the average, 4.7 children, and their parents 6.3, and remarks: "This implies a diminution of fertility as

⁶ "The Decline in the Birth Rate of New South Wales," Sydney, 1903.

⁷ "English Men of Science," London, 1874, New York, 1875.

compared with that of their parents, and confirms the common belief in the tendency to an extinction of the families of men who work hard with the brain." Mr. Havelock Ellis^s found that 214 fertile marriages of British men of distinction produced, on the average, 5.45 children, while 276 "genius producing families" consisted, on the average, of 6.96 children, and remarks that "men of genius belong to families in which there is a high birth rate, a flaring up of procreative activity." He says further that this "might, indeed, have been anticipated. The mentally abnormal classes generally belong to families with a high birth rate"; and quotes data in regard to criminals and the insane. Thus two wide generalizations—that intellectual performance conduces to sterility and that genius is allied to insanity—are based on a curious statistical fallacy for which one would suppose Galton the least likely of men to be responsible.

In a population whose families remain of the same average size in successive generations, every one, whether he be a scientific man, a criminal or a tailor, is likely to come from a larger family than he has. If, for example, all families were of one or of seven children equally divided, the average family would be four in each generation, but the children would be seven times as likely to come from the larger family and would belong to a family which, on the average, would be 6.25. With an average family of three, the size of 100 families would be distributed approximately as follows:

Size ..	0	1	2	3	4	5	6	7	8	9	10
No. ..	18	10	20	23	15	7	5	3	2	1	1

When then we count up the average size of the family from which each of the 300 children comes, it will be found to be 4.47. As our scientific men come from families of the average size of 4.7, one may conclude that the families of the class to which they belonged were of the average

^s"A Study of British Genius," London, 1904.

size of about 3.2. In one generation this family has been reduced to 2.3, owing either to a general fall in the birth rate or because scientific men have families which are smaller than those of the classes to which their parents belonged. Both factors are present; there is a general decrease in the birth rate and the educated classes have families smaller than the average.

In Table VI. is given information in regard to the size of family of the parents of scientific men in accordance with their nationalities and their occupations. The Germans had families of the average size of 5.7, the British of 4.8 and the native Americans of 4.5. The probable errors show that these differences are not due to the limited number of cases. It is known that immigrants from foreign nations have larger families than native

TABLE VI. THE SIZES OF THE FAMILIES OF THE PARENTS OF THE SCIENTIFIC MEN IN ACCORDANCE WITH THEIR NATIONALITIES AND THEIR OCCUPATIONS

	No.	Size.
American.....	625	4.45
British.....	131	4.83
German.....	67.5	5.73
Others.....	47.5	5.20
Total.....	871	4.65
Professions.....	381	4.51
Clergymen.....	88	4.77
Physicians.....	65	4.22
Lawyers.....	60	4.58
Teachers.....	75	4.39
Others.....	93	4.54
Agriculture.....	185	5.09
Manufacturing and trade.....	311	4.59
Total.....	877	4.66

Americans, but these figures probably give the only information in regard to the families which produce scientific and other professional men. The disparity is not so great as in the so-called lower classes, but it is sufficient to indicate that in the professional classes descendants of recent immigrants from Germany and Great Britain

will in part supplant the descendants of native Americans. It is, however, the case that immigrants are likely to become assimilated to native Americans in size of family as well as in other respects.

The parents of scientific men from the agricultural classes had families of the average size of 5, those engaged in manufactures and trade of 4.6 and those in the professions of 4.5. It was shown in the previous section that the agricultural classes contribute in proportion to their numbers only one thirtieth as many scientific men as the professional classes, and this disparity is increased by their larger families. Among the professions, physicians had the smallest families and clergymen the largest, but the differences are not large, the family of the clergyman being smaller than the family of the farmer. These figures do not, of course, give information in regard to families of the present generation, in which the differences are probably greater.

TABLE VII. THE SIZES OF THE FAMILIES OF THE SCIENTIFIC MEN IN ACCORDANCE WITH THEIR NATIONALITIES

	No.	Size.
American.....	544	2.19
British.....	49	2.43
German.....	19	3.21
Others.....	17	1.88
Total.....	629	2.23

In Table VII. are given the figures for the children of the scientific men in accordance with their nationalities. The

Americans have, on the average, a family of 2.19 children, the British of 2.43 and the Germans of 3.21. The German family is thus nearly 50 per cent. larger than the American. The number of foreign families is, however, too small to give valid averages. It would be very desirable to obtain information in regard to the size of family and other vital statistics for different nationalities and social classes in our population. A single expert in the Bureau of the Census could collect and collate such data in the course of a couple of years at insignificant expense.

Table VIII. gives the sizes of the families from which the scientific men have come and which they have in accordance with the geographical division in which they were born and in accordance with whether they were born in the country or in the city. The differences are small. When the parents lived in the country or in small places at the time of birth of the scientific men, they had on the average 4.68 children; and when they lived in the towns which in 1900 had a population of 25,000 or over, the size of family was 4.43. The scientific men born in the country had on the average 2.31 children, those born in towns, 2.15. As it will take a long time to correct the common idea that children born in the country are more likely to attain success and distinction than those born in cities, attention may again be called to the fact that about one fourth of these leading scientific men were born in cities having in 1860 about one

TABLE VIII. THE SIZES OF THE FAMILIES FROM WHICH THE SCIENTIFIC MEN COME (THEIR FRATERNITIES) AND WHICH THEY HAVE (THEIR CHILDREN), IN ACCORDANCE WITH THE REGION OF THEIR BIRTH AND WHETHER BORN IN THE CITY OR IN THE COUNTRY

Division.	Country Born.			City Born.			Total		
	No.	Fr.	Ch.	No.	Fr.	Ch.	No.	Fr.	Ch.
North Atlantic.....	206	4.40	2.34	124	4.18	2.22	330	4.32	2.29
South Atlantic.....	17	4.53	2.29	17	5.12	2.18	34	4.82	2.24
South Central.....	7	5.71	2.86	5	3.80	4.40	12	4.92	3.50
North Central.....	151	4.99	2.17	44	4.75	1.77	195	4.94	2.09
Western.....	5	6.00	4.00	5	6.20	1.60	10	6.10	2.80
Total.....	386	4.68	2.31	195	4.43	2.15	581	4.60	2.25

eighth of the population of the nation. The greater productivity of cities in men of distinction is doubtless in part due to the fact that the abler and more enterprising people are drawn from the country to the cities, their children inheriting superior ability, and in part to the fact that the city-born children have an environment more favorable to education and to success in scientific work.

The number of families from the southern and western states is too small to give reliable information in regard to the number of children. The fraternities of the scientific men from the North Central States are larger than of those from the North Atlantic States, but their own families are smaller. The differences are small, but apparently significant. The scientific men born in the North Central States came from families of 5.0 and had families of 2.2, those from the North Atlantic States came from families of 4.4 and had families of 2.3. A generation ago the families of the central States—at least those of this particular class—were larger than those of the Northeastern States; they are now slightly smaller. The fertile and wealthy state of Iowa had a smaller population in 1910 than in 1900. The increase in the population of the country is maintained by immigrants and the children of immigrants. The 87 scientific men born in Massachusetts had fraternities of 4.1 and families of 2.1 children, the 117 born in New York State had fraternities of 4.5 and families of 2.3 children.

The table shows the great preponderance of the North Atlantic and North Central States in the production of scientific men and the infertility of the south, concerning which statistics have been given by the writer in previous articles. The birth rate of leading scientific men per million of the population has been 107 in Massachusetts, 89 in Connecticut, 47 in New York, 23 in Pennsylvania, 32 in Ohio, 36 in Michigan, 45 in Wisconsin, 24 in Illi-

nois, 12 in Missouri, 9 in Virginia, 5 in North Carolina, 3 in Georgia, 2 in Alabama, 1 in Mississippi and Louisiana. In recent years, however, the North Central States have been gaining and the North Atlantic States have been relatively losing. Thus for younger men the birth rates in figures comparable to those given above have fallen to 85 in Massachusetts, 57 in Connecticut and 36 in New York, whereas they have risen to 35 in Ohio, 74 in Michigan and 54 in Wisconsin. These differences and changes the writer is disposed to attribute in the main to environment rather than to heredity. From the family stocks of Massachusetts, Michigan or Louisiana, we can obtain as many competent scientific men as we care to educate and support.

TABLE IX. THE SIZES OF THE FRATERNITIES AND FAMILIES OF THE SCIENTIFIC MEN IN ACCORDANCE WITH THE INSTITUTION AT WHICH THEY ARE EMPLOYED

	No.	Fr.	Ch.
Larger universities.....	242	4.50	2.18
Smaller state institutions.....	89	5.04	2.62
Smaller private institutions.....	122	4.69	2.29
U. S. government.....	73	4.64	2.00
Commercial and private.....	61	4.72	2.44
Research laboratories, etc.....	56	4.52	2.41
Total.....	643	4.65	2.28

The distribution of the families among different kinds of institutions is given in Table IX. The fraternities of the scientific men are substantially the same in all cases. The only instance in which the departure from the average exceeds the probable error is for the smaller state-supported institutions, and the difference here may not be significant. In the case of the children of the scientific men, the size of family is probably influenced by the environment. The 73 men in the government service, most of whom live in Washington, have the smallest families, those in the smaller state-supported institutions the largest. The probable errors

of the figures are about 0.1, so the differences are not likely to be due to chance. The 61 men in commercial work, or having no institutional affiliations, and the 56 men in research and related institutions have families larger than the average, while those in the larger universities have families smaller than the average. In the larger private universities the situation, for those with 10 or more professors who supplied the information, is: Harvard, 42 families with an average of 2.2 children; Yale, 16 and 2.0; Chicago, 25 and 2.1; Johns Hopkins 12 and 2.1; Cornell, 29 and 2.3; Stanford, 13 and 2.4; Princeton, 10 and 2.5; Pennsylvania, 13 and 2.5; Columbia, 25 and 2.7. The smallest families are at Yale, Johns Hopkins and Chicago, the largest at Princeton, Pennsylvania and Columbia. The larger state universities have professors with the smallest families, the size of family being Michigan, 17 families with an average of 2.1 children; Minnesota, 10 and 1.8; Wisconsin, 15 and 1.7; Illinois, 15 and 1.6.

The figures given are for completed families and for all children born. The death rate for the children of scientific men is unusually small, 75 per thousand to the age of five years and about 120 to the age of marriage. The marriage rate for scientific men is high, 895 among the thousand being married. None the less it is obvious that the families are not self-perpetuating. The scientific men under fifty, of whom there are 261 with completed families, have on the average 1.88 children, about 12 per cent. of whom die before the age of marriage. What proportion will marry we do not know; but only about 75 per cent. of Harvard and Yale graduates marry; only 50 per cent. of the graduates of colleges for women marry. A scientific man has on the average about seven tenths of an adult son. If three fourths of his sons and grandsons marry and their families continue to be of the same size, a thousand scientific men

will leave about 350 grandsons who marry to transmit their names and their hereditary traits. The extermination will be still more rapid in female lines.

If the families of the scientific men should increase at the rate of the general population, the thousand leading scientific men would have some 6,000 grandchildren instead of fewer than 2,000. These well-endowed and well-placed people would probably have an average economic worth through their performance of not less than \$100,000, and the money loss due to their non-existence is thus \$400,000,000. The loss to the welfare of the nation and the world from the suppression of the social traditions and the germplasm is incalculable. Until democratic society learns that services for society must be paid for by society, and that the two most important services are scientific research and the bearing and rearing of children, the universities, on which three fourths of our scientific men depend for support, have great responsibilities. They to a certain extent profess that research is part of the work for which their professors are paid, but they do not acknowledge a similar obligation in regard to the children of professors. Columbia University gives, under certain faculties, scholarships to the sons of professors; Yale University has had a statute by which a married professor received a slightly increased salary; the provisions of the Carnegie Foundation benefit married professors. But these are slight acknowledgments of the obligations of our universities.

President Eliot tells us that "the welfare of the family is the ultimate end of all industry, trade, education and government"; but, in his book on "University Administration," he writes:

The general features of a good scale of salaries are as follows: The salary of an annual appointee at the start should be low, about the amount needed by a young unmarried man for comfortable support in the university's city or village. When,

after a few years, this young man receives an appointment without limit of time, a somewhat higher salary should be given him, with a small advance each year for, say, three years. If this instructor so commends himself that the university desires his further service, he should receive, as assistant professor, a salary which will enable him to support a wife and two or three children comfortably, but without luxury or costly pleasures.

The scientific man receives his doctorate at the average age of twenty-seven years and is then eligible for an instructorship with a salary for an "unmarried man"; after "a few years" and then "three years" more he is to receive a salary which will enable him to support "two or three children." President Eliot also says:

The recent tendency of sons of well-to-do, and even rich, families, to go into the ministry, the medical profession, academic life, and the public service, is one in which all patriots may well rejoice. . . . It is a good deal safer to give a life office to a married man on whom marriage has proved to have a good effect, than to a single man who may shortly be married with uncertain results.

There might well be inscribed at Harvard and at other universities the words which President Eliot wrote for the Water-Gate of the Chicago World's Fair, changing one word, so that it would read:

TO THE
BRAVE WOMEN
WHO IN
UNIVERSITIES
AMID STRANGE
DANGERS AND
HEAVY TOIL
REARED FAMILIES
AND MADE HOMES

The vital statistics of the United States are entirely inadequate. Where registrations of deaths and births exist, they are imperfect, and the changing population, its age composition and the amount of immigration render them difficult to interpret. The only information concerning birth rates is given by the proportion of children as determined by the census,¹⁰

¹⁰ In January, 1917, was issued the first bulletin from the Bureau of the Census giving birth rates for ten states.

but even this is unreliable. It might be supposed that it would be possible to determine the number of children by counting them, but this is not the case. The children reported in the census of 1850 were fewer than the survivors (with the comparatively small excess of immigrants) counted ten years later. There are always more children given as two years old than as one—in 1880 as many as 170,000 more. Nor can we have complete confidence in the compilations of the experts of the census. Thus in the case under consideration they give¹¹ figures

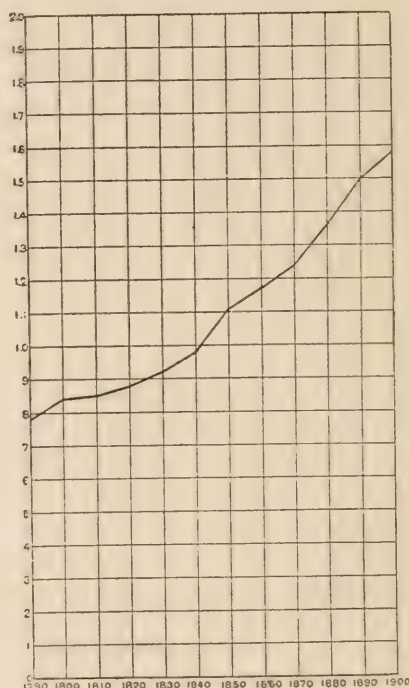


FIG. 1. Ratio of white adults of self-supporting age to white children under sixteen years in the United States, according to the Bureau of the Census.

¹¹ "A Century of Population and Growth," Bureau of the Census, 1909, pp. 80 and 103. An answer to a letter addressed by the writer to the director of the census partly explains the way this error was committed—but the explanation was marked "confidential"! It is, however, no violation of this confidence to state, as the information is available from official reports, that figures were not at hand prior to 1830 and that these were guessed—it appears very awkwardly—so as to give a regular curve.

showing that the white population of the United States increased from 1790 to 1800 by 35.7 per cent., adults over 20 by 50.9 per cent., and children under 16 by 38.8 per cent., whence it follows that children from 15 to 19 decreased 22 per cent. This is of course absurd and is due to a gross error of some sort. However, the ratio of white adults twenty years of age and over to white children under 16, according to the census reports, is shown on the curve. The percentage of children under 16 years of age in the white population increased from 1790 to 1810 and was the same in 1820 as in 1790. In 1810 just half the white population consisted of children under 16; in 1900 the percentage of children had decreased to 35.7.

From a special study by Mr. Kuczynski,¹² it appears that the birth rate of the native population of Massachusetts has been 63 per thousand women of child-bearing age, as compared with 85 in France, 104 in England and 143 in Russia. Its birth rate per thousand of the population was 17, the size of family 2.61 and of the sur-

living family 1.92. Special statistics have been gathered for college graduates. President Eliot in his report for 1901-02 stated that 634 married Harvard graduates of the classes from '72 to '77 had an average family of 1.99 surviving children. Only 71.9 per cent. of the graduates were married, and the number of children for each member of the class was 1.43. If only 72 per cent. of Harvard graduates are married at the average age of fifty, it is a serious indictment of the kind of men who go to Harvard or of the influences under which they come. We have seen that 91 per cent. of American men of science over 40 are married. Other data concerning the families of college graduates have been published by Professor Thorndike¹³ and others.

Curves are here drawn for some of the data, which show that the gross size of the family of college graduates has decreased from 5.6 at the beginning of the century to 2.5 for classes graduating in 1875, while at that time the size for Harvard was about 2. A projection of these curves—which of course gives no scientific information—shows the curious result that if the decrease should continue at the same rate students graduating in 1835 would have no children. The average college graduate has a family of about the same size as the scientific man of the same age. Data collected for the graduates of Yale,¹⁴ in the classes 1869-86 twenty years after graduation and thus not quite complete, give the following results for different occupations:

Occupation	Marriages	Family
Clergy.....	119	2.2
Law.....	398	2.0
Education.....	163	2.0
Manufacturing.....	88	2.0
Medicine.....	108	1.7
Merchant.....	82	1.7
Miscellaneous.....	258	1.9

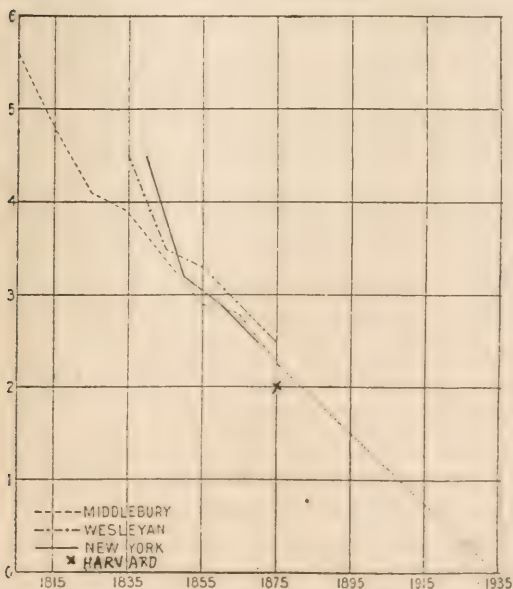


FIG. 2. The decrease in size of family of college graduates.

¹² *Quarterly Journal of Economics*, November, 1901, and February, 1902.

¹³ "The Decrease in the Size of American Families," Edward L. Thorndike, *Popular Science Monthly*, 1903.

¹⁴ *Yale Alumni Weekly*, 1907.

Graduates of colleges for women also have had families of about two, but half of them remain unmarried. The Harvard graduate thus has on the average three fourths of a son, the Vassar graduate one half a daughter.

Since this article was written and published in abstract elsewhere,¹⁵ there have appeared two excellent articles on the size of family of college graduates. Johnson and Stutzmann¹⁶ find that about half of Wellesley College alumnae graduating from 1879 to 1888 married and had families averaging 1.56 children. John C. Phillips¹⁷ gives data from the class reports of Harvard and Yale students compiled twenty-five years after graduation. Seventy-four per cent. of Harvard graduates and 78 per cent. of Yale graduates had married. The number of children born for each married graduate decreases from about 3 in the fifties to 1.8 in 1890. As Mr. Phillips points out, the decrease becomes slower between 1875 and 1890.

TABLE X. THE SIZES OF THE FAMILIES IN ACCORDANCE WITH THE EDUCATION OF THE MOTHER

	College	Partial	None	Total
Under 50				
No.....	109	33	119	261
Size.....	1.81	1.79	1.98	1.88
50 to 59.....				
No.....	58	20	145	223
Size.....	2.22	2.20	2.39	2.33
Above 59				
No.....	21	7	117	145
Size.....	2.57	3.43	2.69	2.71
Total				
No.....	188	60	381	629
Size.....	2.02	2.12	2.35	2.23

In Table X. it is shown that the families of scientific men in which the mothers have had a college education are not appreciably smaller than others. If one regards only the total, it appears that when

the mother had a college education the average family is about 2, when she had a partial college education 2.1 and when she had none 2.3, but these differences are chiefly and probably entirely due to the fact that the younger scientific men have the smaller families and at the same time are more likely to marry college graduates. If we divide the scientific men into three age groups, the differences become much less, and if the groups were subdivided still further they would probably disappear. This illustrates the possibility of statistical fallacies when a group is not homogeneous. Of the scientific men under fifty, 109 married college graduates and had families of the average size of 1.81, 33 married women with a normal school or partial college education and the average family was 1.79, 119 married women without a college education and the average family was 1.98. Fifty-four per cent. of scientific men under 50 have married women with a college education; for scientific men from 50 to 59 the percentage falls to 35 and for those 60 or older to 19.

The figures result not only from the increasing number of women undergoing higher education, but also from an extension of common scientific interests and pursuits for men and women. A distinguished biologist has observed that "if marriages are made in heaven, Woods Hole may be regarded as a branch office." To the same biologist we owe the remark that "eugenics is an infant industry." There is truth in both epigrams. The percentage of men who have married women with whom they have been thrown into association as teachers or fellow students is large, and we are at present ignorant of the results of such marriages. Small as are the families of scientific men, it is here shown that they are not so because the mother is a college graduate. If both mother and father have common scientific aptitudes and interests, the physical heredity and social traditions should lead

¹⁵ Proceedings of the First National Conference on Race Betterment, January, 1914; *The Independent*, September 17, 1915.

¹⁶ *Journal of Heredity*, 1915.

¹⁷ *Harvard Graduates Magazine*. September, 1916.

the children to follow similar scientific pursuits with an early start and favorable opportunities. I shall be able to give the percentage of fathers and sons, or of two or more brothers, who have engaged in scientific work, and it may be possible to determine the effect when the mother also has scientific interests and ability.

III. VITAL STATISTICS AND THE COMPOSITION OF FAMILIES

It has been claimed that children of older parents are physically and mentally inferior. Conversely, C. L. Redfield in a curious book entitled "Control of Heredity" and in various articles argues that men of distinction are likely to be born when their fathers are old and that their performance is due to inheritance of the experiences gained by their fathers. If the age of the parents affects the constitution of the children, this clearly is a matter of importance, particularly if the principles of eugenics are enforced either by law or by sentiment. But at present we have no scientific information on a problem which could be solved by statistical research.

The fathers of 865 leading American men of science were on the average 35 years old and their mothers were 29 years and 8 months old when their sons were born. The fathers married at the average age of twenty-eight years, being somewhat more than five years older than their wives. The scientific men are consequently born at an average interval of seven years after the marriage of their

parents. The ages are given separately for the four groups into which the scientific men have been divided and are earlier for both fathers and mothers (group I. in the table) of those more distinguished. The probable errors given in italics show that the differences may be due to chance, but that this is unlikely. It is the case, as shown below in Table XIV., that the first-born son is the one most likely to become a scientific man, and the parents of first-born children are of course younger.

In Table XI. is also given the average age at death of the parents, whence it appears that the fathers died at the average age of 70.6 years, the mothers at 70.2 years, the chances being even that these figures are correct within a third of a year. The average age of the scientific men being about fifty years, most of their parents are now no longer living. If, however, the deceased parents only had been included, the averages would have been too low, as the more long-lived parents would be those more likely to be living. The expectation of life has been added to the age of each of those still living, and the probable age at death used in the averages. The ages given do not mean that people of this class live to those ages, or that the men live longer than the women. A statistical error such as this has often been made, a distinguished scientific man having, for example, urged that it is one of the advantages of the scientific career that scientific men live much longer than the average, failing to note the circumstance that there are no scientific men who die

TABLE XI. THE AGES OF THE PARENTS AT THE BIRTH OF THE SCIENTIFIC MEN AND AT DEATH, ACCORDING TO THE STANDING OF THEIR SONS

	No.	Age at Birth of Scientific Man		No.	Age at Death	
		Father	Mother		Father	Mother
I.	64	34.02 ± .57	28.37 ± .50	62	70.18 ± 1.12	70.89 ± 1.56
II.	160	34.54 ± .40	29.86 ± .31	154	70.85 ± .75	70.68 ± .78
III.	505	35.00 ± .23	29.72 ± .20	496	70.77 ± .38	69.96 ± .36
IV.	136	35.69 ± .53	30.09 ± .38	121	70.91 ± .92	69.45 ± .99
Total	865	34.95 ± .18	29.70 ± .15	833	70.64 ± .80	70.20 ± .31

when they are babies. The figures in the table mean that the fathers being on the average 35 years old when their sons are born have an expectation of life of 35.6 years, and will on the average die at the age of 70.6 years. The mothers, averaging 29.7 years old, have an expectation of life of 40.5 years. These expectations are about four years longer than those allowed by standard mortality tables, but the data are not exactly comparable. Although the parents of the more distinguished scientific men do not live longer than the others, they live longer after the births of their sons.

TABLE XII. THE AGES AT DEATH OF THE FATHERS OF THE SCIENTIFIC MEN IN ACCORDANCE WITH THEIR OCCUPATIONS

	No.	Age at Death.
Professions.....	370	69.67 \pm .45
Clergymen....	94	71.68 \pm .81
Physicians....	66	67.20 \pm 1.03
Lawyers.....	57	71.75 \pm 1.19
Teachers.....	70	69.29 \pm 1.07
Others.....	83	68.25 \pm .92
Agriculture....	193	72.81 \pm .62
Manufacture....	330	70.65 \pm .48
Total.....	893	70.71 \pm .29

Table XII. shows that the farmers who were fathers of scientific men died at the average age of 72.8 years, the physicians at 67.2 years, a difference of over five years between the shortest and longest lived of the groups. The clergymen and lawyers lived one year less than the farmers, the teachers two and a half years less. Those engaged in manufacturing and trade died at the average age. According to the report of the English registrar-general (1908), the death rates per thousand during the years 1900-1902 for those

between 45 and 65 in different occupations were: Farmers, 14.8; clergymen, 15.5; teachers, 15.8; lawyers, 18.3; physicians, 23.9.

Table XIII. gives the ages at death of the mothers in accordance with the size of their families. The crude figures are subject to a statistical error, as mothers might have small families because they died early. This is eliminated by considering only those who survived the child-bearing age. In this case mothers of one child died at the average of 68.6 years; mothers of 12 children at the age of 80.6. There are included 759 families, but the number of families of different sizes is too small to give entirely valid averages. Still it is significant that the thirteen mothers of 11 and 12 children lived to the average age of 78 years; the 43 mothers of 9 and 10 children to the age of 75 years. It is probable that the women who were the more vigorous had the largest number of children and also lived to the greatest age; they might have lived as long or even longer if they had been unmarried. Though largely due to statistical selection, the fact remains that of 45 mothers of one child 10 did not survive the age of 45, whereas of 56 mothers of from 9 to 12 children not one died under this age. In view of these facts it may be doubted whether the practise of limiting the number of children is beneficial to the health and longevity of the mother.

Table XIV. gives the numbers of scientific men who were first-born children, second-born children, etc., for each size of family. A scientific man is of course more likely to be a first-born child than a second-born, because there are families with

TABLE XIII. AGES AT DEATH OF MOTHERS OF THE SCIENTIFIC MEN IN ACCORDANCE WITH THE SIZES OF THEIR FAMILIES

Size of Family.	1	2	3	4	5	6	7	8	9	10	11	12	Av.
Number.....	45	91	106	136	110	112	59	44	27	16	8	5	759
Age at death.....	61.7	67.9	69.3	71.7	69.1	71.5	73	70.7	77.6	70.5	76.2	80.6	70.1
No. dying under 45.....	10	17	11	10	11	3	2	4	0	0	0	0	68
Age at death of those surviving 45.....	68.6	74.2	73	74.4	72.5	72.5	74	73.6	77.6	70.5	76.2	80.6	73.3

only one child and consequently more first-born children. But it appears from the table that the first-born child is more likely than the others to become a scientific man. In families of two or more children, 284 are first-born and only 168 second-born; in families of three or more, 214 are first-born and 114 are third-born; in families of four or more, 159 are first-born and 81 fourth-born.

TABLE XIV. THE ORDER OF BIRTH OF SCIENTIFIC MEN

	Order of Birth												
	1	2	3	4	5	6	7	8	9	10	11	12	
1	63												63
2	70	52											122
3	55	39	31										125
4	53	33	32	29									147
5	47	13	18	17	23								118
6	30	17	16	19	21	14							117
7	16	7	8	7	9	14	7						68
8	7	3	5	4	8	5	4	8					44
9	5	1	2	4	4	4	0	3	5				28
10	1	1	2	0	1	2	0	0	0	5			12
11	0	1	0	1	0	1	0	0	1	1	1		6
12	0	1	0	0	0	0	0	1	0	1	1	1	5
	347	168	114	81	66	40	11	12	6	7	2	1	855

The first-born child has been reported to be more likely to be a man of genius, an idiot, a consumptive and various other things, but usually as the result of some statistical fallacy. If, for example, in our figures only families of two and eight are considered, there being on the average five children and one first-born, it looks at first sight as though the chances are one in five that an individual selected at random would be the first-born. But both families being represented, it has been argued that the chances are half that the individual is the first-born in the small family and one eighth in the large family, or on the average five sixteenths, nearly one in three. However, the family of eight is four times as likely to be represented in a random selection from the two families, so the chances of the individual being first-born are reduced to one in five. Finally—and this seems to have been

overlooked—there are three times as many families of two as of eight, and there are in fact 16 chances out of 61, or a little over one in four, that the individual selected at random will be the first-born.

These errors have been eliminated by the method used in the table, but there are at least two other statistical errors that affect such data. When we are dealing with contemporary families the older children may be preferred. Thus children under fifteen are not likely to suffer from pulmonary tuberculosis or to be criminals, and the patient or the prisoner may be more likely to be the first-born child than the last born. This circumstance holds for the scientific men. They are on the average 38 years old when they attain their position, and the scientific population is rapidly increasing, so the earlier born children are more likely to be included. This factor, however, is small, as is shown by the fact that the second-born child is not appreciably more likely to be a scientific man than those later born. Probably a large statistical error is introduced by the fact that a man sometimes does not know of or ignores children who were born and died before he himself was born, and thus records himself as the first-born.

In so far as it may in fact be the case that the first-born child is more likely to be a scientific man, this is probably due to social rather than to physiological causes. Galton found the eldest son to be preferred, and perhaps this might be expected under a system of primogeniture. In this country where families are apt to improve their economic condition, the younger sons may be more likely to be sent to college than the older, but as to this there is no available information.

In Table XV. the intervals are given between marriage and the birth of the first child and between the births of successive children for families of different sizes. When there is only one child it is born on

TABLE XV. INTERVALS IN YEARS BETWEEN MARRIAGE AND BIRTH OF FIRST CHILD AND BETWEEN BIRTHS OF SUCCESSIVE CHILDREN

Size of Family	No.	1	2	3	4	5	6	7	8	9	Av.
1	70	3.17									3.17
2	121	2.14	4.21								3.17
3	120	1.87	3.09	4.00							2.99
4	56	1.59	2.40	3.16	3.82						2.74
5	29	1.62	2.52	2.69	3.38	3.76					2.79
6	12	1.33	1.83	2.00	2.92	2.25	2.75				2.18
7	5	1.40	2.00	1.60	2.60	3.00	2.00	2.20			2.11
8	2	2.00	1.50	2.50	2.00	2.00	2.00	2.00	3.50		2.19
9	1	1.00	2.00	1.00	2.00	2.00	1.00	3.00	2.00	2.00	1.78

the average 3.2 years after marriage, whereas in a family of five or more the interval is about a year and a half. In the standardized family of two the second child is born 4.2 years after the first, twice as long as for large families. The delay in the birth of children in small families might be due to the same physiological or pathological causes which make the family small, but in most cases it is probably due to voluntary control.

From Table XVI. it appears that 478 scientific men reported 716 sons and 668 daughters. This difference falls within

TABLE XVI. DISTRIBUTION OF SONS AND DAUGHTERS

Size of Family	No. of Families	Family of Parents		
		Sibs	Sisters	Brothers
(1)				
2	126	126	69	57
3	128	256	123	133
4	152	456	244	212
5	125	500	266	234
6	123	615	327	288
7	71	426	235	191
8	48	336	172	164
9	31	248	121	127
10	16	144	83	61
11	7	70	34	36
12	5	55	31	24
Total	832	3232	1705	1527
		Family of Scientific Men		
		Children	Sons	Daughters
1	81	81	42	39
2	136	272	153	119
3	130	390	199	191
4	63	252	130	122
5	41	205	104	101
6	15	90	46	44
7	5	35	16	19
8	4	32	10	22
9	3	27	16	11
Total	478	1384	716	668

the limits of chance variation, and is not likely to be significant. In the families from which 832 scientific men come there were 2,537 sons and 1,527 daughters recorded. This disparity may at first strike the reader as inexplicable. Galton in his "Hereditary Genius" says: "I also found the (adult) families to consist on an average of not less than $2\frac{1}{2}$ sons and $2\frac{1}{2}$ daughters each. Consequently each judge has on an average of $1\frac{1}{2}$ brothers and $2\frac{1}{2}$ sisters. . . . 100 judges are supposed to have 150 brothers and 250 sisters." Nearly all those whom I have questioned about this statement think that it is correct. It seems to most people obvious that if there are equal numbers of boys and girls, a boy must on the average have one more sister than brother. However, a boy has as many brothers as sisters, owing to the sex composition of families. Thus in families of two, one fourth of the families will consist of two boys, one fourth of two girls and one half of a boy and girl. On the average, four boys will have among them two brothers and two sisters, and there is a similar equality for large families.

Table XVII. contains information in regard to deaths in the families of scientific men. For their brothers and sisters the percentage of deaths recorded under five years is 14.8, and under twenty-five years it is 22.5. For their children the percentages are 7.5 and 10.9. The death rate has thus decreased to half in a single generation, and for the children of the scientific men is probably the smallest known. As only completed families are

considered, there are practically no children under five, but those under twenty-five who might die before reaching that age make the death rate too low in this

TABLE XVII. DEATHS IN THE FAMILIES OF SCIENTIFIC MEN

	Size of Family Brothers and Sisters		Total or Average.
	1 to 6	7 to 12	
Number of families . . .	515	129	644
Brothers and sisters . . .	1406	917	2323
% of deaths under 5 . . .	14.22	15.59	14.77
% of deaths under 25 . . .	22.28	22.63	22.51
Children			
	1 to 4	5 to 9	
Number of families . . .	416	67	483
Children	1024	381	1405
% of deaths under 5 . . .	7.37	8.01	7.54
% of deaths under 25 . . .	10.69	11.55	10.93

group. It is difficult to see how more valid statistics can be obtained than those supplied by scientific men, the order of birth and the dates of birth and death having been given; yet it is undoubtedly the case that all deaths are not recorded, especially for the brothers and sisters who died in infancy. This error would, however, only emphasize the decrease in the deaths of the children as compared with the preceding generation. The number of deaths among a thousand children born is not directly comparable with death rates per thousand of the child population. When there are seventy-five deaths under the age of five among a thousand infants born to the scientific men, the annual death rate is somewhat larger than 15.

The decrease in the infantile death rate in recent years is so remarkable as to be almost incredible, and the existing differences in nations and social classes are appalling. In the families from which our scientific men come, the death rate for children under five is somewhat over 30 and in their own families it is somewhat over 15. The rate in the registration area of the United States in 1900 was 51.9. In the present registration area it was 32.9 in 1911, varying from 41.1 in Massachusetts to 18.6 in Washington, from 74 in

Fall River to 22.4 in Seattle. In or about 1900, the rates for the other nations were:

Russia	134.5
Spain	104.1
Austria	86.7
Germany	74.2
Italy	74.8
England	53.5
France	47.6
Sweden	37.5
New Zealand	23.2

The table indicates a small selective death rate against the larger families. When there were one to six brothers or sisters the percentage of deaths under five years was 14.2 as compared with 15.6 for larger families; when the number of children was four or less, the percentage was 7.5 as compared with 8 for families of five or larger. This small difference is probably due to the coinciding decrease in the birth rate and in the death rate. The larger families had a higher death rate not because they were larger but because they were earlier when the death rate was higher. Other statistics, such as those of Labin and Westergaard for Copenhagen, show a selective death rate against the larger families. In the statistics with which we are concerned poverty and neglect are almost excluded.

In Table XVIII. is shown the relation between the size of the family from which the scientific men come and the size of the family that they have, the scientific men being divided into three age groups. It will be noted that the size of family of the scientific men varies with their age at the time, being 2.7 children when they are above 59; 2.3 when they are between 50 and 59, and 1.9 when they are under 50. These differences are partly due to statistical selection, the families of the younger men being not absolutely complete, and the barren and smaller families being more likely to be included. They, however, in part represent the declining birth rate within a period of twenty years. There is

TABLE XVIII. THE RELATION BETWEEN THE SIZES OF FAMILIES OF THE PARENTS OF SCIENTIFIC MEN AND THE SIZE OF THEIR OWN FAMILIES

	1, 2, 3	Size of Parents Families			Total or Av.
		5, 6	7, 8, 9	10, 11, 12	
Under 50.....	94	19	37	12	253
Size of family.....	1.69	.99	1.81	2.41	1.88
50-59.....	74	9	33	5	205
Size of family.....	2.35	1.4	2.69	2.60	2.32
Above 59.....	43	6	31	4	139
Size of family.....	2.60	1.77	2.48	4.00	2.70
No of families.....	211	26	101	21	597
Av. size of families.....	2.11 ± .11	2 ± .07	2.30 ± .13	2.76 ± .29	2.22 ± .06

shown a slight positive correlation between the number of brothers and sisters and the number of children. Thus when a man comes from a family of 1, 2 or 3 children, his family averages 2.1, and as the size of the family from which he comes increases by groups of three, his own family increases to 2.2, 2.3 and 2.8. The probable errors show that the figures have a limited validity. The differences, however, may be due to the decreasing size of family, the older scientific men having larger families and coming from families which were larger because they were earlier. The inheritance of physiological fertility would depend partly and perhaps chiefly on the female, and the size of the modern small family is determined in the main by social and psychological causes. If the data here given were valid, they would show a slight correlation of fecundity in successive generations and a slight selective death rate against the larger family, which about balance each other. These conditions are those which must obtain in a state of nature, for unless there is a change in the environment, the number of individuals of a species can not considerably increase and if they regularly decrease it will be exterminated. The relations which obtain in the families of scientific men are, however, probably due entirely to the decreasing death rates and birth rates of the past seventy-five years.

In Table XIX. the scientific men are divided into four groups in accordance

with their distinction, and the size of the family from which they came and which

TABLE XIX. THE STANDING OF SCIENTIFIC MEN AND THE SIZE OF FAMILY

	I	II	III	IV	Total or Av.
Parents family					
No. of families	71	162	530	141	904
Average size ..	4.73	4.59	4.69	4.45	4.64
Own family					
No. of families	49	111	298	96	554
Average size ..	2.50	2.17	2.14	2.39	2.22

they have is given for each degree of distinction. The most distinguished group (I. in the table) came from families of the average size of 4.7 and have families of the average size of 2.5, in both cases above the average. The eminent man is slightly more likely to have more brothers and sisters and appreciably more likely to have more children than his colleagues. The most eminent group is, however, about five years older than the others, and this about accounts for their larger families, no rapid has been the decline in the birth rate. The lack of correlation between the distinction of a scientific man and the size of his parents' family may be due to a combination of causes. On the one hand, only child or the child from a small family may be more likely to have educational opportunities or inherited wealth; on the other hand, he may have inferior heredity and opportunity for forming character.

The conditions are similar for scientific

men who are unmarried or who have no children or but one, as compared with scientific men with larger families. There is but slight difference in their performance. The similarity may be due to a balance of various conditions, and is also in part accounted for by the fact that men marrying at the average age of 29.5 years have in large measure had such original ideas as they may hope to have and have in the main determined their careers. As a matter of fact those who are unmarried

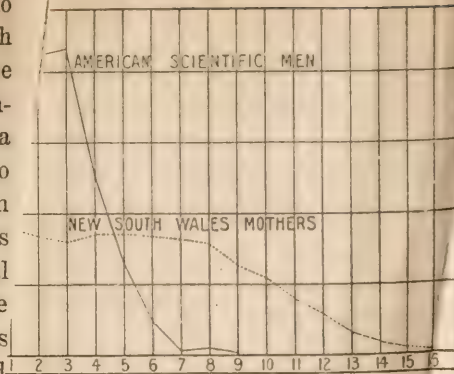


FIG. 3. The percentage of families of American scientific men of each size, compared with the percentage of families of New South Wales mothers in the decade 1891-1900.

with the largest families could be regarded as valid, it would be indicated that the

THE CAUSES OF THE DECLINING BIRTH-RATE¹

are the ablest and most successful, but there is a biological adaptation which at the same time furnish the largest share to the group who have dropped out of the first thousand, perhaps owing to the circumstance that scientific work must be neglected to support the children. The decrease of the average family to three or four—in the case of American scientific men or college graduates to two—must be due to infertility or to voluntary limitation. Both causes have been recognized since the time of the writing of the book of Genesis; both have doubtless increased in force in the course of the nineteenth century. It is generally believed that the principal cause of the small size of the modern family is voluntary limitation. A definite answer is supplied by information given to me by 461 leading scientific men, as shown in Table XX.

Of these completed families 176 were not voluntarily limited, while 285 were so limited.

¹ From an article printed in the *Independent*, September 27, 1915, being the abstract of an address given at the First National Conference on Race Betterment. The writer had at that time made an extensive study of vital statistics, with special reference to birth-rates and related problems, but the collection of such statistics has been interrupted and their interpretation made difficult by the war.

TABLE XX. THE CAUSES LIMITING THE SIZE OF FAMILIES

Number of Children	0	1	2	3	4	5	6	7	8	9	
Number of families.....	102	58	98	100	54	31	12	2	3	1	461
Not limited	67	19	14	29	22	14	5	2	3	1	176
Voluntarily limited	35	39	84	71	32	17	7	0	0	0	285
Health	25	17	44	26	8	11	2	0	0	0	133
Expense	5	12	29	30	14	3	5	0	0	0	98
Other causes	5	10	11	15	10	3	0	0	0	0	54

ited, the cause of the voluntary limitation being health in 133 cases, expense in 98 cases and various other reasons in 54 cases. Childlessness was involuntary in two thirds of the cases. In the standardized family of two children the condition was desired six times out of seven. In over one third of the 461 families the limitation was involuntary, due to infertility and other pathological causes, but if these had not obtained, voluntary limitation would have oc-

curred later in nearly all cases. In seventy-one marriages prior to 1890 the average size of family including all children born was 2.9, and the limitation was voluntary in forty-eight per cent. of the cases. In the decade of the 80's with 132 marriages the size of the family was 2.6, and the limitation was voluntary in sixty-four per cent. of the cases. For 198 marriages contracted in the 90's, when no more children will be born, the average size of family was 2.0, and the limitation is voluntary in seventy per cent. of the cases.

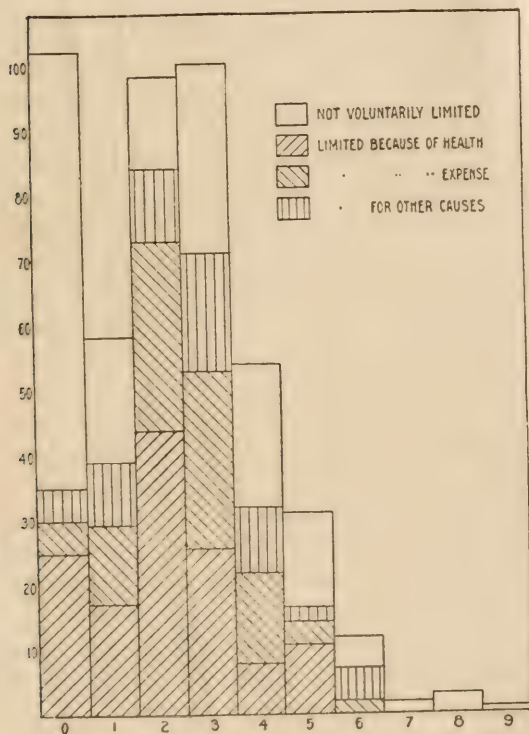


FIG. 4. The number of families of American men of science of each size, showing the number voluntarily limited and the causes of the limitation.

Neither the prevalence of the voluntary limitation of the size of family, nor the fact that the size of family is limited directly or indirectly through infertility or ill-health in more than three fourths of the cases, can be regarded with satisfaction. It is indeed evident that a limitation of the number of offspring was an essential condition of the evolution of a higher race at all of the civilization to which it has attained. It might be as undesirable and benighted as illegal for a man to have six children as to have two wives. But we are laying with edged tools when we substitute rationalism for fundamental instincts. In practice the family is not voluntarily limited for the welfare of the race, but to avoid risk and ill-health—real or fancied—expense and inconvenience, and to give the individual child greater advantages. There seem to be no existing conditions which will check the decreasing birth rate, while there are powerful forces tending to its decline below the danger point of the death rate.

